



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Information Notice

Market Review

Wholesale Dedicated Capacity (WDC) Market

Publication and notification to the European Commission (EC), the Body of European Regulators for Electronic Communications (BEREC), and Member State National Regulatory Authorities (NRAs) of draft measures under Article 32 of Directive 2018/1972

Information Notice

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Commission for Communications Regulation

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1. This Information Notice relates to the Commission for Communications Regulation's ('**ComReg**') publication and parallel notification to the relevant European authorities of its draft decision ('**Draft Decision**') concerning its review of the Wholesale Dedicated Capacity ('**WDC**') market in Ireland. A non-confidential version of the Draft Decision is attached at Annex 1 of this Information Notice.
2. In accordance with Article 23 of the European Electronic Communications Code ('**EECC**')¹ and Regulation 101 of the ECC Regulations,² ComReg carried out a public consultation ('**Consultation**') on its analysis of the WDC market in Ireland over the period 27 November 2024 to 31 January 2025.³
3. Prior to the adoption of a final decision, Article 32(3) of the EECC (transposed via Regulation 17 of the ECC Regulations) requires ComReg to publish and, at the same time, make draft measures accessible to the European Commission ('**EC**'), the Body of European Regulators for Electronic Communications ('**BEREC**') and National Regulatory Authorities ('**NRAs**') in other Member States (the '**Article 32 Notification**').
4. The Article 32 Notification has today been made by ComReg on the basis of the draft measures set out in the Draft Decision.
5. Please note that this Information Notice, including the Draft Decision in Annex 1, does not constitute a national public consultation and should therefore not be construed as an invitation to make submissions to ComReg.
6. Having completed the Article 32 Notification, ComReg will take utmost account of any views expressed by the EC, BEREC and NRAs in other Member States before adopting its final decision.

¹ Directive 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the '**EECC**').

² S.I. No. 444/2022 - European Union (Electronic Communications Code) Regulations 2022 (the '**ECC Regulations**') which transpose into Irish law the European Electronic Communications Code.

³ Market Review, Wholesale Dedicated Capacity, Consultation and Draft Decision, [ComReg Document 24/92](#), November 2024.

Annex 1: Market Review - Wholesale Dedicated Capacity (WDC) Market - Draft Decision

1.1 A copy of ComReg's Draft Decision is attached.



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Market Review - Wholesale Dedicated Capacity (WDC) Market

Response to Consultation and Decision

Note this is a DRAFT DECISION

Reference:	ComReg 25/XX
Decision:	DXX/2X
Date:	XX XXXX 202X

Additional Information

Approval

Redacted Information

Please note that this is a non-confidential version of the Final Decision. Certain information within the Final Decision has been redacted for reasons of confidentiality and commercial sensitivity, with such redactions indicated by the symbol \otimes and highlighted in BLACK. In some cases, ComReg has presented information in an aggregated form in order to strike a balance between preserving the confidentiality of operator-specific information whilst enabling interested parties to understand, in a meaningful way, the conclusions set out in Final Decision.

Section	Page
1. Executive Summary	9
1.1 The Relevant Markets and SMP	9
1.2 Remedies	12
2. Introduction.....	15
2.1 Introduction.....	15
2.2 What is WDC?	16
2.3 Legal Basis and Regulatory Framework.....	21
2.4 Previous Review.....	25
2.5 Current Review.....	27
2.6 Consultation Process	29
2.7 Liaison with Other Bodies.....	30
2.8 Regulatory Impact Assessment.....	31
2.9 Structure of this Decision.....	32
3. Retail Market Review and Assessment.....	34
3.1 Introduction.....	34
3.2 Overview of Retail Markets in 2020 Decision	34
3.3 Providers of Retail Leased Line Services	35
3.4 Retail Market Trends and Developments	46
3.5 Retail Market Assessment.....	57
3.6 Geographic market Assessment	84
4. WDC Market Definition.....	88
4.1 Introduction.....	88
4.2 Identifying the Focal Product.....	89
4.3 Product market.....	92
4.4 Geographic Scope of the Relevant WDC Product Markets	119
4.5 The Trunk – Terminating Boundaries of the MI WDC Markets	151
5. Competition Analysis – SMP Assessment	154
5.1 Overview	154
5.2 Assessment framework	155

5.3	Overview of the WDC Markets in Ireland.....	158
5.4	SMP Assessment in MI WDC Market 1	159
5.5	SMP Assessment in MI WDC Market 2.....	169
5.6	SMP Assessment in MI WDC Market 3.....	178
5.7	SMP Assessment in MI WDC Market 4.....	179
5.8	Designation of Eircom with Significant Market Power in MI WDC Market 2 and MI WDC Market 4.....	181
6.	Competition Problems in the Zone B MI WDC Markets and Impacts on Competition and Consumers.....	183
6.1	Overview	183
6.2	Main Types of Competition Problems.....	184
6.3	Conclusion on Competition problems in the Zone B MI WDC Markets	190
7.	Remedies in the Zone B MI WDC Markets	191
7.1	Introduction.....	191
7.2	Access Remedies.....	191
7.3	Non-discrimination obligations.....	216
7.4	Transparency	220
7.5	Price control and cost accounting obligations.....	235
7.6	Accounting separation obligation.....	255
7.7	Regulatory Governance	260
8.	Withdrawal of obligations	269
8.1	Introduction.....	269
8.2	Withdrawal of obligations in the LB TI WDC Market.....	269
8.3	Withdrawal of obligations in WPZs transferring from the Zone B MI WDC Markets (under the 2020 Decision) to the Zone A MI WDC Markets (defined in this Decision).....	270
Annex: 1	Decision Instrument	273
Annex: 2	Consultation with the Competition and Consumer Protection Commission (CCPC).....	333
Annex: 3	European Commission Response to ComReg's Draft Notified Measures	335

Annex: 4	ComReg’s consideration of European Commissions response to Notified Draft Measures.....	336
Annex: 5	Non-confidential versions of Respondent Submissions to the 2024 Consultation	337
Annex: 6	Sensitivity Test on the Proportionality Criterion	338
Annex: 7	List of Business Parks.....	340
Annex: 8	Sequence of the Algorithm for Applying Geographic Assessment Criteria	348
Annex: 9	Full list of WPZs	350
Annex: 10	Map of WPZs	351
Annex: 11	Other Factors for SMP Assessment	352
Annex: 12	List of Eircom Trunk and Non-Trunk Nodes.....	354
Annex: 13	List of WPZs which change Zone designation	356
Annex: 14	Pricing concepts.....	362
Annex: 15	Treatment of SPs’ Data.....	368
Annex: 16	End-user interviews summary.....	373
Annex: 17	List of Acronyms	378

Table of Figures

Figure 1: Point to Point Based WDC LL Configuration	18
Figure 2: Interconnection based WDC leased lines configuration	18
Figure 3: Interconnection based WDC delivered using a PON	19
Figure 4: Number of Wired (fibre only) Active Retail LLs by SP (2020 to 2024). [REDACTED]	39
Figure 5: Market Share Percentages of Wired (fibre only) Active Retail LLs by SP (2020 TO 2024) [REDACTED]	40
Figure 6: Number of Wired Active Retail LLs by SP – including copper based (2020 to 2024). [REDACTED].....	42
Figure 7: Retail Market Shares of Wired Active Retail LLs by SP – including copper based LLs (2020 to 2024) [REDACTED]	43
Figure 8: Number of Wired and Wireless Active Retail LLs by SP (2020 to 2023). [REDACTED].....	44
Figure 9: Retail Market Shares of Wired and Wireless Active Retail LLs by SP (2020 to 2024) [REDACTED].....	45
Figure 10: Volumes of Retail TI and MI wired LLs	48
Figure 11: Breakdown of Leased Line local access technology purchased by Major Retailers	69
Figure 12: Breakdown of major retailers’ usage of wireless leased lines.....	70
Figure 13: Breakdown of Leased Line local access technology purchased by Banks and Fintech Companies	71
Figure 14: Breakdown of banks and ‘fintechs’ usage of wireless leased lines.....	72
Figure 15: Road Licence Applications.....	133
Figure 16: Flowchart of the Algorithm	146
Figure 17: Market Shares CPs in the MI WDC Market 1, H2 2023 and H2 2024 [REDACTED]	161
Figure 18: Market Shares in the MI WDC Market 2, H2 2023 and H2 2024[REDACTED]	170
Figure 19 MI WDC Service Overview (Same Node Handoff or SNH).....	197
Figure 20 MI WDC Service Overview (Same Region Handoff or SRH).....	198
Figure 21 NGN Ethernet Service Overview (Same Node Handoff or SNH)..	203
Figure 22 NGN Ethernet Service Overview (Same Region Handoff or SRH)	203
Figure 23 WDM Service Overview (Same Node Handoff or SNH)	203
Figure 24 WDM Service Overview (Same Region Handoff or SRH)	203

List of Tables

Table 1: Retail LL SPs.....	36
Table 2: New TI LLs Installed 2018-2023	49
Table 3: Retail wired and wireless MI LLs 2018-2023	72
Table 4: Product Characteristics Comparison.....	76
Table 5: Indicative Wholesale Ethernet LL monthly rental, (WDC Access Circuit, logical and physical (within 500m of exchange) January 2025.	76
Table 6: Eircom VUA monthly rental prices, July 2025.....	77
Table 7: WDC technology wholesale trends 2020 – 2024 On-Net CPs (inc. self-supply)	90
Table 8: SP DF Sales 2022 [REDACTED].....	99
Table 9: SP On-Net DF Sales 2024 Connected Premises [REDACTED].....	100
Table 10: DF Purchases 2022 [REDACTED].....	102
Table 11: DF purchases (CPs) 2024 [REDACTED].....	102
Table 12: SPs DF Uses 2022.....	104
Table 13: Eircom DF Sales by Customer, 2022 [REDACTED].....	104
Table 14: Eircom DF Sales by Customer 2024 CPs [REDACTED].....	105
Table 15: Eircom Zone B WSEA Annual Rental - Logical circuits	111
Table 16: Eircom Active On-net WDC Lines (excl. DF) [REDACTED] .	118
Table 17: Premises Served by MI WDC Network, H2 2024 [REDACTED].....	142
Table 18: Share of the Total Connected Premises , H2 2024 [REDACTED].....	159
Table 19: Market shares in MI WDC Market 1, 2018, H2 2023 and H2 2024 based on market boundaries at the time [REDACTED]	162
Table 20: Market shares in MI WDC Market 1, 2018, H2 2023 and H2 2024, based on H2 2024 market boundaries [REDACTED].....	163
Table 21: Market Shares in MI WDC Market 2, 2018, H2 2023 and H2 2024 based on the market of boundaries at the time [REDACTED]	171
Table 22: Market Shares in MI WDC Market 2, 2018, H2 2023 and H2 2024 based on the market defined in H2 2024 [REDACTED]	172
Table 23: Twelve MI WDC Aggregation Regions.....	198
Table 24: Proportionality Criterion Comparison (Number of Connected Premises)	338
Table 25: Proportionality Criterion Comparison (Market Shares Zone A) [REDACTED].....	338
Table 26: Proportionality Criterion Comparison (Market Shares Zone B) [REDACTED].....	339

Table 27: List of Eircom Trunk Nodes	354
Table 28: List of Eircom Non-Trunk Nodes	355

1. Executive Summary

- 1.1 This Decision presents ComReg’s analysis of the Wholesale Dedicated Capacity (**‘WDC’**) market with a view to determining whether any Service Provider (**‘SP’**) has significant market power (**‘SMP’**) and, if so, imposing appropriate remedies on that SP to address identified competition problems.
- 1.2 ComReg conducted a Consultation on this market review over a nine-week period running from 27 November 2024 to 31 January 2025 (**‘2024 Consultation’**)¹. Seven submissions (**‘Submissions’**) to the 2024 Consultation were received from a range of industry stakeholders (the **‘Respondent(s)’**).
- 1.3 WDC, also known as wholesale leased lines (**‘LL(s)’**), is a symmetric, dedicated and high-quality connectivity service between two or more locations, typically with very high-quality service level agreements (**‘SLAs’**) governing service availability and repair time guarantees. The European Commission’s 2020 Recommendation² identifies the WDC market as being susceptible to *ex ante* regulation.
- 1.4 Retail LLs are used by businesses to provide a wide variety of retail services such as connectivity between business sites and company headquarters via a Wide Area Network (**‘WAN’**). Retail LL services play a vital role in enabling the provision of Information and Communications technology (**‘ICT’**) services to medium and large sized businesses and public service organisations. LLs are also used by SPs to carry data traffic between aggregation points on their networks or to connect to other services.

1.1 The Relevant Markets and SMP

- 1.5 At the retail level, ComReg has assessed the boundaries of the retail LL market to inform its subsequent analysis of the WDC market. ComReg is of the view that the relevant retail market consists of all wired retail LLs carried over a modern interface (**‘MI’**) on a nationwide basis, including fibre-based Ethernet LLs, Wavelength Division Multiplexing (**‘WDM’**) LLs and other MI LLs (the **“Retail MI LL Market”**).

¹ Market Review, Wholesale Dedicated Capacity, Consultation and Draft Decision, [ComReg Document 24/92](#), November 2024.

² European Commission Recommendation of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the **‘2020 Recommendation’**).

- 1.6 One important feature of the retail market is the multi-site nature of the demand. Multi-site customers account for the majority of all retail MI LL demand. These customers often have offices/business sites throughout the country. They usually tender for LL services on a nationwide basis for the entire contract and generally require a single vendor to meet their total connectivity requirements. This means that a retail LL SP would require wholesale access in places where it doesn't have its own network in order to bid for these customers.
- 1.7 At the wholesale level, ComReg has defined the relevant WDC product market as consisting of the provision of wholesale dedicated capacity over fibre (including point-to-point and Passive Optical Network ('PON') network configurations) using modern interfaces, which include Ethernet, WDM and dark fibre ('DF') (the "**MI WDC Product Market**"), with no bandwidth breaks in this market.
- 1.8 Demand for low bandwidth traditional interface ('LBTI') leased lines³ has been declining since the **2020 Decision**⁴ (see section 3.4.1). Demand for both analogue and TDM LLs has fallen from 3,137 in 2020 to 1,737 in 2024, a decline of 44.6%. The majority of demand for LB TI LLs is legacy in nature, with new demand in single digits since 2020, and very little wholesale demand. Given current and expected trends, regulation of this LB TI LL market is no longer justified.
- 1.9 In respect of the geographic scope of the MI WDC Product Market, ComReg begins by adopting workplace zones ('WPZs')⁵ as the geographic unit of assessment (consistent with the 2020 Decision). ComReg then applies the following criteria (the "Criteria") for assessing whether the conditions of competition differ sufficiently across WPZs such that the definition of subnational geographic markets is warranted:
- (a) **Criterion 1:** A WPZ has two or more alternative networks ('ANs') present (3 networks including Eircom);

³ LB TI LLs are provided over wired analogue, digital and TDM interfaces with bandwidths of ≤2Mbit/s.

⁴ "Market Review – Wholesale High Quality Access at a Fixed Location, Response to 2018 Further Consultation and Decision, ComReg Document 20/06, 24 January 2020" (the "**2020 Decision**").

⁵ Currently there are 7,219 WPZs in Ireland. Further details on the CSO construct of WPZs are available [here](#) - WPZs are designed to capture 'daytime population' of areas. The daytime population includes everybody who indicated they worked or studied in the area, along with persons in that area who do not work or study (and so are there during the day).

- (b) **Criterion 2:** at least 60% of the connected premises ('CP(s)')⁶ within a WPZ must be within 50 metres of two or more ANs⁷;
 - (c) **Business Parks Test:** A WPZ overlaps with a business park which is intersected or passed by two or more ANs, then all premises within a business park are deemed to be passed by such networks; and
 - (d) **Island Test:** A WPZ which fails the above criteria but is surrounded by WPZs that have met the above criteria, then this WPZ is deemed to pass the Criteria.
- 1.10 Then, aggregating WPZs that exhibit sufficiently similar competitive conditions, ComReg identifies 4 sub-national MI WDC geographic markets:
- (a) **MI WDC Market 1:** which is sub-national in its geographic scope, and equates to a unique and separately distinguishable set of 2,888 WPZs, each containing CPs and considered to meet the Criteria described above;
 - (b) **MI WDC Market 2:** which is sub-national in its geographic scope, and equates to a unique and separately distinguishable set of 2,261 WPZs, each containing CPs but considered not to meet the Criteria above;
 - (c) **MI WDC Market 3:** which is sub-national in its geographic scope, and equates to a unique and separately distinguishable set of 1,095 WPZs, each containing no CPs and considered to meet the Criteria above; and
 - (d) **MI WDC Market 4:** which is sub-national in its geographic scope, and equates to a unique and separately distinguishable set of 975 WPZs, each containing no CPs and considered not to meet the Criteria above.
- 1.11 Having conducted a competition and SMP assessment within each of the above MI WDC Markets, ComReg finds that:
- (a) No Undertaking is likely to have SMP in MI WDC Market 1;
 - (b) Eircom has SMP in MI WDC Market 2;
 - (c) No Undertaking is likely to have SMP in MI WDC Market 3; and
 - (d) Eircom has SMP in MI WDC Market 4.
- 1.12 For the purpose of assessing competition concerns and imposing remedies, ComReg has amalgamated the MI WDC Markets as follows (they are identical from a product perspective):

⁶ Connected Premises mean premises that are connected with MI WDC services as of H2 2024, also referred to as 'CP(s)'.

⁷ This criterion does not apply to WPZs that contain no CPs.

- (a) Zone A MI WDC Markets: consist of MI WDC Market 1 and MI WDC Market 3 (**'Zone A MI WDC Markets'**); and
 - (b) Zone B MI WDC Markets: consist of MI WDC Market 2 and MI WDC Market 4 (**'Zone B MI WDC Markets'**).
- 1.13 There have been some notable changes since the 2020 Decision. First, on a national basis, there are a total of 14,276 premises connected with LL or Dark Fibre (**'DF'**) (**'Connected Premises'** or **'CPs'**) as of the end of 2024, a sizeable change from the 8,473 CPs at the time of the 2020 Decision. There are a combination of contributing factors to this, including growth in LL demand, more accurate provision of geolocation data by SPs compared to the 2020 Decision (arising from statutory requirements to do so), the continued migration from legacy interfaces to MI and the now inclusion of DF in the MI WDC Markets in this market review.
- 1.14 Also in 2025, Speed Fibre Group Limited (**'SFG'**) acquired sole control of BT Communications Ireland Limited (**'BTCIL'**). Based on its assessment, ComReg has found that the acquisition has no material impact on the WDC market analysis. This is discussed in section 4.4.10.
- 1.15 Further, relative to the 2020 Decision, an additional net 1,248 WPZs now fall within Zone A. These WPZs will be de-regulated, meaning 55.2% of overall WPZs will not be subject to SMP based regulation.
- 1.16 ComReg has considered, in the absence of any regulation, the competition concerns that arise in the Zone B MI WDC Markets (and related markets). Having regard to Eircom's SMP position, including other factors such as it being a vertically-integrated SP that competes at both the retail and wholesale level, Eircom has the ability and incentive to potentially engage in anti-competitive behaviours, ultimately to the detriment of retail competition. These behaviours include the ability and incentive for Eircom to deny or delay other SPs access to its network and to engage in pricing and other behaviours which could restrict or distort competition by actual or potential competitors.

1.2 Remedies

- 1.17 To address the above competition concerns, ComReg is imposing a suite of obligations on Eircom to ensure effective competition in the Zone B MI WDC Markets and the downstream retail LL market. These include:
- (a) Access obligations;
 - (b) Non-discrimination obligations;
 - (c) Transparency obligations;

- (d) Price Control and Cost Accounting obligations;
 - (e) Accounting Separation obligations; and
 - (f) Statement of Compliance (**'SoC'**) obligations.
- 1.18 The non-pricing obligations are largely maintained from the 2020 Decision. Details of the obligations can be found in Section 7. The non-pricing obligations in Zone B WPZs apply uniformly throughout the Zone B MI WDC Markets including for premises in the National Broadband Plan (**'NBP'**) Intervention Area (**'IA'**).
- 1.19 With respect to pricing obligations, ComReg has decided to maintain the obligation of cost orientation for MI WDC products, services and associated facilities, in the Zone B MI WDC Markets adopted in the 2020 Decision. Eircom is subject to a pricing continuity approach whereby it will continue to charge its existing MI WDC rental prices, including WDM, as fixed price points. In other words, Eircom charges the prices for MI WDC products and services, including WDM services in the Zone B MI WDC Markets according to the current Zone B prices listed in Eircom's published Leased Lines Reference Offer (**'LLRO'**) price list. For interconnection services, Eircom charges the current prices in its published LLRO price list in the Zone B MI WDC Markets.
- 1.20 However, for NBP IA premises falling within the Zone B MI WDC Markets, ComReg has decided to differentiate the price control remedy on Eircom given the potential greater competitive constraints exerted by NBI at such premises. In essence, in the IA in Zone B MI WDC Markets, Eircom is not subject to a price control obligation at such premises, noting, however, that other obligations (including transparency and non-discrimination) continue to apply. This is discussed in Section 7.5.
- 1.21 The obligations of cost accounting and accounting separation continue to apply to Eircom with regard to MI WDC products, services and associated facilities. This is discussed in Section 7.5.5 and Section 7.6.
- 1.22 Further, to facilitate a smooth transitional period to deregulation and regulation, the following will apply:
- (a) a sunset period of six months for existing LB TI WDC services with access at existing prices maintained during the sunset period. Eircom is not required to provide access to new orders for LB TI WDC services;
 - (b) a sunset period of nine months for existing MI WDC services in WPZs moving from the Zone B MI WDC Markets to the Zone A MI WDC Markets, with access at existing prices to be maintained during the sunset period. During the first three months of this sunset period, Eircom is required to provide access to new orders for MI WDC LLs.

- (c) a sunrise period of three months for existing MI WDC services in WPZs moving from Zone A MI WDC Markets to Zone B MI WDC Markets regarding pricing obligations.

Chapter 2

2. Introduction

2.1 Introduction

- 2.1 The Commission for Communications Regulation (**'ComReg'**) is the National Regulatory Authority (**'NRA'**) responsible for the regulation of the electronic communications sector (telecommunications, radio communications and broadcasting transmission) and the postal sector in the State.
- 2.2 This Response to Consultation and Decision (**'Decision'**) sets out ComReg's analysis of the Wholesale Dedicated Capacity (**'WDC'**) market, or wholesale leased line (**'LL'**) market.⁸ WDC is a symmetric, dedicated and high quality connectivity service between two or more locations, usually businesses. The European Commission's 2020 Recommendation⁹ identifies the WDC market as being susceptible to *ex ante* regulation.
- 2.3 Consistent with ComReg's statutory role to review certain electronic communications markets, the objective of this market review is to examine the extent of competition within the WDC market(s). In circumstances where such markets are not found to be effectively competitive due to one or more Service Providers (**'SPs'**) having Significant Market Power (**'SMP'**), the imposition of appropriate regulatory obligations on that/those SPs is necessary in order to address identified competition problems that could arise in the WDC market(s) or related markets. Similarly, if any such markets are found to be sufficiently competitive (or trending towards effective competition), then regulatory intervention may not be justified (or no longer justified in cases where they have been imposed to date).
- 2.4 This introductory section of this Decision describes the following:
- (a) an overview of the WDC market(s) and what WDC is used for at the wholesale and retail level (discussed in Section 2.2 below);
 - (b) the legal basis and the regulatory framework under which this Decision is being made (discussed in Section 2.3 below);

⁸ The Decision refers to either Wholesale Dedicated Capacity or Leased Lines interchangeably throughout this document.

⁹ European Commission Recommendation of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (the **'2020 Recommendation'**).

- (c) the background to the previous review of the leased line markets (discussed in Section 2.4 below);
- (d) the reasons for undertaking the current market review and an outline of the information sources relied upon for the analysis set out in the Decision (discussed in Section 2.5 below);
- (e) an overview of the consultation process and those who responded to the Consultation¹⁰ (discussed in Section 2.6 below)
- (f) details of ComReg’s engagement with the Competition and Consumer Protection Commission (‘**CCPC**’), the European Commission (‘**EC**’) and BEREC¹¹ (discussed in Section 2.7 below);
- (g) details on the approach to the Regulatory Impact Assessment (‘**RIA**’) (discussed in Section 2.8 below); and
- (h) an overview of the structure of the Decision document (discussed in Section 2.9 below).

2.2 What is WDC?

2.5 WDC is a wholesale service that involves the supply of dedicated transmission capacity between fixed locations. As noted in the Explanatory Note to the 2020 Recommendation¹² “...*the distinguishing product characteristics of LLs are their ability to provide dedicated and uncontended connections and symmetrical speed*”. The Explanatory Note to the 2020 recommendation also notes that “*The precise definition of the market should however be determined by the characteristics of the service delivered rather than by technological details.*”¹³ In addition, LLs are usually provided with high quality of service metrics (including low latency, jitter¹⁴ and packet loss¹⁵, short repair times, etc.), high levels of reliability and in some instances,

¹⁰ Market Review, Wholesale Dedicated Capacity Market, Consultation, [ComReg Document 24/92](#) (‘**2024 Consultation**’).

¹¹ Body of European Regulators for Electronic Communications (‘**BEREC**’) as established by Regulation (EC) No 1211/2009 of the European Parliament and of the Council of 25 November 2009 the Body of European Regulators for Electronic Communications (BEREC) and the Office.

¹² Section 4.1.5, EU Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation, dated 18.12.20 (the ‘[Explanatory Note to the 2020 Recommendation](#)’).

¹³ *Ibid.*

¹⁴ Latency refers to the time it takes for data to pass from one point on a network to another and jitter refer to the delay variation.

¹⁵ Packet loss refer to data not reaching their destination after being transmitted across a network.

redundant connections to ensure alternatives are available in case of failure. Overall, a Class of Service (**‘CoS’**) determines the quality of service for different types of data or for different customers. Currently there are many SPs supplying wholesale LL services in Ireland, including SFG/Enet¹⁶, Eircom, SIRO and Virgin Media.

- 2.6 Wholesale LL services allow SPs to provide retail LL services (and other associated services) that they would not otherwise be capable of providing through the use of their own network. For example, a SP may wish to provide retail LL services to a customer’s premises, but if this premises is not connected to its network and the cost of building out its network to this location is too expensive, this SP may elect to purchase a wholesale LL from another SP in order to provide its own retail LL services at this premises.
- 2.7 WDC services also allow a SP to extend its network by establishing a new network point of presence (**‘POP’**) in an area and using third party LLs to connect this POP to its closest pre-existing nodes or network. It may subsequently build out its own network to directly connect this POP when it has established sufficient concentrations of customers in this area to commercially justify this network expansion.
- 2.8 Similarly, wholesale LLs are used by Mobile Network Operators (**‘MNO’**) to facilitate connection between their base stations (or high-sites) and their core networks (“Mobile Backhaul”). For the purpose of this market review, only Mobile Backhaul services purchased from other SPs are considered part of the relevant WDC markets as they are contestable. Self-supplied Mobile Backhaul services are not contestable and are therefore not part of the wholesale market. ComReg notes that many NRAs include Mobile Backhaul in the definition of the WDC market, on the basis of growing demand, its substitutability with other dedicated capacity services, and, in some countries (e.g. Austria, Slovenia, Croatia, UK), the specific need to support 5G rollout¹⁷.
- 2.9 WDC services are also commonly resold at the wholesale level whereby SP ‘A’ purchases a LL input from SP ‘B’ and sells this onto SP ‘C’. Such a resale could also be augmented by SP ‘A’ providing additional connectivity to the purchased LL before selling it on. For example, if SP ‘A’ owns a network to

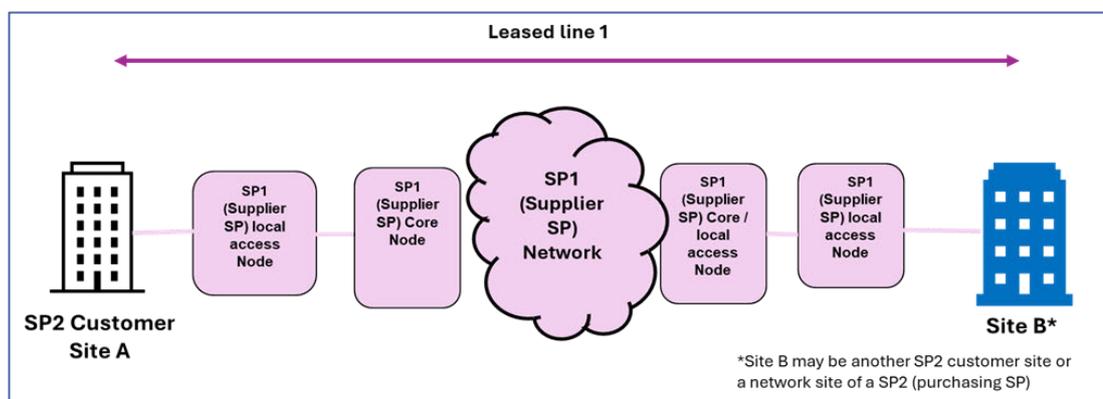
¹⁶ As discussed further in section 3.4.5 below, Speed Fibre Group Limited has acquired elements of BT’s business, the result of which means that BT will no longer be supplying wholesale LL services.

¹⁷ BEREC input to the EC’s consultation on the review of the Recommendation on Relevant Markets. These NRAs include Austria, Belgium, Croatia, France, Germany, Greece, Ireland, Poland, Portugal, Slovakia, Slovenia, Spain and the UK.

Cork, it can buy a local “tail” in Cork to connect to a local customer premises and then sell the entire end-to-end LL connection to SP ‘C’.

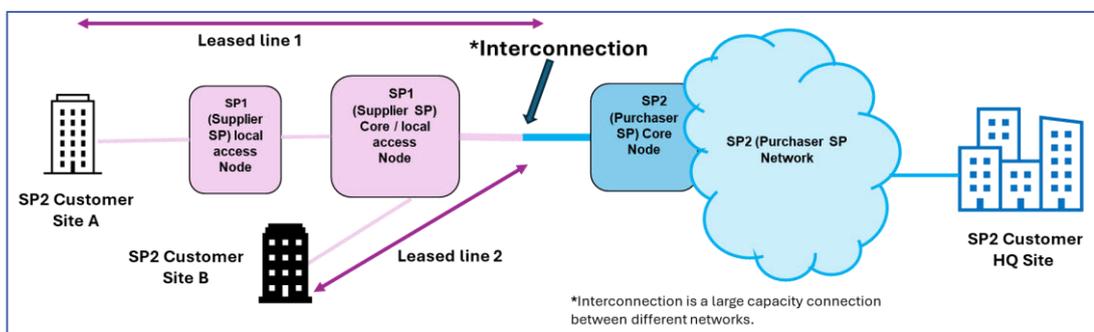
- 2.10 Retail LLs are used by businesses to provide a wide variety of retail services such as connectivity between business sites and company headquarters via a Wide Area Network (‘WAN’). Retail LL services play a vital role in enabling the provision of Information and Communications technology (‘ICT’) services to medium and large sized businesses and public service organisations. Such businesses include multi-national corporations, data centres, financial and other retail branch networks, as well as public sector institutions (e.g., hospitals, Government departments, educational facilities).

Figure 1: Point to Point Based WDC LL Configuration



- 2.11 In general, there are 2 basic types of LL services, namely point-to-point LLs (see Figure 1 above) and interconnection based LLs (see Figure 2 below). The point-to-point service is the most basic arrangement, where the LL is delivered entirely on the network of the supplying SP, (SP1). It connects the 2 sites of the customer of a purchasing SP, (SP2). In some cases, one site may be a network site of SP2. The retail equivalent is where a retail customer purchases such a connection directly from a SP.

Figure 2: Interconnection based WDC leased lines configuration

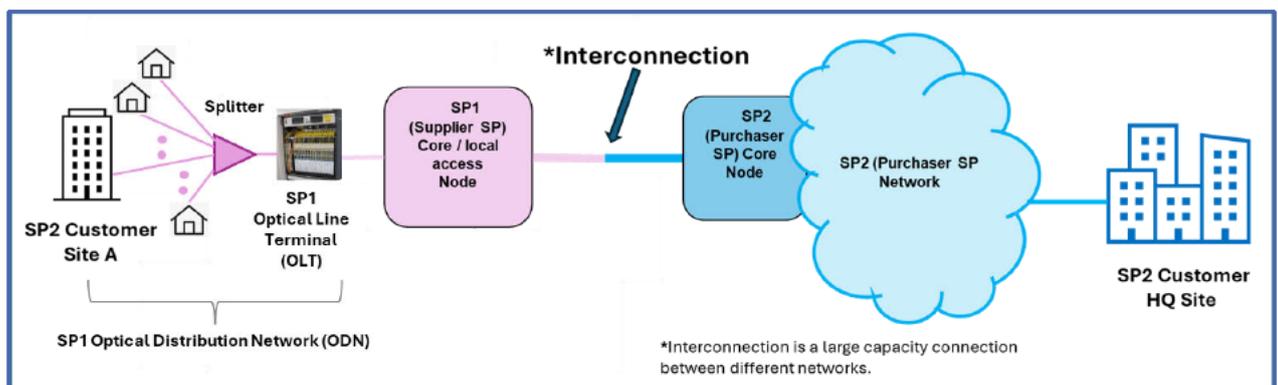


- 2.12 With the interconnection based service set out in Figure 2 above, a purchasing SP (SP2) purchases an access wholesale LL (including a logical service where applicable) and an interconnection service from the supplying

SP (SP1), that it uses, in combination with its own network infrastructure, to deliver the end-to-end LL service to its retail customer. Figure 2 above illustrates the example where the two LLs are provided by SP1 to SP2. These LLs are used to connect to 2 retail customer sites, namely Customer Site A and Customer Site B. For the Customer Site A, the connection also incorporates a backhaul element, between the local access nodes and the core network nodes. For Customer Site B, no backhaul element is required. Both wholesale LLs are provided by SP1, but these are handed over to SP2 at a point of interconnection between their two networks, rather than the final location of the end-to-end service. For this reason, interconnection-based LLs are often referred to as “half-circuits”. The interconnection links where the LLs are handed over are usually of very large bandwidth/capacity and so can convey multiple LLs.

- 2.13 It should be noted that in both scenarios, the customer could be either a retail or wholesale customer i.e., a SP is purchasing a wholesale input from a supplier and providing a service to a downstream third-party SP, or to a retail customer. Additionally, these examples are for illustrative purposes only and there are other configurations possible where SPs use a combination of both service types from multiple suppliers. Some SPs also rent dark fibre from an upstream provider to connect into a premises and then “light” this fibre using its own active equipment to provide a LL service.

Figure 3: Interconnection based WDC delivered using a PON



- 2.14 Additionally, with the deployment of Passive Optical Networks (‘**PONs**’), a number of network providers offer a symmetrical logical service delivered on a PON to enable SPs to combine their own network in order to deliver LL services to business premises.
- 2.15 An example of an Interconnection based WDC leased line delivered using an PON is depicted in Figure 3. The fibre connection to the end-user’s premises (Site A) is terminated on an Optical Network Terminal (‘**ONT**’) and connected to a port on the splitter. A logical connection consisting of a layer 2 ethernet Virtual Local Area Network (‘**VLAN**’) transparent service is provisioned

between the ONT and the Interconnection where the service is presented to the SP (SP2) at the Point of Handover ('**PoH**'). The logical service is symmetrical and available with various CoS options to enable traffic prioritisation. SP2 can use this logical service delivered on the SP1's PON and combine it with its own network to deliver LL services to its end-users.

- 2.16 Such services over a PON network, delivering bandwidth symmetry, CoS, guaranteed high-quality service availability (based on active network management, where required) and business class SLAs, meet the product characteristics of a Leased Line.
- 2.17 A network provider who offers a symmetrical logical service delivered on its PON also has the ability to easily offer point-to-point MI WDC services on its Optical Distribution Network ('**ODN**') by utilising the available spare fibre strands not connected to the PON, or to reallocate unused fibres.

2.2.1. Fee Structure and Uses of Leased Lines

- 2.18 SPs purchasing wholesale LL services typically pay a once-off connection or installation fee which typically depends on the location and bandwidth of the connection from the end-user location to the serving network node of the purchasing SP. Connections costs can be substantial, especially where new network build is required. SPs purchasing wholesale LL services also pay recurring rental charges which generally depend on product characteristics as described in paragraph 2.5 above. There are other scenarios where SPs purchase an overall network solution from another SP, rather than individual LL connections. Such arrangements provide connectivity to a large number of sites and with the price calculated based on inputs such as the number of connected premises, the length of contract and bandwidths required.
- 2.19 Typically, retail LL services are demanded by medium to large businesses in order to support a wide variety of ICT applications, such as access to the internet, private voice and data networks, cloud based services, backup and disaster recovery, and remote monitoring and telemetry applications. For multi-site¹⁸ customers retail LL services are also typically used to build WANs connecting each of their premises. These are used to support Virtual Private Networks ('**VPNs**') that allow organisations to link business premises together, including data centres to support the provision of data services, so that business sites can exchange data and access various corporate applications and internet access. Such networks can also support broader

¹⁸ Organisations with more than one premises such as retail multiples, banks etc.

connectivity solutions which may include remote and nomadic working, using retail or wholesale broadband and mobile data access, where required.

2.3 Legal Basis and Regulatory Framework

- 2.20 The European regulatory framework for electronic communications, recast and set out in the 2018 European Electronic Communications Code ('**EECC**'), provides for the regulation of markets identified to be susceptible to ex ante regulation and which are not effectively competitive.
- 2.21 The EECC was transposed into Irish law by the European Union (Electronic Communications Code) Regulations 2022, SI No. 444 of 2022 (the '**ECC Regulations**')¹⁹.
- 2.22 This market review is being undertaken by ComReg in accordance with the obligation under Regulation 46 and Regulation 49 of the ECC Regulations, which requires that ComReg, taking the utmost account of the 2020 Recommendation²⁰ (including the Explanatory Note to the 2020 Recommendation)²¹ and the SMP Guidelines²², should analyse and define relevant market(s) appropriate to national circumstances, in accordance with the principles of competition law.
- 2.23 The European Commission ('**EC**') refers in the 2020 Recommendation to the WDC market as follows:

*"Wholesale Dedicated Capacity"*²³

¹⁹ European Union (Electronic Communications Code) Regulations 2022 (S.I. No. 444 of 2022) (the '**ECC Regulations**'). The ECC Regulations transpose the EECC.

²⁰ European Commission Recommendation 2020/2245 of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code (the '[2020 Recommendation](#)'), (OJ L 439, 29.12.20, p. 23).

²¹ Explanatory Note accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation, dated 18.12.2020 (see [Commission updated the Recommendation on Relevant Markets | Shaping Europe's digital future](#)) ('**Explanatory Note to the 2020 Recommendation**').

²² European Commission guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services, OJ 2018 C 159/1 (the '[SMP Guidelines](#)').

²³ Market 2 in the annex to the 2020 Recommendation.

2.24 The Explanatory Note to the 2020 Recommendation provides further information about the nature of the WDC market and in this respect notes that:

“.... large and/or technologically advanced accounts cannot be satisfied by shared media technologies or infrastructures and will need dedicated capacity..... High-quality users have typically demanded a number of features that were not available to end-users of mass-market broadband connectivity..... The distinguishing product characteristics of leased lines are their ability to provide dedicated and uncontended connections and symmetrical speeds. Moreover, certain advanced quality characteristics are relevant at the wholesale level, such as (i) guaranteed availability and high quality of service in all circumstances (including SLAs, uninterrupted customer support, short repair times and redundancy), (ii) high-quality network management resulting in upload speeds appropriate for business use and in very low contention and (iii) the possibility to access the network at points which have been defined according to the geographic density and distribution of business rather than mass-market users.”²⁴.

2.25 The 2020 Explanatory Note further notes that:

“The precise definition of the market should however be determined by the characteristics of the service delivered rather than by technological details. Depending on the network topology in a given Member State, there may be a dedicated connection all the way between the exchange and the customer or traffic can be collected already at an aggregation switch and transmitted to the exchange over an interconnection link, which provides scope for overbooking. In these cases, the physical link may not be “dedicated” across the whole path, but may still be distinguished from residential offers, when the service provider is offering “guaranteed” bandwidth, with very stringent quality of service parameters and service level guarantees. Especially when there is limited or no overbooking provided for, point-to-aggregate leased lines may constitute substitutes for PtP leased lines.”²⁵

²⁴ See pages 38 and 58 of the Explanatory Note to the 2020 Recommendation.

²⁵ See page 57 of the Explanatory Note to the 2020 Recommendation.

- 2.26 It should be noted that prior to the adoption of the 2020 Recommendation, the WDC market was broadly identified in the 2014 Recommendation²⁶ as the market for wholesale high-quality access provided at a fixed location. The 2014 Wholesale High Quality Access Recommended Market was identified by ComReg as being susceptible to *ex ante* regulation and was thus regulated by ComReg pursuant to the 2020 Decision.²⁷ Given the 2014 Recommendation has been replaced by the 2020 Recommendation, it is the latter which is now applicable for this current market review.
- 2.27 In line with the “Modified Greenfield Approach” (**‘MGA’**) set out in the Explanatory Note to the 2020 Recommendation,²⁸ ComReg’s analysis of the WDC market examines competition in the relevant market(s), assuming the absence of SMP based regulation, i.e. no *ex ante* regulation exists in the specific WDC market under consideration. However, under the MGA, ComReg should take into account existing market conditions, including other type of regulation affecting the market, as well as expected or foreseeable market developments over the course of the next review period in the absence of regulation.
- 2.28 This approach is used in order to avoid drawing conclusions regarding the competitive structure of a particular market which may be influenced by, or indeed premised on, existing SMP based regulation on that market. Considering how a market may function absent regulation helps to ensure that SMP based regulation is only applied (or withdrawn) in those circumstances where it is truly justified and proportionate.
- 2.29 Where a SP is ultimately designated as having SMP in a market, ComReg is obliged, under Regulation 50 of the ECC Regulations, to impose on such an operator (or maintain where they already exist) such of the obligations set out in Regulations 51 to 56, 58 and 62 of the ECC Regulations as it considers appropriate. Obligations imposed must:
- (a) be based on the nature of the problem identified;
 - (b) be proportionate and justified in the light of the objectives laid down in section 4 of the ECC Regulations; and

²⁶ European Commission Recommendation 2014/710/EU of 09 October 2014 on relevant product and services markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (the ‘[2014 Recommendation](#)’), (OJ L 295, 11.10.2014, p. 79).

²⁷ “Market Review – Wholesale High Quality Access at a Fixed Location, Response to 2018 Further Consultation and Decision, ComReg Document 20/06, 24 January 2020” (the “**2020 Decision**”).

²⁸ See page 11 of Explanatory Note to the 2020 Recommendation.

- (c) only be imposed following consultation in accordance with Regulations 17 and 101 of the ECC Regulations.
- 2.30 Section 12(1)(a) of the Communications Regulation Act 2002²⁹ sets out ComReg's objectives in exercising its functions in relation to the provision of electronic communications networks, electronic communications services and associated facilities, namely:
- (a) to promote competition;
 - (b) to contribute to the development of the internal market; and
 - (c) to promote the interests of users within the European Union.
- 2.31 In addition, Regulation 4(3) of the ECC Regulations sets out the general objectives of ComReg which it must pursue in the context of its tasks specified in the ECC Regulations, which in summary are to:
- (a) Promote connectivity and access to, and take up of very-high-capacity networks;
 - (b) Promote competition in the provision of electronic communications networks and associated facilities;
 - (c) Contribute to the development of the internal market by removing remaining obstacles to, and facilitating convergent conditions for, investment in, and the provision of, electronic communications networks, services and associated facilities and services throughout the European Union; and
 - (d) Promote the interests of the consumers and businesses in the State, by ensuring connectivity and the widespread availability and take-up of very-high-capacity networks.
- 2.32 Regulation 4(5) of the ECC Regulations requires that, in pursuit of its objectives under that regulation and under Section 12 of the 2002 Act, ComReg must apply objective, transparent, non-discriminatory, and proportionate regulatory principles by, inter alia;
- (a) Promoting regulatory predictability;
 - (b) Ensuring there is no discrimination in the treatment of undertakings;

²⁹ Communications Regulation Act 2002 (No. 20 of 2002), as amended (the '**Communications Regulation Act 2002**').

- (c) Safeguarding competition and promoting, where appropriate, infrastructure-based competition, (Regulation 4(5)(c) of the ECC Regulations requires the application of EU law in a technologically neutral fashion);
- (d) Promoting efficient investment and innovation in new and enhanced infrastructures;
- (e) Taking due account of the variety of conditions relating to competition and consumers that exist in the various geographic areas within the State; and
- (f) Imposing ex ante regulatory obligations only where there is no effective and sustainable competition and relaxing or lifting such obligations as soon as that condition is fulfilled.

2.33 ComReg is also required to make certain draft measures accessible to the EC, BEREC and NRAs in other Member States (collectively referred to as the '**European Notification Requirements**') pursuant to Article 32 of the EECR and Regulation 17(4) of the ECC Regulations and to take utmost account of any comments received.

2.34 In addition to conducting a public consultation in accordance with Regulation 101 of the ECC Regulations, pursuant to Regulation 49(1) of the ECC Regulations, ComReg is required to carry out an analysis of relevant markets, where appropriate, in collaboration with the Competition and Consumer Protection Commission ('**CCPC**').

2.35 ComReg has consulted with the CCPC, the European Commission and BEREC prior to the adoption of this Decision as further detailed in Section 2.7 below.

2.4 Previous Review

2.36 The previous review of the WDC market (then known as the market for Wholesale High Quality Access ('**WHQA**') at a Fixed Location) was completed by ComReg in 2020³⁰ (the '**2020 Decision**'). The 2020 Decision defined the following market(s) for wholesale high quality access (together the '**2020 Leased Lines Wholesale Market(s)**')

³⁰ See "Market Review – Wholesale High Quality Access at a Fixed Location, ComReg Document 20/06, Decision D03/20", dated 24 January 2020 ('**2020 Decision**').

- (a) a national **Low Bandwidth ('LB') Traditional Interface ('TI') WHQA Market** consisting of wired analogue, digital and Time Division Multiplexing ('TDM') wholesale LLs with bandwidths ≤ 2 Mbit/s;
- (b) a national **High Bandwidth ('HB') TI WHQA Market** consisting of wired TDM wholesale LLs with bandwidths > 2 Mbit/s; and
- (c) four separate geographically differentiated Modern Interface ('MI') **WHQA Markets** consisting of all wired Ethernet First Mile ('EFM'), Ethernet, Wavelength Division Multiplexing ('xWDM') (and other modern interfaces) LLs of any bandwidth, in particular:
 - (i) an '**Area 1 MI WHQA Market**' consisting of all wired EFM, Ethernet, xWDM (and other modern interfaces) LLs of any bandwidth, with this market corresponding to an identified specific set of 1,582 Work Place Zones ('WPZs')³¹ which covered approximately 58.4% (4,950) of wired MI WHQA connected premises in the State;
 - (ii) an '**Area 2 MI WHQA Market**' consisting of all wired EFM, Ethernet, xWDM (and other modern interfaces) LLs of any bandwidth, with this market corresponding to an identified specific set of 1,998 WPZs which cover approximately 41.6% (3,523) of wired MI WHQA connected premises in the State;
 - (iii) an '**Area 3 MI WHQA Market**' consisting of all wired EFM, Ethernet, xWDM (and other modern interfaces) LLs of any bandwidth, with this market corresponding to an identified specific set of 1,153 WPZs;³² and
 - (iv) an '**Area 4 MI WHQA Market**' consisting of all wired EFM, Ethernet, xWDM (and other modern interfaces) LLs of any bandwidth, with this market corresponding to an identified specific set of 2,486 WPZs.³³

³¹ WPZs are an administrative unit created by Ireland's Central Statistics Office ('CSO') and are designed to capture 'daytime population' of areas. The daytime population includes everybody who indicated they worked or studied in the area, along with persons in that area who do not work or study (and so are there during the day). There are 7,219 WPZs in Ireland. Further details on the CSO construct of WPZs are available [HERE](#).

³² There were no connected premises in the Area 3 MI WHQA Market. This market is comprised of the relevant geographic areas that have at least 2 alternative networks (other than Eircom) present or were completely surrounded by Zone A geographic areas.

³³ There were no connected premises in the Area 4 MI WHQA Market. There were, however, less than 2 alternative networks (other than Eircom) present in the relevant geographic areas that comprised this market.

- 2.37 ComReg found that:
- (a) Eircom had SMP in the Low Bandwidth TI WHQA Market;
 - (b) No SP had SMP in the High Bandwidth TI WHQA Market;
 - (c) No SP had SMP in the Area 1 MI WHQA Market;
 - (d) Eircom had SMP in the Area 2 MI WHQA Market;
 - (e) No SP had SMP in the Area 3 MI WHQA Market; and
 - (f) Eircom had SMP in the Area 4 MI WHQA Market.
- 2.38 In the 2020 Decision, ComReg found that Eircom has SMP in the Area 2 MI WHQA and Area 4 MI WHQA Markets (together referred to collectively as the '**Zone B MI WHQA Markets**'). ComReg imposed a range of access, non-discrimination, transparency, price control/cost accounting and accounting separation obligations on Eircom in those Markets.
- 2.39 A similar set of obligations were imposed on Eircom in the LB TI WHQA Market where Eircom was also found to have SMP.
- 2.40 In the 2020 Decision, ComReg found that no undertaking had SMP in the Area 1 MI WHQA and Area 3 MI WHQA Markets (together referred to collectively as the '**Zone A MI WHQA Markets**') and the then existing SMP obligations imposed on Eircom were withdrawn in those markets.

2.5 Current Review

- 2.41 Given the time that has elapsed since ComReg's previous analysis under the 2020 Decision and, having regard to market developments, including the publication of the 2020 Recommendation, it is now considered appropriate to carry out a further market review.
- 2.42 For this current market review, ComReg has obtained information from various sources, listed in Section 2.5.1 below. ComReg has also examined the reviews of wholesale LL markets conducted by other European NRAs and has taken account of guidance available from the EC, BEREC and others before arriving at the views set out in this Decision.

2.5.1. Information Sources Relied Upon

- 2.43 In conducting its analysis ComReg has drawn on data from a number of sources, including:

- (a) Information provided by SPs in response to detailed statutory information requests³⁴ issued by ComReg in which both quantitative and factual information on the retail leased lines market and the WDC market was sought. This included statutory information requests issued on 19 June 2020³⁵, 30 April 2021³⁶, 10 February 2022³⁷, 25 July 2022³⁸, 29 June 2023³⁹ and 30 August 2024⁴⁰, (together referred to as the '**Statutory Information Requests**' or '**SIRs**'); The most recent period for which ComReg has LL data is for H2 2024.
- (b) Information provided to ComReg in subsequent follow-up correspondence and discussions with SPs in relation to (a) above;
- (c) Respondents' Submissions to the 2024 Consultation as outlined in Section 2.6 below;
- (d) Information provided to ComReg by SPs for the purpose of its Quarterly Key Data Report ('**QKDR**');
- (e) Information provided by SPs to ComReg through a non-statutory based qualitative questionnaire ('**QQ**')⁴¹;
- (f) Meetings with SPs⁴²;
- (g) Meetings with major public sector customers of retail leased line services⁴³

³⁴ Statutory information requests are issued by ComReg pursuant to its powers under section 13D(1) of the Communications Regulation Act 2002, as amended, the ("Act"), under which ComReg may at any time, by notice in writing, require an undertaking to provide it with such written information as it considers necessary to enable it to carry out its functions.

³⁵ Leased Line data collection for the period October to December 2019.

³⁶ Leased Line data collection for the year 2020.

³⁷ Leased Line data collection for the period October to December 2021.

³⁸ Leased Line data collection for the periods January to June 2022 and July to December 2022.

³⁹ Leased Line data collection for the year 2023.

⁴⁰ Leased line data collection for 2024.

⁴¹ ComReg Wholesale Dedicated Capacity (WDC) Market Review: Service Provider Questionnaire (issued September 2022).

⁴² Including BT, Eircom, Enet, ESBT, Host, NBI, Siro, Three, and Virgin Media.

⁴³ HEAnet and Office of the Government Chief Information Officer ('**OGCIO**').

- (h) ComReg issued a survey ('**2025 Consumer Survey**') to number of customers of retail leased line services, both private and public sector customers, to ascertain views across a range of issues. ComReg also had follow up meetings⁴⁴ with them; The 2025 Consumer Survey was issued to 37 leased line customers, with 16 customers responding. These customers ranged from large corporate companies with hundreds of LL connections to smaller companies, covering a variety of sectors such as high-tech, retail, banking and financial services sectors. The 2025 Consumer Survey questions are published in Annex: 16 and its findings are interwoven as appropriate into this Decision.
- (i) Other information in the public domain.

2.44 ComReg encountered substantial difficulties in gathering complete and accurate information from SPs via the SIRs, with this delaying the market review process, and in turn, the publication of this Decision. Details on this has been set out in an Information Notice, namely ComReg Document 24/36⁴⁵. Examples of such difficulties encountered included providing incorrect or partially incorrect information, no information, or information in erroneous formats, all of which contributed to delays in finalising an accurate and reliable data set necessary to conduct the market analysis. ComReg also experienced similar issues more recently in obtaining information from Eircom regarding its provision of PIA to other operators.

2.45 As indicated in Section 2.5 of the 2024 Consultation ComReg has refreshed some of the data sources in line with the above and this updated data has been taken into account in this Decision. There are revisions to the data used in the 2024 Consultation, including revised data by some Services Providers and this is reflected in the data presented in this Decision. These do not have any material impact on the findings.

2.6 Consultation Process

2.46 ComReg conducted the 2024 Consultation over a nine-week period running from 27 November 2024 to 31 January 2025, in accordance with Regulation 101 of the ECC Regulations. Seven submissions ('**Submissions**') to the 2024 Consultation were received from a range of industry stakeholders (the '**Respondent(s)**'), namely:

⁴⁴ Including HEAnet and OGCI0.

⁴⁵ See [Information Notice: Wholesale Dedicated Capacity Market – Extension of Timeline for Market Analysis | Commission for Communications Regulation](#)

- ALTO⁴⁶;
- BT Ireland ('**BT**');
- Eircom (including a report carried out on its behalf by Through Line Advisors Ltd. and a supplementary submission of 10 September 2025)⁴⁷;
- Enet (including supplementary submissions on 27 February 2025, 21 August 2025 and 1 September 2025)⁴⁸;
- SIRO;
- Virgin Media Ireland ('**VMI**'); and
- Vodafone Ireland Limited ('**Vodafone**').

2.47 Non-confidential versions of these Submissions are published in Annex: 5 of this Decision. Throughout this Decision, ComReg has summarised Respondents' main views, as appropriate, and has carefully considered them before setting out its final position.

2.7 Liaison with Other Bodies

2.48 In accordance with Regulation 49(1) of the ECC Regulations, ComReg has consulted with the CCPC on the market definition exercise and competition assessment set out in this Decision. A copy of correspondence from the CCPC (the '**CCPC Response**') is set out at Annex: 2 of this Decision. The CCPC indicated in its response of 10 October 2025 that it did not object to ComReg's conclusions.

2.49 On XX Month 2025 ComReg commenced the European Notification Requirements and made the corresponding draft measures accessible to the EC, BEREC and NRAs in other Member States ('**Notified Draft Measures**')⁴⁹, pursuant to Regulation 17(4) of the ECC Regulations. ComReg is required to take utmost account of any comments received. The EC provided its response to ComReg ('**EC Response**') on XXXX, a copy of which is set out in Annex: 3⁵⁰. The EC Response indicates that [TO BE

⁴⁶ Alternative Operators in the Communications Market, www.alto.ie

⁴⁷ Although the supplementary submission was received outside the consultation period, ComReg has at its discretion decided to take them into consideration

⁴⁸ Although the supplementary submissions were received outside the consultation period, ComReg has at its discretion decided to take them into consideration. Note that enet is part of the Speed Fibre Group ('**SFG**').

⁴⁹ A non-confidential version of the Notified Draft Measures is available online at www.comreg.ie.

⁵⁰ Case IE/2025/XXXX.

COMPLETED]. As is required, ComReg has taken utmost account of the EC Response throughout this Decision, as set out in particular at Annex: 4 below.

- 2.50 This is a non-confidential version of the Decision. Certain information within the Decision has been redacted for reasons of confidentiality, with such redactions indicated by the symbol ✖. Should an individual SP wish to review **its own** redacted information⁵¹, it should make a request for such in writing to ComReg and indicate the specific paragraph numbers within which the redacted information being requested is contained. ComReg will consider requests for redacted information and would, subject to the protection of confidential information, respond accordingly.

2.8 Regulatory Impact Assessment

- 2.51 The Regulatory Impact Assessment ('**RIA**') is an analysis of the likely effect of proposed new regulation or regulatory change. The purpose of a RIA is to establish whether regulation is necessary, to identify any possible negative effects which might result from imposing a regulatory obligation and to consider any alternatives. The RIA helps identify regulatory options and establish whether proposed regulation is likely to have the desired impact.
- 2.52 This entire document constitutes a RIA in respect of each type of remedy e.g., access obligations, non-discrimination obligations, transparency obligations, accounting separation obligations, the price control and cost accounting obligations and the Statement of Compliance ('**SoC**') obligations. Hence, in this document and in the process of preparing this document, ComReg has carried out a RIA and concluded that the measures set out in this document are necessary.
- 2.53 In carrying out the RIA, ComReg has taken into account the following:
- (a) ComReg's RIA Guidelines⁵²;
 - (b) Policy Directions issued by the Minister for Communications, Marine and Natural Resources to ComReg under Section 13 of the Communications Regulation Act 2002, as amended, on 21 February 2003;
 - (c) [RIA Guidelines](#) issued by the Department of An Taoiseach in June 2009;

⁵¹ Information may not be made available where its provision would lead to a reasonable expectation that it could undermine the confidentiality of another SP's information.

⁵² See [Microsoft Word - ComReg 0756a](#)

- (d) [Guidance from the European Commission](#) and [Best Practice Principles for Regulatory Policy](#) from the Organisation for Economic Co-operation and Development ('OECD').

2.54 The checklist for ComReg in respect of the RIA is:

- (a) Describe the policy issue to be addressed and identify the objectives;
- (b) Identify and describe the regulatory options (i.e. prepare a list of policy options including to make no change to the current policy);
- (c) Determine the impacts on stakeholders (i.e. identify the costs, benefits and impacts of each of the regulatory options);
- (d) Determine the impact on competition (i.e. consider the impact of each option on competition in the market); and
- (e) Assess the impacts and select the best option.

2.55 Hence, the 5 steps of the RIA (above) are reflected for each type of remedy in Section 7.

2.9 Structure of this Decision

2.56 The remainder of this Decision is structured as follows:

- (a) Section 3 provides an overview of ComReg's assessment of the retail leased line market(s) in terms of both their product and geographic scope;
- (b) Section 4 provides a market definition, defining the proposed scope of the WDC market(s);
- (c) Section 5 assesses competition within each of the defined WDC LL market(s), outlining the assessment framework and assessing whether any undertaking operating within such market(s) holds a position of SMP;
- (d) Section 6 outlines the main competition problems which may, absent regulation, occur within the WDC market(s) where ComReg has identified SMP (and related markets);
- (e) Section 7 presents the regulatory remedies to address competition problems in markets where ComReg has identified SMP, namely, in the form of obligations that would be imposed on an undertaking with SMP. Section 7 also outlines the sunrise provisions with respect to certain obligations applying to those WPZs transferring from the 2020 Zone A MI WDC Markets to the Zone B MI WDC Markets defined in this Decision;

(f) Section 8 outlines the various sunset periods applicable for the LB TI WDC Market and WPZs transferring from the 2020 Zone B MI WDC Markets to the Zone A MI WDC Markets.

2.57 A number of Annexes to this Decision give additional supporting analysis and, in some cases, outline the approach and findings in more detail, where they have been condensed for reasons of brevity in the main text. Of particular note is Annex: 1 which contains the Decision Instrument which specifies, in legal form, the decisions arising from this Decision.

Chapter 3

3. Retail Market Review and Assessment

3.1 Introduction

- 3.1 The starting point for the identification of wholesale markets susceptible to ex ante regulation is the analysis of corresponding retail market(s)⁵³. This approach stems from the fact that demand for the wholesale products is usually derived from downstream end-user demand for retail services (although ComReg notes that, in the case of WDC, wholesale demand can also be derived from SPs' network use cases such as backhaul).
- 3.2 In this Section, we firstly give a brief overview of the assessment of the retail markets in the 2020 Decision, followed by setting out the main trends and developments identified in the supply of, and demand for, retail dedicated capacity or LL services since then. We then assess the relevant retail market(s), taking into account demand-side and supply-side substitutability from the end-user's⁵⁴ perspective, based on existing market conditions and the likely trends and developments.

3.2 Overview of Retail Markets in 2020 Decision

- 3.3 In the analysis supporting ComReg's 2020 Decision, it was found that there were sixteen active retail SPs in the retail leased lines markets, with these varying in size, with variations also in the locations within which they provided services. The access media used to provide LLs were wireless⁵⁵, copper and fibre. Many retail SPs used third party wholesale SPs in order to deliver elements of the retail solutions to their customers, while some were acting purely as entirely resellers of wholesale services, having no network of their own. Five retail SPs were primarily active in just the greater Dublin area, with the remaining SPs having national or quasi-national coverage.
- 3.4 In the 2020 Decision ComReg found that there were three separate retail leased line product markets:

⁵³ Para 15, SMP Guidelines.

⁵⁴ The term 'end-user' includes enterprises and public administrations, unless otherwise specified.

⁵⁵ Point to point microwave wireless links.

- (a) a Low Bandwidth ('LB') Traditional Interface ('TI') Retail Market consisting of all wired retail LLs carried over analogue, digital and TDM interfaces with bandwidths of ≤ 2 Mbit/s (the '**Retail LB TI High Quality Access ('HQA') Market**');
 - (b) a High Bandwidth ('HB') TI Retail Market consisting of all wired retail LLs provided over a TDM Interface with bandwidths of > 2 Mbit/s (the '**Retail HB TI HQA Market**'); and
 - (c) a Modern Interface ('MI') Retail Market consisting of all wired retail LLs carried over modern interfaces such as Ethernet, EFM, xWDM and other modern interfaces (the '**Retail MI HQA Market**').
- 3.5 ComReg also found that each market was comprised of LL products delivered solely over fixed media, with point-to-point wireless LLs, broadband and dark fibre excluded from the retail markets. Additionally, the geographic scope of each of the three product markets was national.

3.3 Providers of Retail Leased Line Services

3.3.1. Introduction

- 3.6 Below ComReg explores the main trends and developments in the supply of retail LLs. The competitive pressure from the supply side of the market is influenced by existing retail LL SPs, entry and exit of LL SPs, and the expansion of existing SPs' LL networks. We look at the retail LL SPs, their infrastructure and network presence in the markets, their market shares as measured in terms of LL connected premises, as well as the overall level of retail market concentration.

3.3.2. Providers of Retail LL Services

- 3.7 At the time of the 2020 Decision, ComReg collected data on retail LLs from 16 retail LL SPs. This figure has since increased to 18 as listed in Table 1 below. These SPs provide services using own-network ('**on-net**') infrastructure (i.e. own local access infrastructure and/or use of upstream third party physical infrastructure) and/or services based on other SPs' managed inputs ('**off-net**') (i.e. where SPs use a wholesale leased line provided by a third party supplier to connect between the customer premises and the SP's network) and/or based on use of other SPs' dark fibre.
- 3.8 As can be seen from Table 1, the majority of SPs active in the retail LL market(s) in Ireland are also active in a relevant upstream wholesale WDC

market(s). In addition, other operators such as SIRO, Enet⁵⁶ and NBI are active on a wholesale only basis and are not included in the table below, however their services are often used in the downstream retail market by retail providers.

Table 1: Retail LL SPs

Service Provider	Technologies Used	Presence in a wholesale market	Geographic coverage
AT&T	Ethernet and xWDM/TDM	Yes	Mainly Dublin area
BT Ireland*	Ethernet and xWDM/TDM	Yes*	Quasi-national
CenturyLink Communications	Ethernet and xWDM/TDM	No	Mainly Dublin
Colt	Ethernet and xWDM/TDM	Yes	Mainly Dublin area
Viatel (Digiweb)	Ethernet	Yes	National
Eircom ⁵⁷	Ethernet and xWDM/TDM	Yes	National
EUNetworks	Ethernet and xWDM	Yes	Mainly Dublin area
Fulnett	Ethernet	Yes	National Reseller
Hibernia Atlantic (EXA)	Ethernet and xWDM	Yes	Mainly Dublin area
Host Ireland	Ethernet	Yes	Mainly Dublin area
Magnet	Ethernet and xWDM	No	National
Orange	Ethernet	No	National Reseller
Pure Telecom	Ethernet	No	National Reseller
Three	Ethernet	Yes	National

⁵⁶ Note that Enet and Magnet are part of the Speed Fibre Group. The acquisition of parts of BT's business by Speed Fibre Group is outlined below in section 3.4.5.

⁵⁷ Eircom's network is taken as being near ubiquitous for the purpose of this market review given the national footprint of its under and over-ground infrastructure, as well as its fibre network presence. Other networks are assessed as national where they have established POPs and presence in all provinces and many regional centres e.g. BT and Magnet/Enet etc (this does not however mean they can provide LL services nationally).

Verizon	Ethernet and TDM	Yes	Mainly Dublin area
VMI	Ethernet and TDM	Yes	Quasi-national
Vodafone	Ethernet and TDM	Yes	National
Zayo	Ethernet and xWDM	Yes	Mainly Dublin area

*Note the acquisition of parts of BT's business by Speed Fibre Group is outlined below in section 3.4.5.

3.9 For the purpose of the analysis, LL SPs can be broadly categorised into three types. These categories are based on the extent of the coverage of their own networks and the degree to which they depend on the use of wholesale services provided by other SPs (each scenario may incorporate the use of upstream DF provided by another SP), to deliver their retail and/or wholesale LL services:

- (a) **Own network SPs:**⁵⁸ these SPs provide retail and/or WDC LLs predominantly using their own network and associated infrastructure and, hence, are not heavily reliant on the use of wholesale inputs provided by other SPs when offering retail and/or wholesale LL services. Examples of such SPs currently include Eircom Ltd. t/a Eir or Open Eir ('**Eircom**')⁵⁹ and Virgin Media Ireland Ltd. ('**VMI**').⁶⁰
- (b) **Wholesale LL purchasers:** these are SPs that, in addition to using their own networks, also purchase wholesale inputs in the upstream WDC market from other wholesale LL SPs and use these inputs, in conjunction with their own network inputs, to provide LL services in the retail and/or wholesale markets. Examples of such operators currently include BT Ireland Ltd. ('**BT**')⁶¹ and Vodafone Ireland Ltd. ('**Vodafone**')⁶² although as noted in section 3.4.5 below, BT is effectively exiting the wholesale market following the acquisition of parts of its business by Speed Fibre Group.

⁵⁸ It should be noted that there is no truly independent retail LL SP as all SPs purchase wholesale circuits from other SPs. As such, this list includes those SPs whose retail circuits are predominantly on-net.

⁵⁹ Further information is available at <https://www.eir.ie>.

⁶⁰ Further information is available at <https://www.virginmedia.ie/>.

⁶¹ Further information is available at <https://www.btireland.com/>.

⁶² Further information is available at <https://www.vodafone.ie/>.

- (c) **Resale retail LL SPs:** these are SPs whose supply of retail LL services does not involve any use of self-owned physical networks. These SPs purchase wholesale access from a third party provider and then resell LLs under their own brand. Such operators include AT&T Global Network Services Ireland Ltd. (**'AT&T'**)⁶³ and Fulnett Ltd. (**'Fulnett'**)⁶⁴.
- 3.10 Below ComReg examines the retail LL market taking account of all the different technologies utilised (such as analogue, TDM, Ethernet and xWDM) to provide retail LLs, along with the trends in the supply of these lines. These trends highlight relevant developments when considering whether to define separate retail LL markets.
- 3.11 It should however be noted that with the exception of the discussion on the 'Demand side substitution' (see section 3.5.3 below), data presented only includes retail LLs provided over a wired media (fibre) and excludes retail LLs using the wireless medium. This is due to their exclusion from each of the retail markets defined later in this section. The data below are based solely on observations in the retail market. Many of these retail LLs are provided by SPs using wholesale inputs purchased from Eircom, both regulated (as a result of regulatory obligations under the 2020 Decision) and non-regulated.
- 3.12 Figure 4 and Figure 5 below set out the number of wired (fibre only) LLs sold by SPs and their corresponding market shares, respectively.⁶⁵ The eight SPs with the highest volume of retail LLs (fibre only) are individually identified for each year, with all other SPs outside of the top eight being grouped together under the heading 'Other Operators' ('**OOs**').⁶⁶ These eight SPs are maintained for Figures 6 through 9 also.

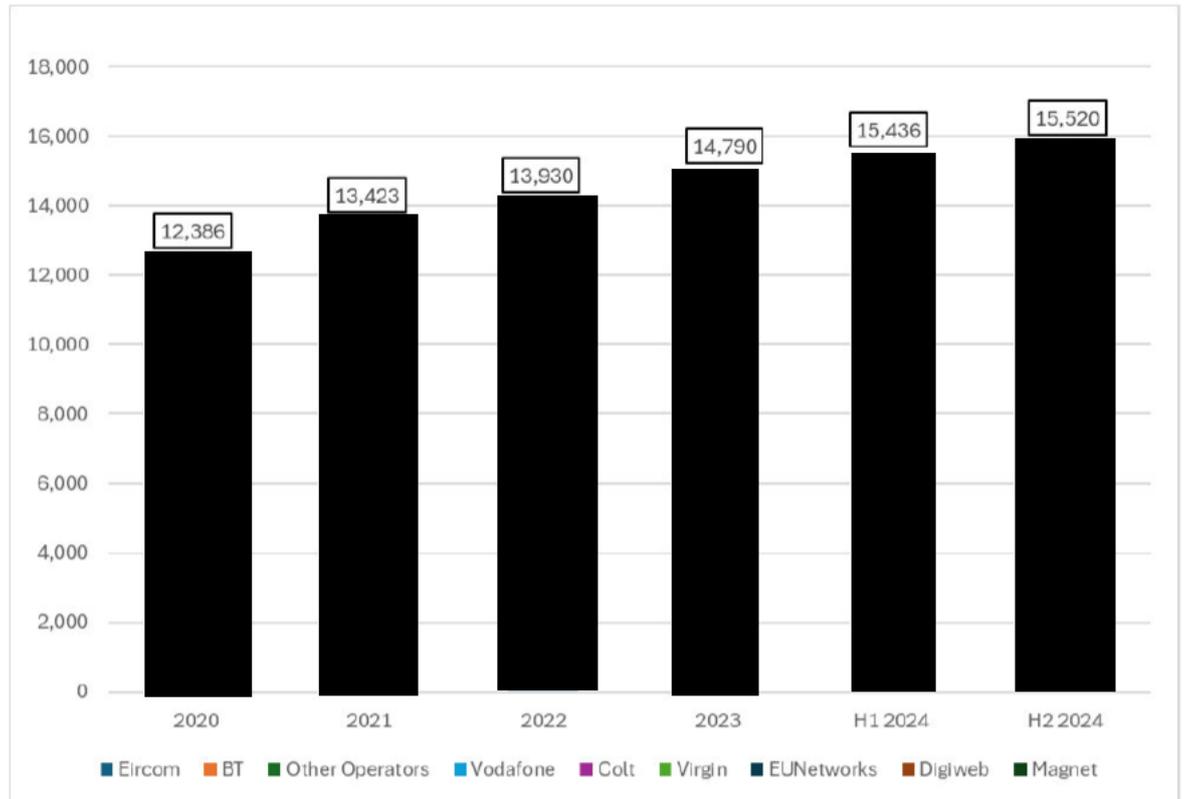
⁶³ Further information is available at [AT&T in Ireland](#).

⁶⁴ Further information is available at [Fulnett in Ireland](#).

⁶⁵ The most recent data available is H2 2024, as H1 2025 data will only be made available to ComReg on 1 October 2025 (after which cleansing, collation and analysis would be required).

⁶⁶ OOs include the following SPs: AT&T, CenturyLink, Fulnett, GTT, Host, Orange, Pure Telecom, Verizon, Welltell and Zayo.

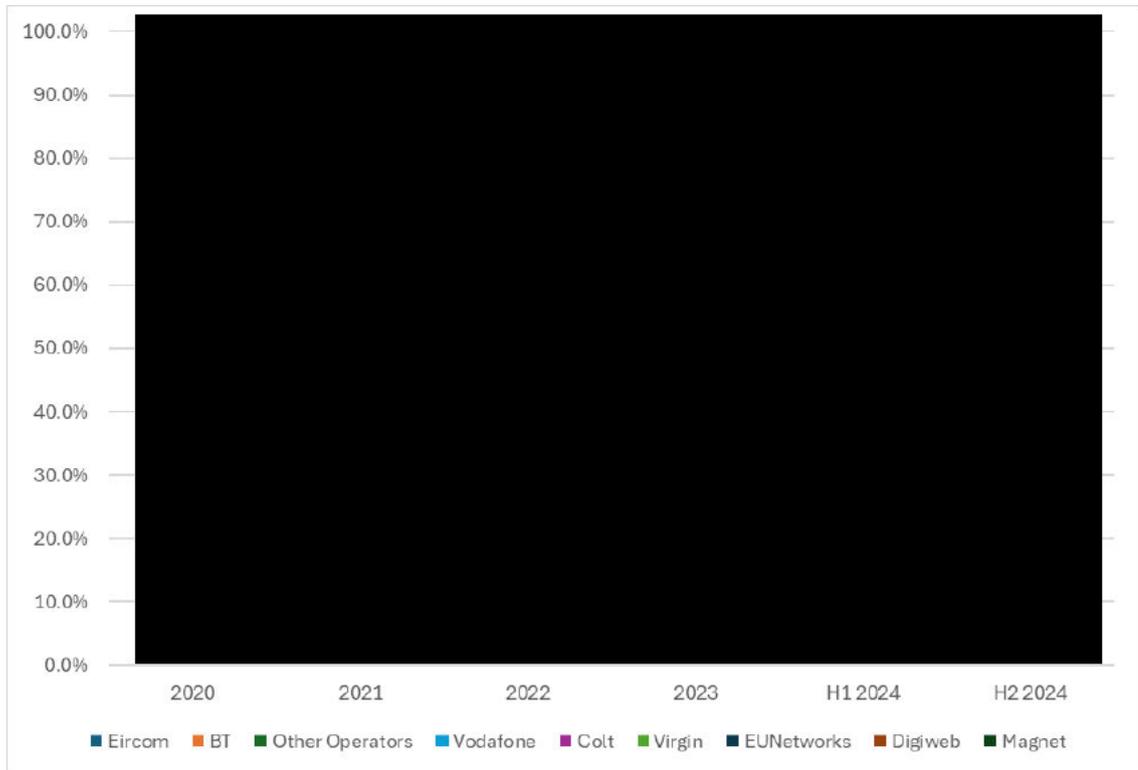
Figure 4: Number of Wired (fibre only) Active Retail LLs by SP (2020 to 2024)⁶⁷ [PARTIALLY REDACTED]



3.13 Figure 4 shows an increase of 3,134 in the total number of wired, fibre only, retail LLs sold between 2020 and H2 2024, an increase of 25.3% over the period. This trend of the total number of fibre retail LLs increasing is a continuation of the trend identified in the 2020 Decision, with this continuation likely being due in part to continued network roll-out from operators and increased retail demand for higher capacity.

⁶⁷ The LLs of Airspeed and Magnet are combined in this graph to correctly reflect the volume of LLs and market share associated with Magnet, following their acquisition by the Speed Fibre Group which combined Magnet with Airspeed [Magnet Networks acquired by state-backed investment fund | Irish Independent](#).

Figure 5: Market Share Percentages of Wired (fibre only) Active Retail LLs by SP (2020 TO 2024) [REDACTED]⁶⁸



3.14 Over the period, we can see that Eircom remained the largest retail supplier of wired LLs, increasing its total LL retail base by [REDACTED], an increase of [REDACTED]⁶⁹. OOs have also seen an increase in the volume of retail LLs sold over the 2020 to H2 2024 period, with an increase of [REDACTED]⁷⁰ sold. Of the other major SPs, Virgin Media had a increase of [REDACTED] in its retail LLs sold, [REDACTED]⁷¹ over the period.

3.15 Magnet shows a significant increase in its retail LLs with its total number of lines growing from [REDACTED] in 2020 to [REDACTED] in H2 2024, an increase of [REDACTED]⁷². This large increase in retail LLs came after Magnet was acquired in December 2020, combining its retail LL services with those of Airspeed⁷³ and becoming part of the Speed Fibre

⁶⁸ Note the figures shown are in the presence of SMP regulation under the 2020 Decision.

⁶⁹ Between 20% and 30%.

⁷⁰ Between 80% and 90%.

⁷¹ Between 0% and 10%.

⁷² Over 100% increase.

⁷³ [Magnet Networks acquired by state-backed investment fund | Irish Independent.](#)

Group, with this group also owning the wholesale-only operator Enet. As a result, Magnet's volume of LLs saw a significant increase since the 2020 Decision, following it becoming part of the Speed Fibre Group. As discussed in section 3.4.5 the acquisition of parts of BT's business by Speed Fibre Group Limited would be expected, once integrated, to lead to changes in Magnet's retail LL figures.

- 3.16 Despite the increases outlined above, the number of retail LLs sold decreased for Vodafone and BT, Vodafone dropping by [X ██████████ ██████████ X]⁷⁴, while BT saw a decline of [X ██████████ X]⁷⁵ in their total number of retail LLs since 2020. Colt's retail LL base saw an increase over this period, with its total number of leased lines increasing [X **Colt:** ██████████ X]⁷⁶ increase in their total number of lines). Colt's increased volume of LLs is predominantly due to their acquisition of Lumen Technologies in 2022⁷⁷.
- 3.17 This period has also seen the growth of Digiweb in the market, with the operator selling [X ██████████ X] retail LLs in H2 2024, a [X ██████████ X]⁷⁸ increase on their total of [X ██████████ X] leased lines in 2020. Alongside Digiweb's significant growth in the market, this period also saw the slight increase of EUNetworks' wired leased line sales, rising from [X ██████████ ██████████ ██████████ X] by H2 2024, a [X ██████████ X]⁷⁹ increase in the total number of lines since 2020.
- 3.18 Figure 5 shows that Eircom's market share over the period 2020 to H2 2024 relatively remained stable, moving from [X ██████████ X]⁸⁰. Magnet experienced the largest increase in market share over this period, increasing from [X ██████████ X]⁸¹. Digiweb also experienced an increase in market share over this period, increasing from [X ██████████ X]⁸². OOs also experienced an increase in their market share,

⁷⁴ Between 30% and 40%.

⁷⁵ Between 10% and 20%.

⁷⁶ Between 30% and 40%.

⁷⁷ 'Lumen Enters into Agreement Regarding Divestiture of EMEA Business to Colt Technology Services' [Lumen Enters into Agreement Regarding Divestiture of EMEA Business to Colt Technology Services for \\$1.8B - Colt Technology Services](#). Under the 2020 Decision, Lumen data was accounted for in the OO category.

⁷⁸ Over 100% increase.

⁷⁹ Between 0% and 10%.

⁸⁰ Between 20% and 30%.

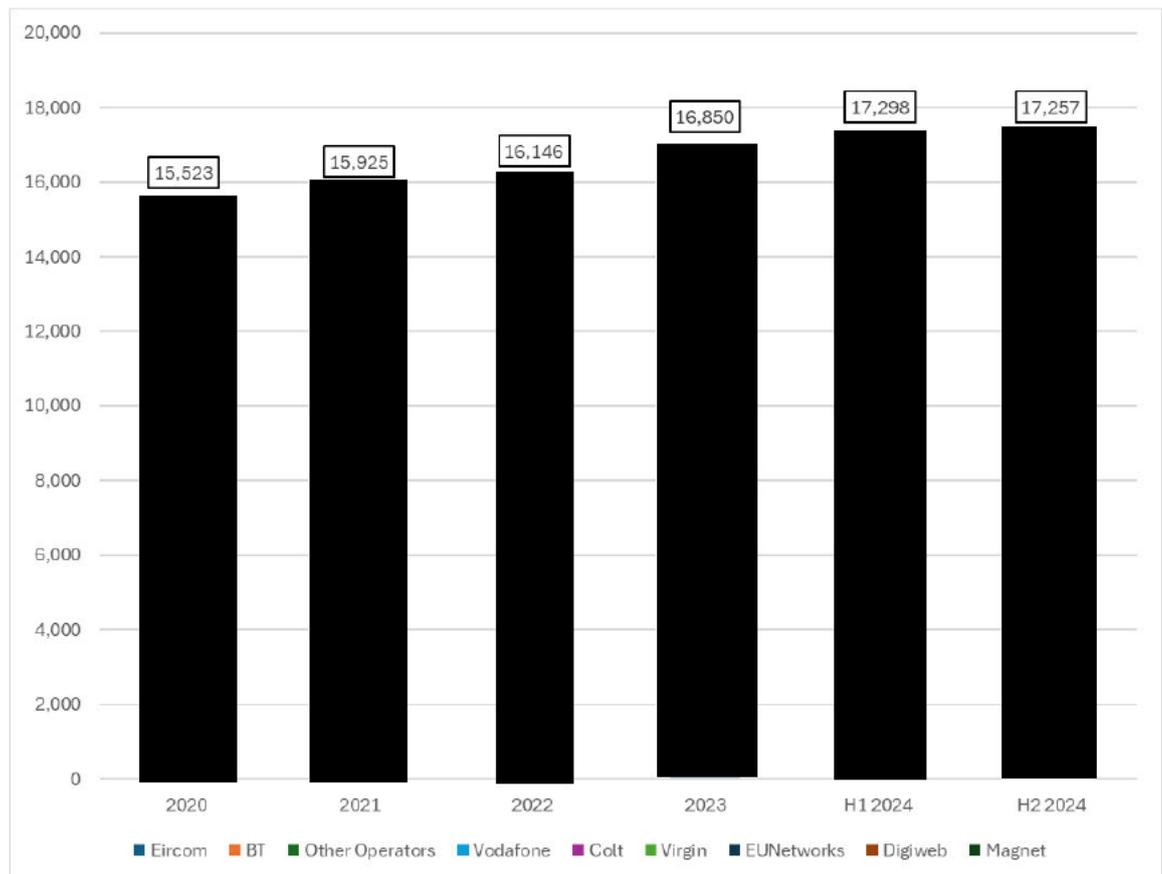
⁸¹ Between 0% and 10%.

⁸² Between 0% and 10%.

rising by [REDACTED]⁸³ during this period. This increase in OOs' market share was partly due to Orange and Pure Telecom entering the market.

3.19 Figure 6 and Figure 7 below⁸⁴ are comprised of retail LLs which are provided over a wired medium, that is to say, all LLs which are delivered to retail customers over either a copper or fibre medium.

Figure 6: Number of Wired Active Retail LLs by SP – including copper based (2020 to 2024)⁸⁵ [REDACTED]

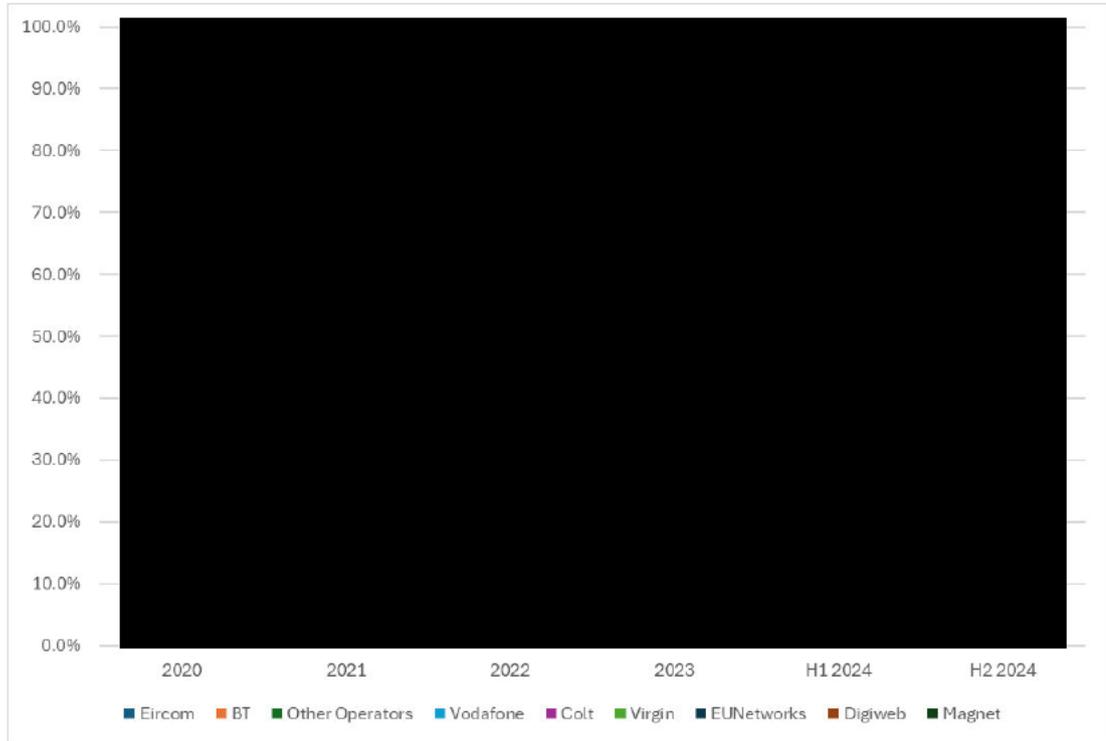


⁸³ Between 0% and 10%.

⁸⁴ The LLs of Airspeed and Magnet are combined in these graphs to correctly reflect the volume of LLs and market share associated with Magnet, following their acquisition by the Speed Fibre Group which combined Magnet with Airspeed [Magnet Networks acquired by state-backed investment fund | Irish Independent](#)

⁸⁵ It should be noted that during the 2020-2021 period, different SPs reported the data slightly different which may have an effect on the number of retail LLs reported for that period.

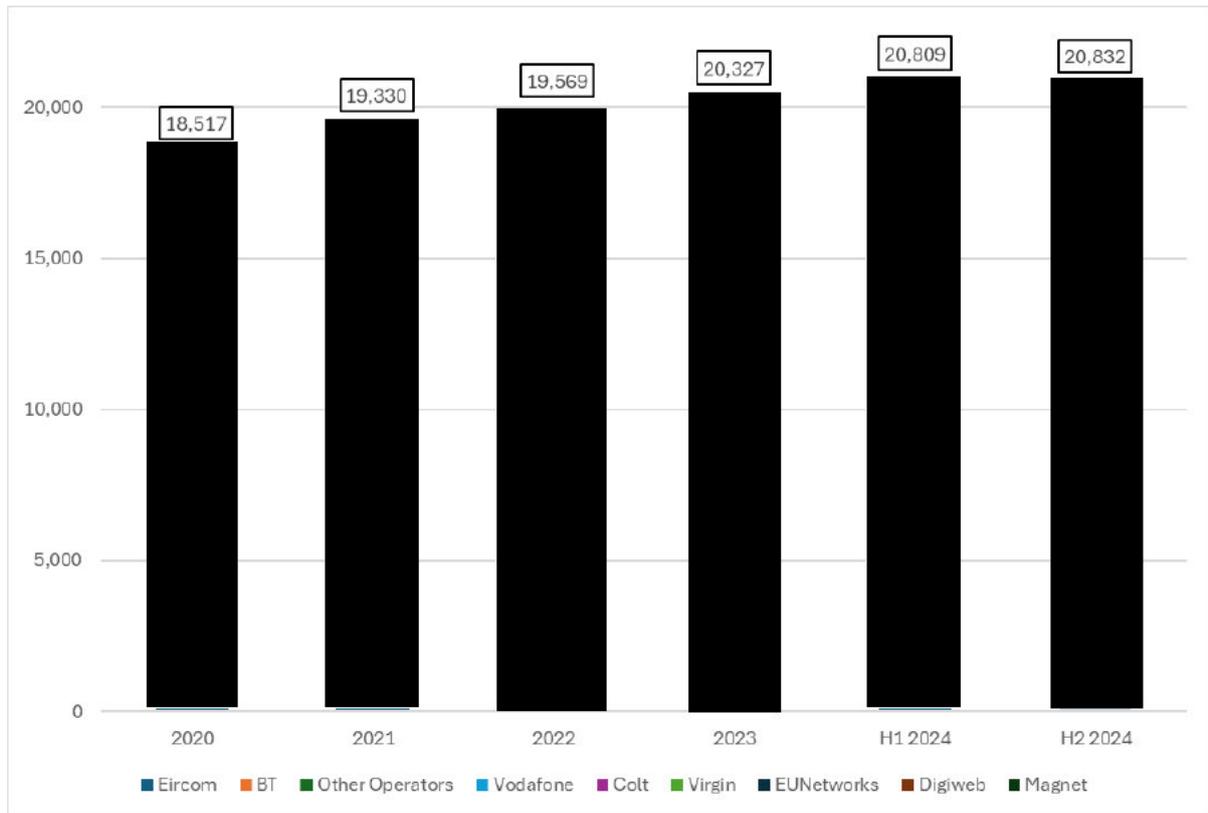
Figure 7: Retail Market Shares of Wired Active Retail LLs by SP – including copper based LLs (2020 to 2024) [X REDACTED X]



- 3.20 Comparing Figure 4 to Figure 6, it can be seen that when copper LLs are included in the retail market figures, there is a far greater number of LLs in 2024 than in 2020. However, the relative increase in volumes has reduced by H2 2024. This reduction is predominantly due to the reduction of copper and other TI based LLs, as discussed in subsection 3.4.1, alongside the continued rollout of fibre by SPs and take-up of fibre based LL retail services.
- 3.21 Looking at SPs’ market shares when all wired LLs are included (Figure 7), it can be seen that Eircom’s market share, although higher in comparison to fibre only, has decreased over the period. This difference is due to a decline in demand for copper LLs given the availability and increasing take-up of fibre LLs. As a result, Eircom’s market share in the wired fibre and copper based retail LLs market has fallen over this period. Apart from Eircom, the inclusion of all wired (fibre and copper) LLs does not overly impact the market shares of the other SPs, mainly given the tendency for such networks to have a lower number of copper LLs.

3.22 Figure 8 and Figure 9 below⁸⁶ are comprised of retail LLs which are provided over both wired and wireless media, that is to say, all LLs which are delivered to retail customers over a copper, fibre or wireless medium.

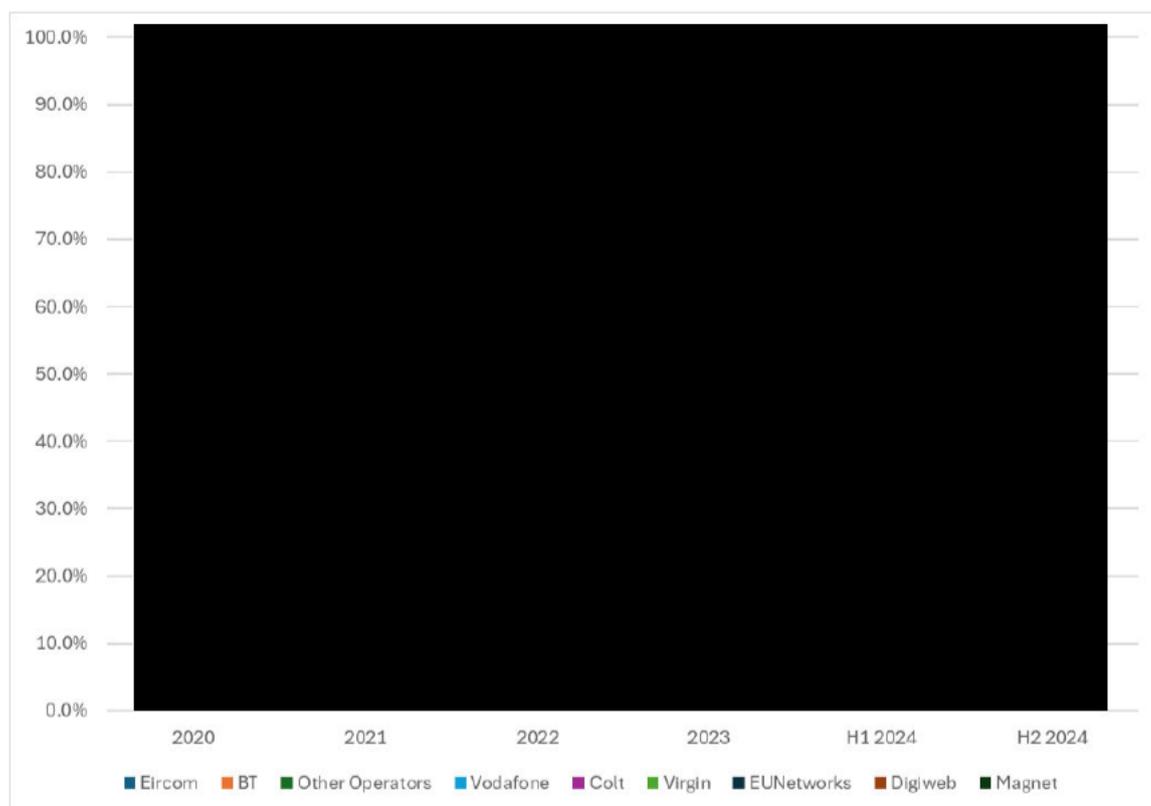
Figure 8: Number of Wired and Wireless Active Retail LLs by SP (2020 to 2023)⁸⁷ [X PARTIALLY REDACTED X]



⁸⁶ The LLs of Airspeed and Magnet are combined in these figures to correctly reflect the volume of LLs and market share associated with Magnet, following their acquisition by the Speed Fibre Group which combined Magnet with Airspeed [Magnet Networks acquired by state-backed investment fund | Irish Independent](#)

⁸⁷ It should be noted that during the 2020-2021 period, different SPs reported the data slightly different which may have an effect on the number of retail LLs reported for that period.

Figure 9: Retail Market Shares of Wired and Wireless Active Retail LLs by SP (2020 to 2024) [REDACTED]



- 3.23 Finally, looking at Figure 8, with the inclusion of wireless, we can see that the volume of LLs increases (20,832 wired and wireless LLs in H2 2024 versus 18,517 in H2 2020). However, it should be noted that the percentage increase for fibre LLs between 2020 and 2024 is 25.3% whereas for wireless LLs it is less at 19.4%.
- 3.24 It is worth noting that a larger proportion of wireless LLs are provided by the smaller retail service providers, and this is reflected in the increase of the OOs' market share in Figure 9. Comparing Figure 8 to Figure 9, it can be seen that OOs' market share, when wireless is included, is between 2% and 5% greater over the three year period, indeed in H2 2024, approximately 32% of wireless LLs are provided by smaller retail SPs.

3.3.3. Conclusion

- 3.25 The retail LLs market in Ireland is characterised by a large number of LL SPs that vary in size, with ComReg having collected data from 18 different SPs in this market. These SPs can be broken down into different infrastructure categories:
- (a) **Own network SPs** who predominantly use their own network such as Eircom;

- (b) **Wholesale LL purchasing SPs** who purchase wholesale inputs in conjunction with their own network such as BT, Verizon and Vodafone; and
- (c) **Resale retail LL SPs** who do not involve the use of their own physical network such as Fulnett.

3.26 Figure 9 above provides an illustration of the volumes and market shares in the retail LLs market when various local access technologies are included. In Subsections 3.4.1 and 3.5.7 below, ComReg outlines the reasoning behind not including TI (copper) and wireless LLs in the retail LL market. Despite this, these figures are still informative in illustrating the dynamics within the retail LLs market.

3.27 The retail LLs market data (wired fibre only retail market) shows that, in the presence of SMP regulation under the 2020 Decision:

- (a) The market share of LLs of the incumbent, Eircom, has been relatively stable over the period, [~~]⁸⁸ in 2020 to [~~]⁸⁹ in H2 2024; and~~~~
- (b) The largest increase in market share was for Magnet, rising from [~~]⁹⁰ over the period following the 2020 Decision; and~~
- (c) There was an increase in the market share of the OOs, whose combined market share increased from [~~]⁹¹ over the years following the 2020 Decision; and~~
- (d) Digiweb also had a significant increase in its market share, moving from [~~]⁹² in 2020, to [~~]⁹³ in H2 2023.~~~~

3.4 Retail Market Trends and Developments

3.28 This Section examines both demand-side and supply-side trends in the retail LLs market. We find that developments identified in the 2020 Market Review are continuing and are likely to continue in the foreseeable future. The most

⁸⁸ Between 20% and 30%.

⁸⁹ Between 20% and 30%.

⁹⁰ Market share moving from 0% to 10% to 0% to 10%.

⁹¹ Between 10% and 20%.

⁹² Between 0% and 10%.

⁹³ Between 0% and 10%.

notable trends and developments, which are discussed in sections 3.4.1 to 3.4.4 below, include the:

- (a) Continued decline in TI LL products, such as TDM and Analogue copper LLs, and the continued increase in the use of MI fibre based LL products;
- (b) Continued increase in bandwidth requirements of MI services;
- (c) Increasing adoption of software-defined wide area network ('**SD-WAN**') solutions;
- (d) Continued ongoing and planned rollouts and/or network upgrades, by several Network Operators ('**NO(s)**'), including Eircom, SIRO, NBI and Virgin Media; and
- (e) Speed Fibre Group's acquisition of BT Communications Ireland Limited.

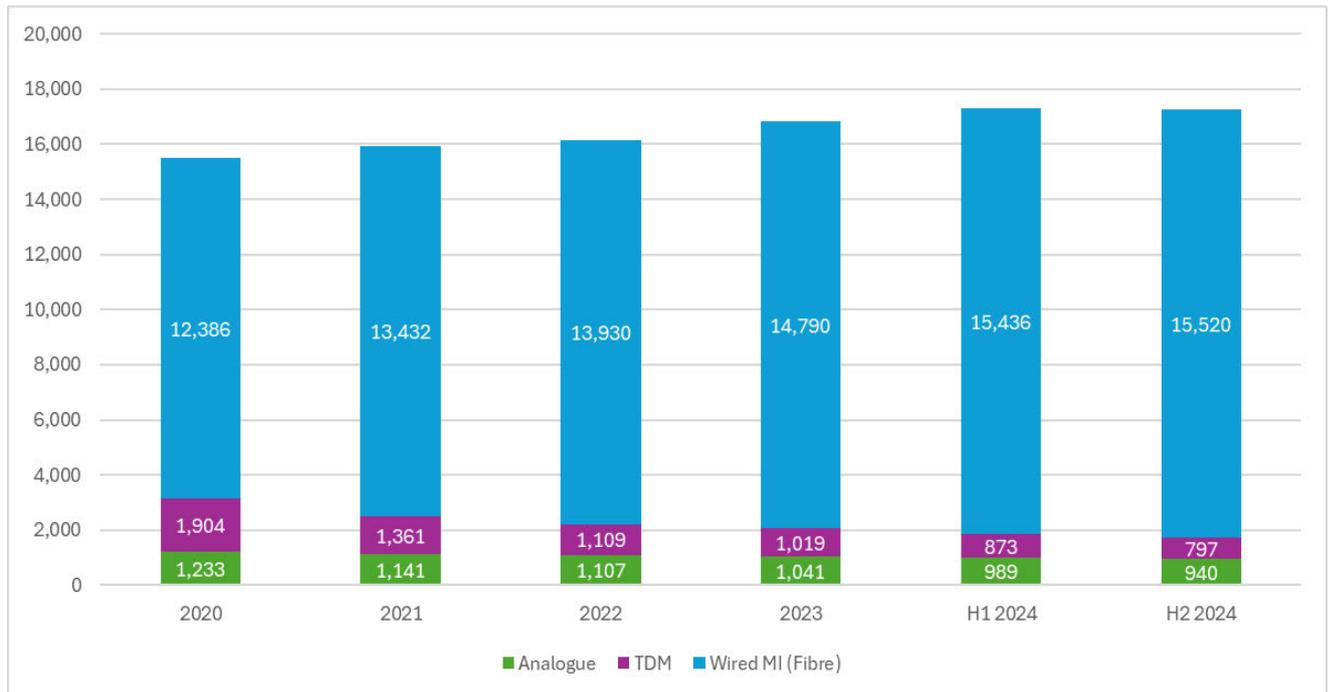
3.4.1. TI to MI Migration

TI versus MI retail LLs

- 3.29 One notable trend identified in the 2020 Decision was an overall increase in demand for MI retail LL services and a steady decline in TI retail LL services. This trend has continued since the 2020 review, as illustrated in Figure 10 below⁹⁴, and is likely to continue into the future. This suggests asymmetric substitution between MI and TI LLs, with retail end-users moving from TI retail LLs to MI retail LLs, but not vice versa.
- 3.30 The medium over which TI LLs are delivered is copper, while MI LLs are delivered over fibre. In addition, for MI LL products the bandwidths which it can deliver range from 1 Mbit/s to 10Gbit/s. In comparison, the bandwidths which can be delivered by TI LL products range from 64Kbit/s to over 100Mbit/s.
- 3.31 There has also been an increase in deployment of Machine to Machine ('**M2M**') mobile SIMs which are increasingly being used for telemetry and monitoring, such as smart electricity metres, intruder and fire alarms. These can often be used to replace both analogue and low bandwidth TI LLs.

⁹⁴ Figure 10 only includes physical circuits.

Figure 10: Volumes of Retail TI and MI wired LLs



3.32 As shown in Figure 10 above, the number of retail LB and HB TI LLs has declined steadily between 2020 and 2024, while wired MI LLs has continued to dominate retail demand, increasing from 12,386 in 2020 to 15,520 in H2 2024, a 25.3% increase. The significant year-on-year increase in the number of wired LLs between 2020 and 2024 (11.2%) may be related to the impact caused by Covid-19. Over this period, there was a significant increase in the demand for Fibre to the Home ('FTTH')/Fibre to the Premises ('FTTP') connectivity due to people working from home, and as a result, SPs increased their rollout of fibre. This rollout enabled SPs to supply more LLs, using both point-to-point fibre and PON networks, as well as FTTH broadband access, and as a result there was a significant year-on-year increase in wired LLs. Overall, MI retail LLs account for 89.9% of all retail fixed LLs in 2024, compared to 79.8% in 2020.

3.33 Within TI LL segments, the markets for HB TI and analogue LLs were deregulated by ComReg in the 2020 Decision. These types of LLs have continued to diminish in volume since then, with only 13 HB TI LLs in place at the end of 2023. Since the 2020 Decision, all TI LLs have seen a steady decline in their numbers, falling from 3,137 in 2020 to 1,737 in 2024, a decline of 44.6%.

3.34 ComReg's meetings with LL SPs and their responses to our QQ have confirmed the trends identified above, including asymmetric substitution from TI retail LLs to MI retail LLs. The vast majority of the QQ respondents agreed that TI LL demand has continued to decline, with Eircom, BT, Enet, Colt, EU Networks, AT&T and Hibernia all stating that TI LLs will be phased out in the

near future. Eircom, BT, Enet, ESBT and Virgin Media have confirmed they will discontinue their use of TDM/SDH TI LL products in the next few years.⁹⁵ In their Submissions, the Respondents broadly agreed that the regulation of TI market was no longer justified, with there being a shift from the declining legacy TI market to fibre, with BT also noting however that some customers have displayed a dependency on legacy technology.

Declining demand for new TI LLs

3.35 Table 2 below lists the number of new TI LLs installed in the last 5 years. It is apparent that new demand for TI LLs has been negligible since 2020, with demand falling to single digits since then, thus indicating that demand has effectively collapsed. In 2018, there were 49 new TI retail LLs installed; while in 2024 there were only 2 new TI LLs delivered, with over 80% of the installed base being in-situ for over 10 years. Approximately 80% of TDM lines are used by utility companies, Local Authorities and other public service organisations.

Table 2: New TI LLs Installed 2018-2023

	2018	2019	2020	2021	2022	2023	2024
New on-net TI LLs	32	36	6	8	2	5	2
New off-net TI LLs	17	7	0	1	0	0	0
Total New TI LLs	49	43	6	9	2	5	2

Conclusions on LB TDM market

3.36 ComReg considers that the LB TDM market is unlikely to be worthy of monopolising in light of the trends in demand. In this respect, ComReg notes:

- (a) The volume of retail LB TI LLs has been declining and is very low. We expect this trend to continue over the lifetime of this market review, with asymmetric substitution to MI LLs continuing;
- (b) Almost [X ██████████ X]⁹⁶ of this demand consists of self-supply by Eircom to its retail arm, with merchant market supply by Eircom to Access Seekers very low;
- (c) New demand for LB TDM LLs has collapsed since 2020. The provision of new orders in each of the years 2020, 2021, 2022, 2023 and 2024 are in single digits, while the demand for new retail off-net LB TDM LLs falling to zero in 2024.

⁹⁵ From Response to QQ, questions 5 and 7.

⁹⁶ Between 80% and 90%.

- 3.37 In light of the above, ComReg is the view that continued regulation of the LB TI market is no longer justified and ComReg does not consider that Eircom has SMP as the market is in decline and is no longer worthy of monopolisation.
- 3.38 Furthermore, we do not consider that it is necessary to definitively conclude on a definition of a relevant LB TI market as the market definition will not alter the view that this market is in terminal decline and is not worthy of monopolisation so as to warrant continued regulation.

3.4.2. Increase in LL Bandwidths

- 3.39 Another trend identified in the 2020 Market Review⁹⁷ was the continuous growth in the demand for higher bandwidth LL services. This trend has continued, with all LL SPs confirming in their QQ responses that there has been a continued increase in bandwidth requirements.
- 3.40 For instance, Eircom noted that [redacted]
[redacted]
[redacted]
[redacted]
[redacted] ⁹⁸. BT noted [redacted]
[redacted]
[redacted] ⁹⁹.
- 3.41 This is not unexpected as the general trend is for continuous growth in the bandwidth requirements of LL customers, alongside the continued growth of data traffic in electronic markets, and communications in general.
- 3.42 The Kantar ¹⁰⁰ report on business services commissioned by BEREC, published in December 2022, noted the increased digitalisation of businesses. This development incorporated the migration of IT services towards the cloud, including the adoption of on-demand access services such as, Software as a Service ('SaaS'), computing power, storage capacity etc. This has accelerated due to the Covid-19 crisis, with the resultant increase in the demand for bandwidth.

⁹⁷ See para 3.91 - 3.103 of the 2020 Decision, [ComReg Document 20/06](#).

⁹⁸ From Eircom Response to QQ, question 5.

⁹⁹ From BT Response to QQ, question 5.

¹⁰⁰ Kantar Report: A study prepared for the BEREC, Study on Communications Services for Businesses in Europe: Status Quo and Future Trends. Published December 2022, Pages 12 and 57.

3.43 Additionally, Enet stated that it has [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] ¹⁰¹, while EUNetworks said that [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] ¹⁰². These responses from SPs, combined with the findings of the Kantar report, indicate that there is a continuous growth in the demand for higher bandwidth LL services. In their Submissions, SIRO, Virgin Media, and Vodafone agreed with the trend highlighting a continued increase in bandwidth requirements. Eircom noted that *“Regarding increasing bandwidth, this may be the case for some MI consumers but the vast majority of circuits are for bandwidths of 100Mb/s and lower and the speed requirements for a number of user types may have plateaued. For example, some user groups such as retail operators of national retail store networks are exhibiting a trend towards meeting their needs for dedicated capacity using Broadband for their store connectivity, sometimes in conjunction with SD-WAN and sometimes not.”*¹⁰³ This issue regarding the substitutability of Broadband with LLs is dealt with in detail in sub-section 4.3.3 below.

3.4.3. Adoption of SD-WAN

- 3.44 With the development of technology, in particular the move to cloud computing and remote working, SPs¹⁰⁴ are reporting a growing trend of SD-WAN adoption over the last few years.
- 3.45 SD-WAN is an advanced software layer 3 network management tool that uses software-defined networking (**SDN**) technology to automatically manage and prioritise traffic in real time across WANs. It can incorporate various types of connectivity over different media, which can include LLs, broadband, and wireless connectivity, and importantly incorporates connectivity routed via the public internet.
- 3.46 SD-WAN operates a centralised control over the user’s network connectivity and connection to services. This could for instance include a business’s data centre and various business sites such as retail, manufacturing and distribution outlets, partner¹⁰⁵ sites and remote home and nomadic workers.

¹⁰¹ From Enet Response to QQ, question 5.

¹⁰² From EUNetworks Response to QQ, question 5.

¹⁰³ Eircom Submission, para 21, page 7.

¹⁰⁴ Including Verizon, BT, Eircom.

¹⁰⁵ These partners could provide such services as booking, ticket sales and shipping services etc.

These various locations and individuals may be connected in the manner of a traditional WAN using LL and closed broadband connections¹⁰⁶, or via tunnelled connections across the public internet.

- 3.47 SD-WAN increasingly uses these tunnelled public internet connections, so specialised connectivity of LL and closed broadband connections are not essential. The internet connectivity can vary from large symmetrical LL to retail broadband and 4 and 5G mobile services.
- 3.48 However, the size of the bandwidth required at sites is still driven by the nature of the business, and the demand for particular services and applications used by the business. The larger demand sites will still require high bandwidth services, offering corresponding high service levels such as 24-hour response times with fast repair targets and high availability; these being product characteristics usually met by LL services. Also, other smaller sources of demand that provide key services to businesses also require such high-performance levels for their connectivity services. The majority of Respondents to the QQ agreed that SD-WAN is one of the main developments in the retail sector in recent years (e.g., Eircom, BT, Viatel, Vodafone and AT&T). Eircom and Vodafone noted that the adoption of SD-WAN may be most significant in large retail networks. Overall, the adoption of SD-WAN has impacted the nature of the design and sale of connectivity solutions at the retail level. This adoption has also continued the trend of the provision of bundled retail solutions by SPs and aggregators, and the shift away from the sale and purchase of discrete LLs or other connectivity by retail users. The overall volume of retail MI LLs has increased since 2020 Decision¹⁰⁷ as has wholesale demand. In their Submissions, Respondents agreed with the increasing adoption of SD-WAN and with ComReg's view on this increased adoption, with the exception of Eircom who said that ComReg had failed to analyse the implications of this for the MI LL market. ComReg disagrees with this view as it has taken account of SD-WAN in the above and elsewhere, including in its consideration of the impact of broadband in sub-section 4.3.3 below.

¹⁰⁶ Business oriented SPs have typically offered broadband connectivity which is part of a closed network i.e. where the users are not connected to the internet but are connected to a private network.

¹⁰⁷ See Figure 4 above.

3.4.4. Network rollout and upgrade

Commercial network roll-out

- 3.49 The growth in infrastructure identified in the 2020 Decision, primarily being in fibre-based networks, has continued, as evidenced by the fibre deployments of various operators. The deployment of fibre-based networks impacts the WDC market as it results in SPs having greater levels of fibre-based infrastructure, in some cases providing SPs with the option to provide LL services to a greater range of premises. It should, however, be noted that much of the Fibre to the premises ('FTTP') rollout has occurred primarily in residential areas rather than commercial areas.
- 3.50 Eircom is currently upgrading its network to FTTP, having passed just over 1,372,550 premises by the end of Q1 2025. Eircom has indicated that it expects to pass 1.9m premises with FTTP by 2027.¹⁰⁸ It has the largest FTTP network in the State and, on a forward-looking basis, will continue to have the largest FTTP network in the State if Eircom and the other SPs meet their announced rollout targets.
- 3.51 SIRO¹⁰⁹, a wholesale only open access wholesale network, is expanding its FTTP network. As of the end of Q1 2025 SIRO had passed 642,449 premises with plans to reach 700,000 premises. According to SIRO it plans to pass over 700,000 premises by 2026¹¹⁰.
- 3.52 In November 2021, Virgin Media announced plans to upgrade its network to FTTP, with a goal to pass 1 million premises nationwide by the end of 2025.¹¹¹ As of the end of Q1 2025, Virgin Media has passed just over 395,728 homes and businesses with FTTP.
- 3.53 In their Submissions, Respondents agreed with the network rollouts outlined, with Enet noting *"that much of the Fibre to the premises ('FTTP') rollout has occurred primarily in residential areas rather than commercial areas"*. The

¹⁰⁸ "With 1.9m premises expected to be passed with FTTH broadband by 2027.....we are well-positioned to expand our customer base through the offering of high quality, high value products over the coming years." .See [eir-Q4-24-FY-24-PRESS-RELEASE-VF.pdf](#).

¹⁰⁹ SIRO is a 50:50 joint venture between ESB and Vodafone Ireland.

¹¹⁰ "To date, SIRO's national network has reached more than 660,000 premises across 143 towns and cities, as part of its €1 billion investment. The company is on track to pass over 700,000 premises by 2026, helping to future-proof connectivity in communities right across Ireland." See <https://siro.ie/news-and-insights/siros-fibre-broadband-network-expands-in-athenry/>.

¹¹¹ <https://www.virginmedia.ie/about-us/press/2021/virgin-media-ireland-announces-national-fibre-network-upgrade/>, article dated 4th November 2021.

market analysis involves the testing of proximity of networks to CPs so therefore this point is captured in the assessment.

National Broadband Plan

- 3.54 The National Broadband Plan ('**NBP**') Contract¹¹² was signed between the Government and National Broadband Ireland ('**NBI**') in November 2019. Pursuant to the contract, over a seven-year rollout period, NBI is scheduled to pass approximately 565,000 premises in what is known as the Intervention Area ('**IA**'). The IA focuses on areas where there is no existing or planned commercial NG network. Although predominantly rural, the IA covers areas in all 26 counties, and all but four metropolitan Dublin constituencies. The IA covers 1.1 million people living and working in over 560,000 premises, including almost 100,000 businesses and farms along with some 679 schools.
- 3.55 The NBP was established to support the provision of broadband access to households and businesses that currently fall outside the reach of existing broadband networks. Under the NBP Contract, NBI is also permitted to provide wholesale LL services.
- 3.56 NBI's rollout commenced in late 2020, passing its first premises in January 2021, with 386,387 premises being passed at the end of Q2 2025,¹¹³ with NBI expecting to complete its roll-out in 2026.¹¹⁴
- 3.57 NBI is a wholesale-only operator that does not compete in retail markets. There are 3 categories of products catered for in the NBI contract, as follows:
- (a) **Category A:** Minimum Required Wholesale Products ('**MRWP**');
 - (b) **Category B:** Additional Required Wholesale Products ('**ARWP**'); and
 - (c) **Category C:** Other Permitted Wholesale Products ('**OPWP**').
- 3.58 Schedules 3.1 and 3.2, alongside Appendix 1 of the NBP Contract,¹¹⁵ capture the details of the NBI products which fall within Category A and Category B.

¹¹² The full details of which, including the contract document are available at [gov - National Broadband Plan Contract \(www.gov.ie\)](http://www.gov.ie) ('NBP Contract'). The contract is subject to a change control procedure and elements may be updated over the project lifetime.

¹¹³ ComReg QKDR data.

¹¹⁴ See <https://nbi.ie/news/events/2025/06/25/nbi-announces-leadership-promotions-to-support-next-phase-of-national-broadband-plan-delivery/>.

¹¹⁵ The details of the contract document are available at [gov - National Broadband Plan Contract \(www.gov.ie\)](http://www.gov.ie) ('NBP Contract'). The contract is subject to a change control procedure and elements may be updated over the project lifetime. It should be noted that Schedules 3.1 and 3.2 are not publicly available due to them being deemed commercially sensitive.

ComReg understands that all Category A and Category B products must be provided in the IA under the NBP Contract¹¹⁶. Meanwhile, all Category C products must be funded entirely by NBI, meaning that NBI will fund the delivery of all OPWP products through revenues generated from them. Category A and Category B products are obligated to be made available under the terms of the NBP Contract and NBI must design products, SLAs etc. with corresponding Reference Offers, Product and Technical documentation, alongside submitting pricing to the Department of Culture, Communications and Sport ('DCCS') for approval prior to launch. Schedule 5.2 of the NBP Contract sets out detailed rules regarding the prices that may be charged and the benchmarking of Wholesale Products against wholesale products outside the Intervention Area.

- 3.59 NBI's LL offering is classed as a Symmetrical Ethernet Service ('SES'), a Category B product under the NBP Contract. ComReg understands that there are two LL SES based products. The first product is a 'local' SES product, which will provide local access to a premises falling within the IA. The local SES product is an ARWP¹¹⁷. The second type is a 'national' SES product is a national backhaul product that can run outside of the IA, and is a Category C product, meaning that it is not subsidised and must be funded by NBI.¹¹⁸
- 3.60 The local SES product, which was launched in Q1 2020, is available in various bandwidths, 1Gbit/s, 2Gbit/s and 5Gbit/s, using XGS-PON technology with a point-to-point version planned for launch in 2026.¹¹⁹ This product provides a Layer 2 ethernet Virtual Local Area Network ('VLAN') transparent service with CoS options (0%, 10%, 20%, 50% Expedited Forwarding ('EF')¹²⁰ options available).
- 3.61 The NBI SES product utilises NBI's PON network to provide leased lines with the characteristics of symmetric bandwidth, guaranteed high-quality service availability (based on active network management) and traffic-based CoS options.

¹¹⁶ Meeting with DCCS on 19 January 2024.

¹¹⁷ *Ibid.*

¹¹⁸ *Ibid.*

¹¹⁹ See NBI's Standard Access Agreement relating to Wholesale InterConnect and Symmetric Ethernet Products and Services and the National Broadband Plan, version 2.3 effective date 1/10/2024 at <https://nbi.ie/service-provider-portal/?id=7b601fd6-bc82-413d-9b1b-ad272c72c194>

¹²⁰ Also referred to as 'Real-time'.

- 3.62 NBI also plans to launch further leased lines services (Transmission services) and enhancements to the SES product, in addition to DF access, as required under the NBP Contract, and as laid out in its published product roadmap.¹²¹

3.4.5. Speed Fibre Group Limited's acquisition of BT Communications Ireland Limited

- 3.63 On 11 April 2025 the CCPC adopted a merger decision clearing the acquisition by Speed Fibre Group Limited ('SFG') of sole control of BT Communications Ireland Limited ('BTCIL') ('Merger Decision')¹²². The acquisition comprises BT's wholesale infrastructure business in the State, including wholesale customers and certain retail corporate customers. Prior to adopting the Merger Decision the CCPC engaged with ComReg in relation to the proposed acquisition and ComReg, with the CCPC, met with the parties involved. The acquisition took effect on 1 September 2025.
- 3.64 SFG has informed ComReg that it will take time for it to complete the integration of BT network infrastructure, systems and processes. ComReg recognises this to be the case and, in view of this, the impact of the rationalisation of the integrated networks and businesses may not be fully known for 1-2 years. A unified network map for the integrated business, post merger, completion is not therefore available.
- 3.65 In view of this, ComReg considers that the most appropriate approach is to utilise the separate BT and Enet network maps but to treat them as one network, which is reflected in the analysis in this Decision. The CCPC's Merger Decision¹²³ notes that the merging parties' networks are largely complementary, suggesting minimum network overlap further supporting ComReg's approach above.
- 3.66 At a retail level, as part of the acquisition, as outlined above, certain retail corporate customers will be transferring to SFG, while others will remain with BT. However, for the historic data periods concerned it should be noted that these are still represented as BT customers in the retail data, noting that BT's retail service were underpinned by a combination of the use of its own network, alongside the purchase of wholesale services from other SPs.

¹²¹ <https://nbi.ie/service-provider-portal/>.

¹²² See CCPC Merger Decision [M.25.018-Public-Determination.pdf](#).

¹²³ See paragraph 57.

3.5 Retail Market Assessment

3.5.1. Introduction

- 3.67 In this Section, ComReg outlines some of the main structural and behavioural characteristics associated with the provision of retail services supplied using upstream WDC inputs.
- 3.68 The European Commission defines a relevant product market as:
- “...all those products and/or services which are regarded as interchangeable or substitutable by the end user, by reason of the products’ characteristics, their prices and their intended use.”¹²⁴*
- 3.69 ComReg is not required to conclude on a precise definition of the retail market(s) in this market review. Rather, the purpose of the retail market assessment is to inform the subsequent assessment of the WDC market in respect of both market definition and the strength of any indirect retail constraints from the related downstream retail leased lines market(s).
- 3.70 The 2020 Explanatory Note explains that *“...the starting point for the identification of wholesale markets susceptible to ex ante regulation is the analysis of the corresponding retail markets”¹²⁵*, indicating that any analysis of a wholesale market must be preceded by an assessment of the competitive conditions in the related retail market, absent regulation, following the Modified Greenfield Approach (**‘MGA’**).
- 3.71 In considering the relevant upstream wholesale markets, ComReg must assess whether any effective direct demand-side substitutes, direct supply-side substitutes or indirect retail constraints exist which would effectively constrain the price setting behaviour of a hypothetical monopolist (**‘HM’**) supplier of WDC services.
- 3.72 For the purpose of examining the retail market(s), as per the MGA, ComReg’s assessment is conducted assuming no regulation of the WDC market, as appropriate¹²⁶. In this regard, ComReg assumes the presence of upstream

¹²⁴ Notice on Market Definition, paragraph 7.

¹²⁵ At pp. 8-9 of the 2020 Explanatory Note.

¹²⁶ When considering the WDC market, in accordance with the MGA, ComReg takes into account any regulation which lies upstream of the WDC market.

regulation of the Physical Infrastructure Access ('PIA') market, on the basis of the analysis set out in the 2024 PIA Decision¹²⁷.

- 3.73 The retail product market assessment considers the following factors:
- (a) An outline of the Hypothetical Monopolist Test and its implementation through the assessment of demand and supply side substitution (discussed in Sections 3.5.2 to 3.5.4 below);
 - (b) An outline of the reasons for selecting retail LLs provided over an Ethernet interface as the retail focal product (discussed in Section 3.5.5 below);
 - (c) An assessment of the substitutability of xWDM based retail LLs with the fibre Ethernet based retail LLs (discussed in Section 3.5.6 below);
 - (d) An assessment of the substitutability of P2P Wireless based retail LLs with the fibre Ethernet and xWDM based retail LLs (discussed in Section 3.5.7 below);
 - (e) An assessment of the substitutability of Business Broadband with the fibre Ethernet and xWDM based retail LLs (discussed in Section 3.5.8 below);
 - (f) An assessment of the substitutability of DF with the fibre Ethernet, xWDM based retail LLs (discussed in Section 3.5.9 below);
 - (g) An assessment of whether products of all bandwidths fall within the same or separate product markets (a bandwidth breaks assessment) (discussed in Section 3.5.10 below); and
 - (h) Impact from Deployment of SDN (discussed in Section 3.5.11 below).

3.5.2. Hypothetical Monopolist Test

- 3.74 In line with the methodology recommended by the European Commission in its **Notice on Market Definition**¹²⁸, ComReg begins its analysis by

¹²⁷ Market Review – Physical Infrastructure Access (PIA) Market Review. Response to Consultation and Decision. ComReg 24/05 (the '2024 PIA Decision').

¹²⁸ As noted in paragraph 23 of the European Commission's Notice on Market Definition (C(2023) 6789 final), demand substitution constitutes the most effective and immediate disciplinary force on the suppliers of a given product. Paragraph 23 also notes further that "*an undertaking's influence over prevailing conditions of sale – such as prices, the level of innovation or the quality offered – depends on the extent to which its customers can easily switch to available products that the customers consider as substitutes*". As noted in paragraph 23 of the Commission's Notice on Market Definition,

considering the narrowest 'Candidate Product' or 'Focal Product' and examines whether this initial narrow product (the 'Focal Product') should be broadened to include other products or services, taking account of demand-side and supply-side substitutability considerations at the retail level.

- 3.75 The European Commission in its 2018 SMP Guidelines suggests a potential approach to assessing supply-side substitution in defining markets:

*“One possible way of assessing the existence of any demand and supply-side substitution is to apply a so-called “hypothetical monopolist” or SSNIP test.”*¹²⁹

- 3.76 This economic analytical framework for defining a relevant product through demand-side substitution analysis consists of an examination of end-user behaviour in response to permanent price increases and is known as the SSNIP Test or Hypothetical Monopolist Test ('HMT'). The SSNIP test consists of observing whether a Small but Significant Non-transitory Increase in Price above the competitive level - taken to be in the range of 5% to 10% - of a Candidate Product supplied by a HM would provoke a sufficient number of end-users to switch to an alternative (substitute) product, such that it would make the original price increase unprofitable.

- 3.77 If a sufficient number of subscribers switching to the alternative product makes the price increase unprofitable, then the alternative product is considered an effective substitute product for the focal product and is included in the relevant product market. The SSNIP Test is carried out for any given number of alternative products, which, by their characteristics, prices and intended use, may constitute an effective substitute to the focal product. If switching to these alternative products is sufficient to also render the SSNIP (above the competitive level) of the focal product (and any included substitute products) unprofitable, then these alternatives are also included in the relevant product market.

- 3.78 Having regard to the above, ComReg first considers whether, from the end-user demand-side perspective, there are any products which might act as an effective substitute for Ethernet LLs over a fibre medium ('**fibre Ethernet LLs**'), with this being ComReg's focal product choice as discussed below. ComReg examines this from two perspectives:

supply-side substitution “can also be relevant for the definition of the relevant market in some cases, namely when it is as effective and immediate as demand substitution and when it leads to similar competitive conditions across the products concerned”. When these conditions are met, the market may be broadened to include the products that those suppliers are already producing.

¹²⁹ SMP Guidelines Paragraph 29.

- (a) Firstly, ComReg considers whether the product characteristics, prices and intended use of potential substitute products are sufficiently interchangeable with those attributes associated with a fibre Ethernet LLs product.
- (b) Secondly, having examined the product characteristics, prices and intended use of any such potential substitutes, ComReg also assesses the likelihood that a sufficient number of end-users might switch to using these potential substitutes in circumstances where the focal product was subject to a small but significant price increase.

3.79 It should be noted that ComReg's primary focus in relation to this market analysis is the local access component, with the 2020 Explanatory Note noting that the cost of deploying point-to-point ('PtP') dedicated capacity fibre is still very high, especially in rural areas so it is unlikely that deployments of alternative infrastructures in those areas will occur, given the high sunk costs involved¹³⁰. Given that the local access component is the point where potential barriers to entry are high due to the significant fixed upfront (and sunk) costs referenced in the 2020 Explanatory Note, ComReg will primarily focus on this local access component in this market analysis.

3.5.3. Demand Side Substitution

3.80 Due to a lack of data on the elasticities of demand for various retail LL products, an empirical SSNIP test cannot be carried out. However, it is noted in the Notice on Market Definition that there is no obligation to apply the SSNIP test empirically, with other types of evidence being equally as valid in informing the market definition¹³¹. Such other types of evidence include product characteristics, prices, functionalities, and intended use¹³². Given this, ComReg will carry out the demand side substitutability tests by examining the following factors:

- (a) **Product Characteristics:** Insight into the substitutability of two products can be gained by comparing the:
 - (i) key product features/characteristics that constitute a retail LL. These include a dedicated symmetric bandwidth/connectivity

¹³⁰ 2020 Explanatory Note, at p.10.

¹³¹ Notice on Market Definition, paragraph 31.

¹³² Notice on Market Definition, paragraph 25.

with low contention¹³³, jitter¹³⁴ and latency¹³⁵, along with high quality SLAs.

- (ii) Consumers' stated preferences on the importance of these features/characteristics.
- (b) **Pricing:** The comparability of prices between LL products is challenging, especially when these products have numerous dimensions to them. The following are a number of price related factors that have an impact on retail consumers of LLs:
- (i) Retail Pricing Structures: Retail LL pricing structures can influence the way in which retail LL purchasers select their SP. ComReg notes that in general, LL services are sold on a price-on-application ('PoA') basis and thus retail prices are not typically publicly available, with any published pricing being indicative only. Typically, charges will involve both connection/installation fees and reoccurring charges. The connection/installation may be influenced by the geographic location and the distance from the end-user premises to the serving network node of the LL supplier. Reoccurring charges would depend on the LL access technology, bandwidth, and the SLA requested. Finally, discounts from bundling LLs with other services, the number of lines purchased, and the duration of the contract can influence the retail price.
 - (ii) End-user awareness of cost: Retail customers are more likely to be sensitive to price changes if they are aware of the retail costs they will incur with their purchasing decisions, than those who are not. ComReg notes that end-users are likely to be more aware of specific costs at the time when they choose a LL SP, typically through a procurement process that involves tendering, which allows them to compare the service costs.

¹³³ 'Low contention' means that more bandwidth is available to the end-user on the network at any given time. A standard low contention ratio for a LLs product would be 1:1, with a standard broadband connection ranging from 5:1 to 50:1.

¹³⁴ 'Jitter' means the variation in the time, generally measured in milliseconds (ms), between packets arriving at a destination, which can be caused by network congestion, timing drift, or route changes.

¹³⁵ 'Latency' means the time it takes, generally measured in milliseconds (ms), for a source to send a packet of data to a receiver. The key causes of latency tend to be propagation delay, serialisation, data protocols, routing and switching, and queuing and buffering.

(iii) End-user sensitivity to price changes: End-user sensitivity to changes in prices is important when assessing the propensity of businesses to switch to alternative services, in particular, in responses to an increase in the price of retail LLs. Such considerations are of relevance to ComReg's assessment of potential retail market substitutes for retail LLs and the assessment of the strength of any indirect constraints imposed from the retail LL market on the wholesale LL market. Retail LLs are often purchased as part of a bundle, namely alongside various applications and services, and the cost of the LL may therefore be a relatively smaller component of the overall telecoms solution and this may make users less sensitive to the cost of the LL component.

(c) **Intended Use**: The use that different LL products are put to by consumers provides another type of insight into the comparability and substitutability of different products. If two products are used for the same or similar purposes, then it is possible that consumers will consider them to be substitutes. If on the other hand, consumers do not perceive a particular product as equivalent to another, then they are unlikely to switch between them in the event of a SSNIP.

3.5.4. Supply Side Substitution

3.81 ComReg also considers supply-side substitution, which the European Commission's Notice on Market Definition sees as being relevant for market definition where suppliers use the same assets and processes to produce related products that are not substitutes for customers, and where this leads to similar conditions of competition across the range of such related products. In such cases, it may be appropriate to include such related products in the relevant product market, provided the constraining effect of supply substitution across the range of products is equivalent to that of demand substitution in terms of effectiveness and immediacy¹³⁶. In considering supply-side substitution, ComReg considers the following factors:

¹³⁶ Notice on Market Definition, paragraph 32.

- (a) **Suppliers with similar production technologies:** these are producers who can switch swiftly from producing one product to the focal product or utilising spare capacity to do so. This is where the alternative supplier has all the relevant assets; only needs adjustment to the production process and/or inputs; and this does not involve significant sunk/irrecoverable costs.
- (b) **Barriers to entry (technical, financial or regulatory):** these are obstacles to the entry of new suppliers to the relevant/focal product market and they can include technical expertise, financial resources required or regulatory requirements, such as licences. While these challenges may not prevent a supplier from entering a market in the longer term, they may prevent immediate entry in the short term to constrain the profitability of a SSNIP.

3.5.5. Focal Product – Fibre Ethernet based Retail LLs

- 3.82 The European Commission’s Notice on Market Definition and SMP Guidelines¹³⁷ (of which ComReg is obliged to take utmost account) provides market definition principles that are useful and applicable when analysing markets, including retail markets. The first step involves identifying the focal product at the retail level, which, once established, can then be used as the basis for assessing potential complement and/or substitute products.¹³⁸
- 3.83 The starting point for this retail market assessment is the retail LL for which demand is highest. The majority of retail LL services are provided using an Ethernet interface and over a fibre medium (65% in H2 2024). It is ComReg’s view that the focal retail product is an Ethernet LL over a fibre medium. ComReg notes that Fibre Ethernet Retail LLs include such services whether provided via point-to-point or PON based technologies. Services provided over PON can deliver bandwidth symmetry, guaranteed high-quality service availability (based on active network management, where required) and business class SLAs which meet the product characteristics of a LL. Further, PON based LL services are sold and marketed as LLs and are priced accordingly and meet customer requirements for LL performance. For

¹³⁷ See paragraph 30 of the SMP Guidelines and Section 1.3 of the European Commission’s Notice on Market Definition.

¹³⁸ As noted in paragraph 23 of the European Commission’s Notice on Market Definition, demand substitution constitutes the most immediate and effective disciplinary force on the suppliers of a product, and paragraph 25 notes further that “...the main approach used by the Commission to define the relevant product market is that of assessing the substitutability of products from the perspective of the customer (demand substitution). Situations of sufficiently strong demand substitution arise when customers would switch easily from the products of the undertaking(s) involved to readily available alternative products.”

example, [redacted], an advanced user, uses [redacted] LL products and makes no distinction between GPON and P2P fibre LLs as long as they meet its product specifications. In its Submission, BT disagreed that PON based Ethernet LL services fall within LL product market, their views are considered in detail in section 4.2 below.

- 3.84 Further to the above, consideration must be given to whether the focal product is a standalone retail LL connectivity product or a connectivity product bundled with various applications and services. The majority of retail LLs are purchased as part of a bundle, namely alongside various applications and services. However, it is important to note that ComReg's primary focus in this market analysis is on the local access. It is the local access portion of a LL where potential competition problems are most likely to arise, as this is where the highest potential barriers to market entry may exist. These barriers are primarily associated with infrastructure that is not easily replicated. Therefore, the local access portions of both standalone and bundled products are included as they make up the local access portion of the market.
- 3.85 It is therefore ComReg's position that a fibre Ethernet LL (whether on a standalone basis or in a bundle with other services) is the focal product against which to assess alternative potential substitute products. If an alternative product is found to be an effective substitute for the focal product, it is included in the relevant product market.

3.5.6. Is a xWDM and other modern Interface LLs an effective substitute for a fibre Ethernet LL

- 3.86 xWDM is a transmission technology originally used by NOs to provide optical fibre links with very high capacity bandwidth within their networks. It is increasingly being used by businesses that have very high bandwidth requirements, particularly for data centres and data storage network applications.
- 3.87 In the 2020 Decision, xWDM and other modern interface LL services were considered an effective substitute for an Ethernet based retail LL and therefore in the same relevant retail product market as fibre Ethernet LLs. In their response to the QQ, LL service providers agreed¹³⁹ with the inclusion of xWDM and other modern interface LLs in the same relevant retail product market as fibre Ethernet LLs.

¹³⁹ Service Providers response to QQ, question 16.

- 3.88 In paragraphs 3.85 to 3.92 below, ComReg outlines the rationale for deciding that xWDM and other very high bandwidth retail LL services may represent an effective retail substitute for fibre Ethernet based LLs.

Demand Side Substitution

Product Characteristics - Comparison to Fibre Ethernet LLs

- 3.89 xWDM equipment typically supports a wide range of service connection interfaces and protocols, including Ethernet, SDH and other modern interfaces such as those associated with data storage applications. Therefore, the qualitative aspects of Ethernet and other very high bandwidth LL services such as xWDM are very similar. The introduction of very high bandwidth Ethernet services that are capable of delivering symmetric speeds of up to 100 Gbit/s has further reduced the gap between the maximum bandwidths that these LL services can deliver, while xWDM systems can deliver multiple wavelengths on a single fibre.
- 3.90 The 2020 Decision indicated that purchasers of very high bandwidth LLs (such as xWDM LLs) tended to value product attributes in a similar manner to purchasers of Ethernet based retail LLs. In particular, service availability, bandwidth, symmetry and contention were mentioned by the majority of Respondents purchasing very high bandwidth LLs as being important or very important service characteristics. The number of xWDM based retail LLs has continued to increase, alongside Ethernet based retail LLs since the last market review, with a total of 1,552 retail lines being provided in H2 2024, a 28% increase on the 2020 figure. As such, ComReg is of the view that the observations detailed above remain valid.

Pricing

- 3.91 Retail pricing information on xWDM is difficult to ascertain with any degree of certainty and/or reliability due to the factors outlined in paragraph 3.76 above (the bundling of services).

Intended Use

- 3.92 High bandwidth retail LLs are used in a similar way to other similar LL services. As noted in paragraph 3.82 above, some end-users such as data centres require specialist high bandwidth applications for connecting storage area networks. In such instances, these end-users typically purchase xWDM or other high bandwidth LL products. Hence, the intended use of xWDM is broadly similar to that of high bandwidth Ethernet retail LLs.

- 3.93 Furthermore, as the demand for higher bandwidth services increases into the future, the substitutability of xWDM (and similar very high bandwidth products) with high bandwidth Ethernet services will likely converge.

Conclusion on Demand Side Substitution

- 3.94 Very high bandwidth LLs such as xWDM and higher speed Ethernet LLs have sufficiently similar product characteristics and are used in a similar way by end-users. The introduction of very high bandwidth Ethernet services that are capable of delivering symmetric speeds of up to 100 Gbit/s has further reduced the differences between Ethernet and other very high bandwidth LLs, such as xWDM based LLs.

Supply Side Substitution

Comparison to Fibre Ethernet LLs

- 3.95 ComReg notes that all SPs providing very high bandwidth MI LL services such as xWDM are also supplying Ethernet services. Thus, in a substitution context, any competitive constraint that may arise from SPs of xWDM and other very high bandwidth retail LL services is already considered in the demand side substitution analysis above.

Conclusion

- 3.96 Having considered the relevant demand side factors including functionality, pricing and consumer usage, as well as relevant supply side factors, ComReg's view is that xWDM and other modern interface LL services are in the same relevant retail product market as fibre Ethernet LLs.

3.5.7. Is an Ethernet P2P Wireless LL an effective substitute for either a Fibre Ethernet or xWDM LL

Introduction

- 3.97 P2P radio links are used mainly by fixed and mobile operators, broadcasters and utilities to provide transmission capacity and networks, as well as provide redundancy and back up for other networks. In providing transmission capacity, using radio rather than cable can be a solution where constraints such as costs, local topography and the need for access to remote rural locations are fundamental considerations.¹⁴⁰

¹⁴⁰ In such scenarios, radio links provide operators with the ability to roll-out rapidly and the capability to install transmission paths as and when required.

- 3.98 The European Commission noted in the Explanatory Note to the 2020 Recommendation that wireless is more a complementary product rather than a substitute product to dedicated fibre connection¹⁴¹, where it stated:

“... wireless technologies are unlikely to be able to replicate dedicated fibre connections because business users do not consider wireless technologies as a substitute but as a complementary service. This complementarity is further reinforced by the fact that the dedicated fibre connections will be increasingly essential for the deployment of wireless technologies to be able to meet the required quality of service.”

Position in the 2020 Decision

- 3.99 In the 2020 Decision, Ethernet P2P radio link based LL services were not considered an effective substitute for retail wired Ethernet or xWDM and other modern interface LL services. This was due to *inter alia* the following factors; the majority of multi-site customers are unlikely to see wireless Ethernet LLs as a substitute for wired Ethernet or xWDM LLs due to a perceived difference in quality between both types of media, resulting in these customers seeing wireless Ethernet LLs as a complementary product rather than a substitute; HEAnet, which manages the ICT needs of the Irish public education sector, including primary, secondary and third level institutions’ connectivity requirements, puts a premium¹⁴², from a procurement perspective, on fibre LLs over wireless LLs; and there is very little switching from wired only to wireless only.

Current Analysis

- 3.100 The majority of SPs in their responses to the QQ did not see any reason to change the conclusion that P2P wireless-based retail LLs were outside the LLs market. Three service providers in their responses to the QQ, Eircom, EU Networks and Verizon¹⁴³, all expressed the view that wireless should be included in the market. Of these, EU Networks stated that it was *“Not quite sure what the reasoning is to exclude wireless LLs as these provide P2P dedicated transmission capacity”*. Eircom expressed the view that wireless should be included due to the growth in wireless links over the past two years and the price competitiveness of wireless against fibre. Eircom also presented examples of tenders by NBI for Strategic Community Points (**SCP**), Tetra and HEAnet which use wireless solutions. Verizon expressed

¹⁴¹ Page 52, Explanatory Note to the 2020 Recommendation.

¹⁴² HEAnet confirmed this premium was 20% in a meeting with ComReg on 17.05.23.

¹⁴³ Note EU Networks or Verizon did not provide a submission to the 2024 Consultation.

the view that wireless P2P could be considered equivalent as it provides wireless P2P as an equivalent offering with the same SLAs.

- 3.101 ComReg notes the following regarding the examples provided by Eircom. The NBI SCP and the associated tenders were designed to develop wireless access points in communities pending its fibre network rollout. They are therefore designed as a second-best service pending to roll-out of fibre and this does not suggest sufficient substitutability. ComReg is aware that [REDACTED]. As noted above, HEAnet, in its tendering competition rules, allocates a premium for fibre over wireless connections i.e., a fibre connection could be 20% more expensive than an equivalent wireless solution and still be awarded the business for a site. HEAnet has also confirmed that there has been a migration to fibre over time, with more than three quarters (78%)¹⁴⁴ of secondary school connections and over 74% of primary school connections being fibre.

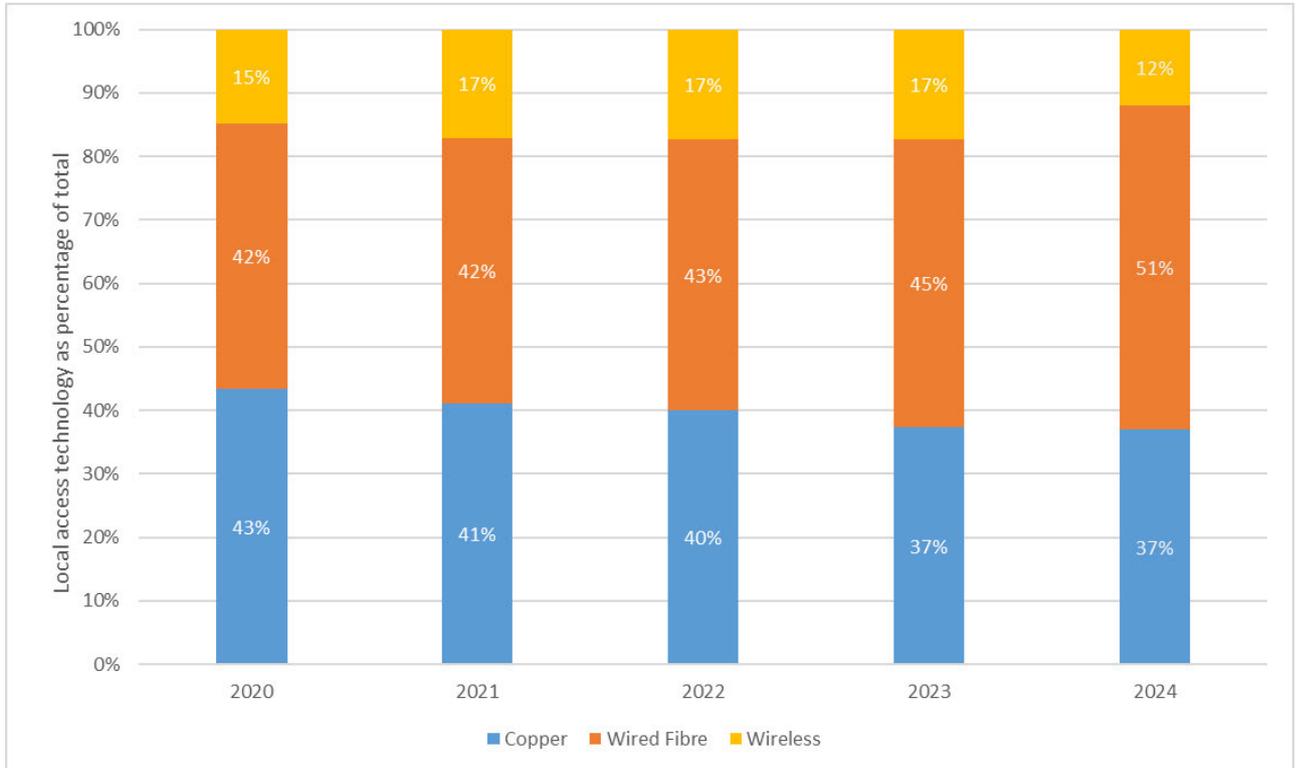
Demand Side Substitution

- 3.102 When the top wireless LLs customers are analysed, the majority tend to be public bodies such as HEAnet, the Department of Justice and the Department of Education. The demand for wireless LLs from these public bodies is influenced by factors such as locations with potentially limited fibre availability, cost considerations & lead-times.
- 3.103 As part of the 2025 Consumer Survey discussed above in paragraph 2.5.1. ComReg examined whether end-users considered wireless to be a substitute. A number of end-users utilise wireless as a backup solution while maintaining a primary wired LL. However, despite this, 14 of the 16 retail end users do not use wireless LLs as a primary connection, with the one other user maintaining a fixed LL back-up. ComReg asked end-user's what their response to a 10% price increase of wired LLs would be. Of the 14 end user respondents who answered this question, 79% of them indicated they would continue to use wired LL with none indicating that they would switch to wireless.
- 3.104 In assessing the level of demand for wireless LLs in the retail sector, seven major retailers' LL purchases were analysed to determine whether wireless LLs are seen as a complement to or an effective substitute for retail fibre Ethernet or xWDM and other modern interface LL services. For the purpose of analysing the major retailers' wireless usage, the following retailers were

¹⁴⁴ In meeting with ComReg April 2025.

included; Dunnes Stores, Tesco, Lidl, Aldi, Musgraves, M&S, and BWG Foods. Looking at Figure 11, it can be seen that wireless local access technology accounts for approximately one sixth of the LLs purchased by major retailers, ranging from 12% to 17% over the period.

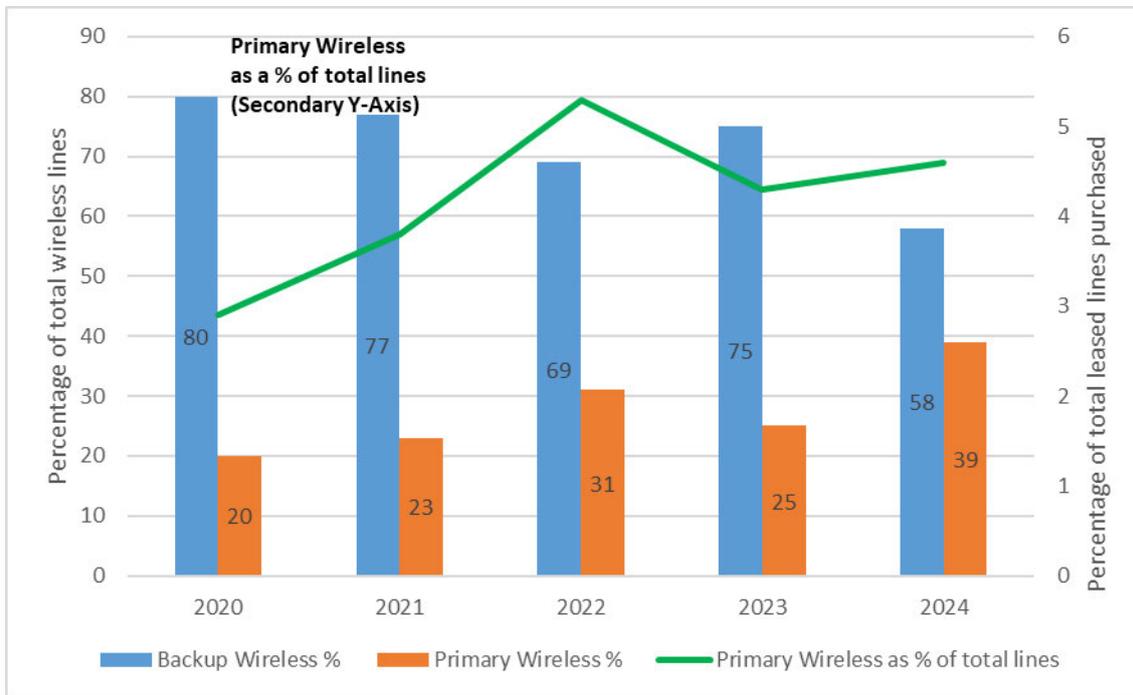
Figure 11: Breakdown of Leased Line local access technology purchased by Major Retailers



3.105 Given the somewhat high percentage of wireless lines being used, it should be noted that a significant proportion of these are purchased by major retailers as backups for their fibre lines, as seen on the secondary Y-axis in Figure 12. This aligns with the position outlined by retail end users in the 2025 Consumer Survey. Although the wireless lines are predominantly purchased for backup, the percentage of wireless lines used as the primary source of connectivity has increased over the 4 years, from 2.9% to 4.6%. These volumes of wireless lines purchased are low, relative to the overall amounts of leased lines purchased by major retailers, indicating that major retailers see P2P wireless LLs as complementary to fibre Ethernet or xWDM LLs, as opposed to an effective substitute (or are used where fibre services are not available). [REDACTED] is the largest purchaser of wireless LLs of all the multi-store retailers. However, despite its high volume of

purchases, it uses wireless LLs in addition to wired LLs¹⁴⁵, therefore in most cases it is used as a back-up complementary service.

Figure 12: Breakdown of major retailers' usage of wireless leased lines

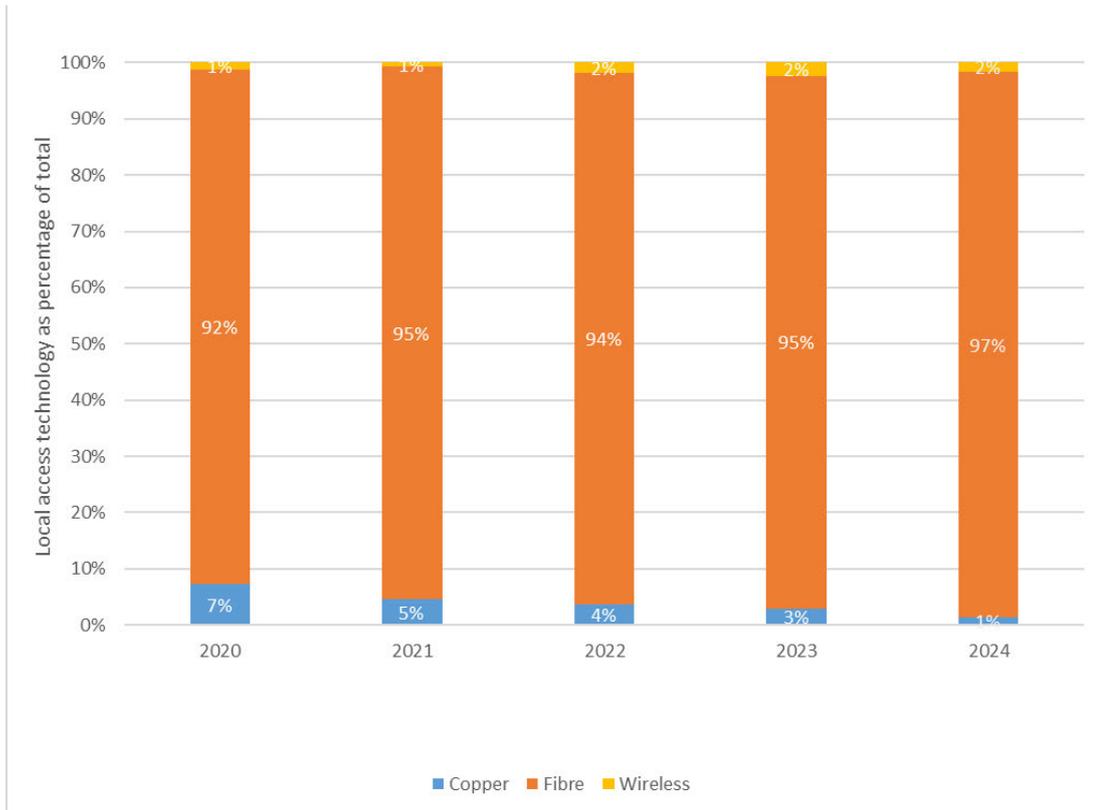


3.106 None of the major financial institutions in the country use wireless LLs at any material level. Of the financial services companies, only 2% of the total demand for LLs in this sector is wireless¹⁴⁶ and the majority of these are used as backup to other fixed services at the same premises. This low level of demand for wireless LLs in the financial sector is illustrated in Figure 13, where it can be seen that the number of wireless LLs purchased, as a proportion of the total demanded, has not been above 2% since 2020, indicating that the financial sector does not see wireless LLs as an effective substitute for wired LLs.

¹⁴⁵ Captured in Retail LL data from 2020 up to and including H2 2024.

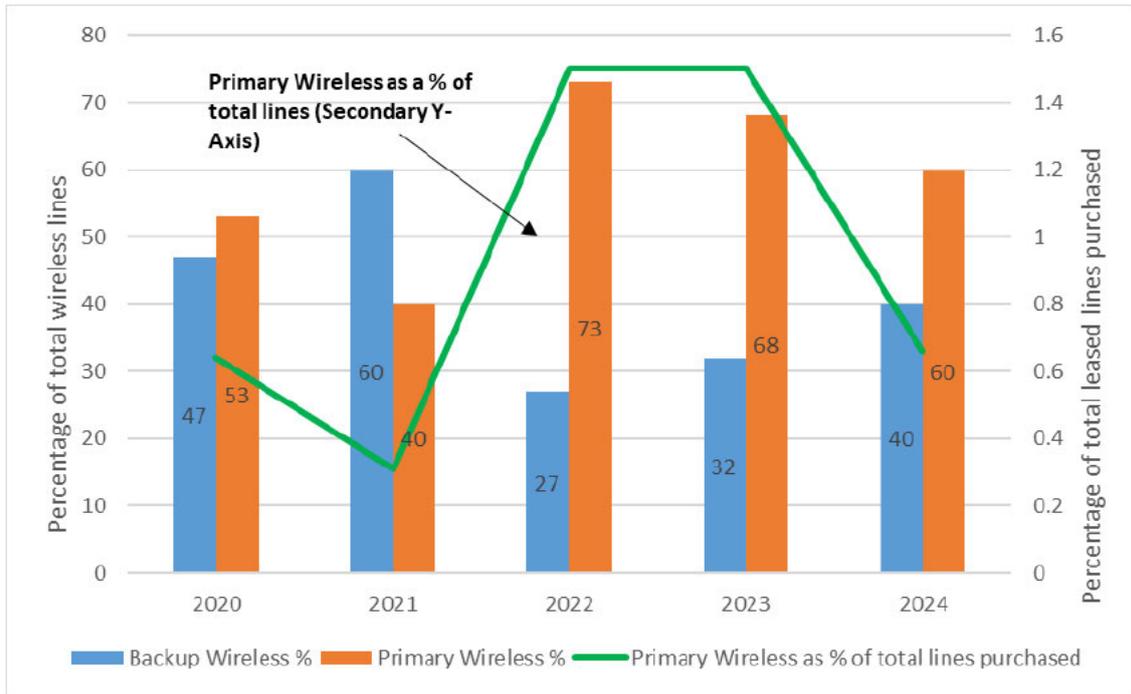
¹⁴⁶ Captured in Retail LL data H1 2023.

Figure 13: Breakdown of Leased Line local access technology purchased by Banks and Fintech Companies



3.107 That wireless P2P leased lines are used as a complementary service to fibre Ethernet or xWDM LLs is further illustrated by Figure 14, which shows the usage purpose for wireless LLs purchased by financial institutions. Although a large proportion of wireless LLs purchased by financial institutions are for the purpose of them being used as the primary source of connectivity, it can be seen on the secondary Y-axis of Figure 14 that these wireless lines account for a small percentage of the total number of leased lines purchased by the entire financial sector. Wireless LLs being used as the primary source of connectivity only account for 0.66% of all LLs purchased, illustrating that they are not seen as an effective substitute to fibre Ethernet or xWDM LLs.

Figure 14: Breakdown of banks and ‘fintechs’ usage of wireless leased lines



3.108 Table 3 below shows the trend in retail wireless and wired MI LLs over the period 2019 to 2024. As can be seen, the number of wireless LLs increased by 732 during the period, an increase of 25.6%. However, the total number of MI LLs (both wired and wireless) increased by 5,707, an increase of 42.5%. As a result, wireless LLs as a percentage of the total MI LLs has decreased from 21.2% in 2019 to 18.8% in 2024. Additionally, where wireless LLs are used as a back-up to wired LLs, it would not be unexpected to see some growth in wireless MI LLs as wired MI LL volumes are also growing.

Table 3: Retail wired and wireless MI LLs 2018-2023

	2019	2020	2021	2022	2023	2024
Wired MI LLs	10,545	12,197	13,410	14,028	15,559	15,520
Wireless LLs	2,842	2,994	3,379	3,395	3,530	3,574
Total Wired and Wireless MI LLs	13,387	15,191	16,789	17,423	19,089	19,094
Wired MI Lines as % of Total Wired and Wireless MI LLs	78.8%	80.3%	79.9%	80.5%	81.5%	81.2%
Wireless Lines as % of Total Wired and Wireless MI LLs	21.2%	19.7%	20.1%	19.5%	18.5%	18.8%

Intended Use

3.109 As P2P radio link-based retail LLs are used to provide uncontended, symmetric, high quality access similar to wired based retail LLs, for some retail customers, there does not appear to be any significant discernible difference in their intended use, although as noted above their use as a back-up service for wired LLs is evidenced. For other retail customers in both the public and private sector, there is a distinct preference for wired over wireless LLs, as evidenced by the 2025 Consumer Survey and also HEAnet offering a premium for wired leased lines.

Conclusion on Demand Side Substitution

3.110 Although wireless Ethernet LLs have some similar characteristics to wired LLs, they also have notable differences including in terms of distance, line-of-sight and congestion issues, all of which limit their ability to provide equivalent service quality levels to those of fibre LLs. As a result of these differences in product characteristics, a sufficient number of retail end-users would not likely consider wireless Ethernet LLs to be an effective substitute for fibre LLs.

3.111 In particular, the intended use of wireless Ethernet LLs is different to those of fibre LLs. When compared to fibre Ethernet, xWDM and other high speed LLs, the largest consumer group, multi-site customers, show a distinct preference for fibre LL products. This is most explicitly evident in the 2025 Consumer Survey where in response to a 10% price increase of wired LLs would be, the majority (79%) of end-users indicated they would continue to use wired LLs as well as in HEAnet's 20% premium scoring for tender submissions for fibre over other mediums for LLs¹⁴⁷.

3.112 The above evidence would suggest that a HM of either fibre Ethernet, xWDM and/or other high speed LL services is likely to be able to sustain a profitable SSNIP in the range of 5-10% (up to 20% in the case of retail customers like HEAnet) above the competitive level without a substantial number of customers switching to wireless LL services.

Supply Side Substitution

3.113 Those SPs of wireless Ethernet LLs who also provide fibre Ethernet or xWDM and other high speed LL services provide no additional constraint as they are already accounted for in the demand side substitution. Those that are wireless only LL SPs have two options when considering providing fibre Ethernet or xWDM and other high speed LL services, namely either purchase

¹⁴⁷ Based on public tendering awarding criteria and confirmed in meeting with HEAnet; 17 May 2023.

wholesale access to another SPs network or build a network capable of offering the service.

- 3.114 The first option would represent a weaker form of competitive constraint as it involves no additional infrastructure/network, especially when purchasing from a SP who is a wholesale provider who are also retail competitors.
- 3.115 The second option would involve substantial levels of upfront capital investment which may be sunk and would require a significant lead in timeframe for building the physical network. This would, in all likelihood, take much longer than the time constraints associated in responding to tenders issued by most retail customers, thereby undermining any supply side constraint.
- 3.116 Therefore, overall, supply side substitution by a wireless only SP entering the market for the provision of fibre Ethernet or xWDM and other high speed LL services, does not represent an effective constraint on a HM supplier of Ethernet LL services over a fibre medium sustaining a SSNIP in the range of 5-10% above the competitive level.
- 3.117 Eircom was the only Respondent who in its Submission, disagreed with ComReg's proposal that wireless Ethernet leased lines are not an effective substitute for MI fibre LLs or xWDM leased lines, while all other Respondents agreed that wireless LLs was not a substitute for MI fibre Ethernet or MI xWDM LLs and should not be included in the relevant retail MI Market.
- 3.118 Eircom's arguments regarding the inclusion of wireless LLs are outlined in section 4.3.2 below and ComReg has addressed these arguments in the same section. It is worth noting here that the 2025 Customer Survey highlighted that the majority (14 of 16) of retail end users indicated they used wired LLs as their primary connections and they did not consider wireless as a viable substitute. ComReg asked these retail end users how they would respond to a 10% increase in the prices of their wired LLs and whether they would switch to a wireless LL instead. 11 out of 14 respondents who answered this question indicated they would continue to use wired LL with none indicating that they would switch to wireless.

Conclusion

- 3.119 Having considered relevant demand side factors including functionality, pricing and consumer usage, as well as relevant supply side factors, ComReg's position is that wireless Ethernet LLs are not likely to be an effective substitute for either fibre Ethernet and/or xWDM LLs.

3.5.8. Is broadband an effective substitute for fibre Ethernet and xWDM LLs?

- 3.120 Broadband services are used by many business customers for connections to the internet, e-mail, cloud storage and other data services. With the rollout of NGA networks, residential broadband services can now provide speeds of up to 5 Gbit/s.¹⁴⁸ However, there are still performance gaps between broadband services and LL services. For example, broadband services are generally asymmetric (i.e., lower upload than download speeds) and contended services, while LL services are typically symmetric and dedicated services, with high quality SLAs. Moreover, the services provided by SPs for Broadband is generally of a lower quality than that of fibre retail LL services as such services were designed for residential end-users rather than for conveying business critical services.
- 3.121 In the 2020 Decision, ComReg considered that business broadband was not a part of any of the relevant wired retail LL markets. This remains the case for the reasons set out below.
- 3.122 As described in paragraphs 2.14 to 2.16 above, a number of SPs now provide leased lines delivered on PON networks. These services are sufficiently distinguishable from broadband being utilised by businesses, usually through the provision of such services with bandwidth symmetry, CoS, guaranteed high-quality service availability (based on active network management) and business class SLAs. These are collectively referred to below as PON based LLs. Such services are sold and marketed as LLs and are priced accordingly and meet customer requirements for LL performance.

Demand side substitution

- 3.123 First, there are sufficient differences between the utilisation of FTTH broadband for business and LLs in terms of product characteristics (see summary in Table 4 below). As mentioned in paragraph 3.90 above, fibre Ethernet and xWDM LLs can provide symmetric speeds, guaranteed bandwidths and high-quality service metrics, including low latency, jitter and packet loss, short repair times, high levels of reliability and redundancy. These features are important for the business market.

¹⁴⁸ For example, as stated on NBI, Openeir, Virgin Media websites.

Table 4: Product Characteristics Comparison

	Broadband	Leased lines¹⁴⁹
Symmetric speeds	No	Yes
Guaranteed bandwidths	No	Yes
Contention	Contended	Uncontended
Repair times	Days	Hours

3.124 Second, the prices of LLs are far higher than those of broadband services, with PON based LLs priced in the intermediary range. In the absence of readily available retail pricing information, we use the wholesale input prices observed in the market as a proxy for the competitive retail price benchmark to compare the prices of broadband and LL services. As shown in Table 5 below, Eircom's monthly rental costs of wholesale LLs (prices shown are for speed of 10Mbit/s) are multiples of its broadband products. Despite such price differences, there have not been significant migrations from LL to broadband products at the retail level, even with increased availability of higher bandwidth broadband services.

Table 5: Indicative Wholesale Ethernet LL monthly rental, (WDC Access Circuit, logical and physical (within 500m of exchange) January 2025¹⁵⁰

	Zone B	Zone B
	Same NGN Region Handoff	
	Medium Density	High Density
Option 1	€ 415	€ 284
Option 2	€ 310	€ 244
Option 3	€ 251	€ 221
Option 4	€ 242	€ 218
Option 5	€ 235	€ 215
Option 6	€ 375	€ 269
	Same NGN Node Handoff	
	€ 214	€ 234

¹⁴⁹ Include services whether provided via point-to-point or PON based technologies.

¹⁵⁰ Pricing data taken from open eir Network Price List Effective Rates, v.16.0, available online at [Reference Offers | Open Eir](#).

Table 6: Eircom VUA monthly rental prices, July 2025¹⁵¹

FTTC-based VUA	Standalone	POTS-based
	€20.28	€1.84
FTTP-based VUA	Standalone	POTS-based
100 Mbit/s	€20.28	n/a
150/300/500 Mbit/s	€23.50	€9.09
500/100 Mbit/s	€27	€12.59
1000 Mbit/s	€28.50	€14.09
1000/150 Mbit/s	€32	€17.59
2000 Mbit/s	€33.50	€19.09

- 3.125 Lastly, broadband and LLs appear to be used for different applications by consumers. Broadband is mostly used for email, internet access and streaming services while LLs are often used for multiple purposes, including email and Internet, disaster recovery, data services and connectivity between premises.
- 3.126 Further, ComReg notes that broadband, and LLs are targeted towards different categories of customers. For example, Eircom’s website is divided into two separate sections: personal section and business section, with the latter further divided into small business (1-9 employees) and medium to large business categories (10+ employees). Broadband for business appears to be marketed to small businesses while LLs appear to be marketed to medium to large businesses. SIRO has similar website designs that distinguish between residential and business customers and between small businesses and medium to large businesses.
- 3.127 Eircom in its Submission disagreed with ComReg’s proposed dismissal of broadband as a relevant substitute, noting that it was seeing increasing evidence of a trend in businesses operating branch networks using broadband. For the reasons set out in this section ComReg disagrees with Eircom’s view. Additionally, the 2025 Customer Survey found that 13 of 15¹⁵²

¹⁵¹ Pricing data taken from open eir Access Reference Offer Price List v.36.0, available online at [Reference Offers | Open Eir](#).

¹⁵² One end-user did not provide a response to this question.

retail end users did not consider broadband to be a substitute but use it instead as a backup connection to LLs, with the remaining 2 considered that broadband may be a substitute only at lower bandwidths. The other Respondents in their Submissions agreed with ComReg that Broadband was not a substitute for MI fibre Ethernet or MI xWDM LLs and should not be included in the relevant retail MI Market.

Supply side substitution

- 3.128 On the supply side, we assess if suppliers of broadband services are able to switch to supplying LL services effectively in the short term to exercise effective competitive constraints on the suppliers of LLs. We note that many broadband SPs are also providers of LL services. Constraints placed by these SPs are already accounted for as they are already active in the LL market.
- 3.129 For broadband providers that are not active in the LL market, they have two options to provide wired LLs: 1) purchase wholesale access to another SPs network or 2) build a network capable of offering the service. Neither of these options are realistic options, for the same reasons outlined for the lack of supply side substitution of Ethernet P2P Wireless, in paragraphs 3.109 to 3.110 above.
- 3.130 Overall, supply side substitution by a business broadband provider is not likely to prevent a HM supplier of Ethernet LL services over a fibre medium from profitably sustaining a SSNIP.
- 3.131 In their response to the QQ, most SPs agreed that business broadband should continue to fall outside the retail LL market. Eircom noted there is an increasing role for MI wireless and broadband services as substitutes for TI products and services. Verizon considered that Broadband could be in the same market noting that “[REDACTED]
[REDACTED]
[REDACTED]”¹⁵³. Viatel agreed that broadband doesn’t fall into the LL product markets but noted its popularity in solutions such as SD-WAN is growing due to price and availability.
- 3.132 As discussed in section 3.4.3, despite the growing adoption of SD-WAN technology, businesses especially larger sites still require high bandwidth

¹⁵³ From Verizon response to QQ, question 11.

symmetric LL services with guaranteed quality. This is evidenced by the continued increase in LL demand since the 2020 Decision¹⁵⁴.

3.133 Eircom in its Submission, claimed ComReg has failed to consider the introduction of 5 Gb/s FTTH and their GEA products and that end users do not consider SLAs as an important factor. As outlined in para 3.125 above end users do not consider Broadband as a substitute for LLs and end users also mentioned the importance of LL SLA's. As outlined in 3.125, the other Respondents in their Submissions are of the view that Broadband was not a substitute for MI fibre Ethernet or MI xWDM LLs and should not be included in the relevant retail MI Market.

Conclusion

3.134 In the light of the foregoing discussion, ComReg is of the view that broadband is not an effective substitute for MI fibre Ethernet or MI xWDM LLs.

3.5.9. Is dark fibre an effective substitute?

3.135 DF refers to the rental of fibre optic cables (in general a single fibre or a pair of fibre strands within a fibre optic cable) owned by an operator. This is a passive product that requires the end-user to provide the electronic equipment (switches, multiplexers, repeaters etc.) necessary to transmit data over the fibre cable. In contrast, LLs are 'active' products since they are provided to end-users with the electronics and management to enable an end-to-end connection between locations.

3.136 In the 2020 Decision, ComReg held the view that DF services were not likely to be an effective substitute for wired LL services. It noted that the inclusion of DF services was not likely to impact upon ComReg's assessment of competition in the MI WDC markets given the relatively small demand for DF services at the retail level.

3.137 In their responses to the QQ, SPs expressed their view that nothing significant had changed in the market since the 2020 Decision to merit the inclusion of DF in the retail market. BT stated in its response that DF [X

[REDACTED]

¹⁵⁴ See Figure 4 above.

██████████¹⁵⁵ while EUNetworks stated that they “██████████
██████████¹⁵⁶” from the retail LLs market.

- 3.138 All Respondents in their Submissions agreed with ComReg that DF was not a substitute for MI fibre Ethernet or MI xWDM LLs at a retail level and should not be included in the relevant retail MI Market.
- 3.139 In the remainder of this subsection, ComReg presents information and evidence to support its conclusion that DF is not an effective retail substitute for any of the fibre-based LL retail markets.

Demand Side Substitution

Product Characteristics

- 3.140 ComReg notes that DF is available at both the retail and wholesale level in Ireland. There are several providers supplying these services in Ireland¹⁵⁷. DF has the ability to support the provision of fibre Ethernet or xWDM LL services – whether retail or wholesale – of any bandwidth and interface. However, to enable these fibre Ethernet or xWDM LL services, end-users must have the expertise required to light and manage , alongside providing additional inputs, such as terminal equipment and switching locations.
- 3.141 ComReg also notes that DF requires additional operational resources, in commissioning, acceptance testing, and administering a passive infrastructure. As the service is provided as unmanaged (i.e. supplier of DF services is not typically responsible for fault repairs and other maintenance services for any connected active equipment), the end-user must also place additional resources into monitoring and fault reporting of the link.

Intended use

- 3.142 There are substantial additional costs, as well as operational skills and knowledge, required for retail end-users to manage their own networks based on purchased DF inputs. These factors are likely to render DF services unattractive for the vast majority of end-users purchasing fibre LL services.
- 3.143 ComReg has also analysed the profile of end-users that currently purchase DF services. The analysis indicates that these services would appear to be suitable only for very large, advanced users such as large multinational cloud

¹⁵⁵ From BT Response to QQ, question 11.

¹⁵⁶ From EUNetworks Response to QQ, question 11.

¹⁵⁷ Aurora, Digiweb, Eircom, Enet, ESBT, EUNetworks and Vodafone.

service providers and Government Networks ('GovNet'), given that it requires additional inputs (e.g. terminal equipment) and management. This is illustrated by the H1 22 data, which shows that [redacted] of all DF lines purchased by retail end-users were purchased by GovNet, with the large cloud-based and technology companies¹⁵⁸ accounting for [redacted] of end-user purchases. As noted in paragraph 4.56 below from recent meetings with the OGCI and HEAnet, GovNet remains the main purchaser of DF lines at retail end user level. These figures suggest that there is some substitution by very large corporations but given that the vast majority of end-user purchasers are comprised of a select few organisations and government bodies who have the knowledge and capacity to manage DF, it is clear that most retail end-users do not see DF as a substitute.

- 3.144 This evidence further suggests that only a niche customer segment requiring very high bandwidths and very large capacities would consider DF services as a credible alternative to fibre Ethernet, xWDM, or other high speed LL services.

Supply Side Substitution

- 3.145 ComReg notes that some of the SPs¹⁵⁹ supplying DF services are also active in the provision of retail LL services. Thus, the competitive constraint arising from these operators is already accounted for in ComReg's analysis.

Conclusion

- 3.146 For the above reasons, ComReg's view is that at the retail level, DF services are not likely to be an effective substitute for fibre LL services. ComReg notes that the inclusion, or otherwise, of DF services in the retail market is not likely to impact upon ComReg's assessment of competition in the WDC markets given the relatively small demand for DF services at the retail level.

3.5.10. Bandwidth Breaks

- 3.147 LL products can be sold over a range of bandwidths, with these ranging from less than a megabit to multiple gigabits. In this Subsection, ComReg examines whether the MI WDC product market should be segmented according to bandwidths, namely whether a 'bandwidth break' exists. A bandwidth break would constitute a separate product market either side of the break within the products using the same set of technology. For example, hypothetically, a MI Retail Product Market consisting of speeds up to and

¹⁵⁸ Amazon, eBay, Facebook, Google, Microsoft.

¹⁵⁹ Eircom, Virgin Media, Vodafone.

including 1Gbit/s, with another Retail MI Product Market consisting of speeds above 1Gbit/s. In its 2020 Decision, ComReg was of the view that there was unlikely to be a break in pricing at the retail level, in relation to bandwidth breaks, given that SPs will pass through at least some of the wholesale price differences to their retail customers. Therefore, it was decided that there would be no bandwidth break required in the MI WDC Markets.

3.148 Subsequent to the 2020 Decision, ComReg has engaged with SPs through its QQ, asking SPs:

“The 2020 Decision did not separate the retail MI LL market by bandwidth. Do you consider there are any developments since then that should change this?”

3.149 In their responses to this, the majority of SPs indicated that bandwidth breaks were not present. Eircom, which indicated bandwidth breaks were not present, noted in its response “[REDACTED]

[REDACTED]”¹⁶⁰. Colt noted “[REDACTED]

[REDACTED]”¹⁶¹,

while Virgin Media noted “[REDACTED]”¹⁶².

3.150 One SP, Enet, did express its concern that if there is no bandwidth break in the MI LL market, [REDACTED]

[REDACTED]. As a result of this, Enet suggested that “... *ComReg should account for these scenarios in the upcoming review*”¹⁶³. In their Submissions, a number of Respondents suggested possible bandwidth breaks in the retail market similar to those proposed in the wholesale market, as described in detail in sub-section 4.3.5 below.

3.151 Noting the position in the 2020 Decision and having considered the responses to the QQ (with the vast majority of respondents indicating that bandwidth breaks were not necessary in the MI LLs market), and the consideration of the Submissions in sub-section 4.3.5 below, ComReg’s

¹⁶⁰ From Eircom Response to QQ, question 12.

¹⁶¹ From Colt Response to QQ, question 12.

¹⁶² From Virgin Media Response to QQ, question 12.

¹⁶³ From Enet Response to QQ, question 12.

position is that there has been no significant developments that would justify a bandwidth break being introduced in the retail MI LL market.

3.5.11. Impact from Deployment of SDN

- 3.152 Since the 2020 Decision, there has been an increased deployment of SD-WAN technology in the retail LLs market, and an increase in the deployment of SDN. SDN is becoming more widespread at the retail level but this does not impact on retail LL demand per se. It has however, changed the manner in which overall connectivity solutions are sold. Aggregators can now offer enhanced monitoring and automatic backup solutions using business broadband¹⁶⁴ and 4G/5G¹⁶⁵ etc., combined with software services (including cloud, SaaS etc.), thus allowing greater opportunities for retail organisations to outsource some or all of their IT functions. It does not impact on the bandwidth demands and the SLAs on the connectivity inputs to these solutions, due to the existing SLAs and bandwidths of these inputs (i.e. LLs) being sufficient to deliver SDN solutions.
- 3.153 This development was acknowledged in many responses to the QQ, with Eircom stating “[redacted]”¹⁶⁶, and Enet noting that it “[redacted]” and that they “[redacted]”¹⁶⁷.
- 3.154 Although the deployment of SDN has meant a change in the manner that connectivity solutions are sold at the retail level, it does not impact on the bandwidth demands and SLAs for the connectivity inputs to these solutions. Therefore, the deployment of SDN should not have a material impact on the retail MI LLs market due to it providing bundling capability rather than being a substitute to LL services, as acknowledged by various SPs.

¹⁶⁴ Business Broadband is delivered by SPs over various technologies and are generally asymmetric (i.e. lower upload than download speeds) and contended services. Business Broadband services are typically distinguished from residential broadband by enhanced SLAs.

¹⁶⁵ This is fourth/fifth generation mobile broadband. Mobile broadband networks can be used to supply broadband access.

¹⁶⁶ From Eircom Response to QQ, question 5.

¹⁶⁷ From Enet Response to QQ, question 5

3.5.12. Overall Conclusion on Retail Product Market Definition

- 3.155 As discussed above, ComReg is not required to conclude on, or precisely define the scope of, the retail market. However, it has carried out the preceding analysis to inform its subsequent analysis of the WDC market.
- 3.156 In summary, ComReg concludes that the Retail MI Product Market consists of MI Retail LLs, which are composed of fibre Ethernet LLs, xWDM LLs and other modern interface LLs.
- 3.157 ComReg also concludes that:
- (a) Wireless Ethernet LLs are not likely to be an effective substitute for either fibre Ethernet and/or xWDM LLs and therefore not in the same relevant retail market.
 - (b) Broadband, including business broadband, is not likely an effective substitute for Ethernet or xWDM LLs and therefore is not in the same relevant retail market.
 - (c) DF services are not likely to be an effective substitute for fibre LL services at a retail level and therefore not in the same relevant retail market.
 - (d) There is no bandwidth break in the retail MI LL market.

3.6 Geographic market Assessment

3.6.1. Introduction

- 3.158 In this section, ComReg assesses the geographic scope of the Retail MI Product Market as identified and summarised in Section 3.5 above.
- 3.159 As was the case with the assessment of the Retail MI Product Market, ComReg is not required to define the geographic boundaries of this market. However, it is nevertheless useful to examine their likely geographic scope, since it is likely to be of relevance to the consideration of the geographic scope of the upstream WDC markets, including in the context of any indirect retail constraints.
- 3.160 This Section includes:
- (a) the framework for assessing the geographic scope of the MI Retail Product Market;
 - (b) the assessment of the geographic scope of the MI Retail Product Market; and
 - (c) the overall conclusion on geographic market definition.

3.6.2. Framework for assessing Retail Geographic Markets

3.161 In general, the process of defining the geographic boundaries of markets involves identifying any geographic areas where a distinct break in competitive conditions can be observed. ComReg’s approach in identifying the retail geographic markets follows the approach adopted by the European Commission in the 2020 Recommendation.¹⁶⁸

3.162 The European Commission’s Notice on Market Definition indicates that:

*“...when defining relevant markets National regulatory authorities should identify geographic areas where the conditions of competition are sufficiently homogenous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different”.*¹⁶⁹

3.163 The European Commission also notes in its SMP Guidelines that:

*“...According to established case-law, the relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products or services, in which the conditions of competition are sufficiently homogenous, and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are significantly different. Areas in which the conditions of competition are heterogenous do not constitute a uniform market.”*¹⁷⁰

3.6.3. Assessing Geographic Scope of Modern Interface LLs

Introduction

3.164 In the 2020 Decision, ComReg defined a national market for the retail MI LL market. Below we consider whether the conditions of competition are sufficiently homogenous or are noticeably heterogenous across the country to define either a national or subnational Modern Interface LL market(s). This will be examined by looking at both the demand and supply side factors.

¹⁶⁸ 2020 Recommendation.

¹⁶⁹ *Ibid.*

¹⁷⁰ European Commission guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services, OJ 2018 C 159/1 (the ‘[SMP Guidelines](#)’)

Demand side

- 3.165 First, as noted in the 2020 Decision, although multi-site retail LL customers represent the minority of the total number of customers, such customers account for the majority of all retail Ethernet LL demand. These customers typically tender for LL services on a nationwide basis for the entire contract and require a single vendor to meet their total connectivity requirements. The multi-site nature of the contracts supports a position that the retail MI LL market is national in scope.
- 3.166 Second, in their response to the QQ, most SPs stated that they did not have, or intended to have different retail product or services offerings in different geographic region. This indicates that there are no significant differences in product/services offered across different areas of the country.
- 3.167 Furthermore, pricing for LLs tend to be on a bespoke basis and can often be purchased as part of a bundle, as outlined in para 3.80 above, therefore obtaining precise LL pricing data can be challenging. However, ComReg has found no evidence of geographic based differentiated pricing or marketing strategies.
- 3.168 Therefore, from a demand perspective, in particular due to the multi-site nature of the retail MI LL market, this market can likely be considered to be national.

Supply side

- 3.169 As shown in Table 1, there are multiple SPs operating in the retail MI market, and as indicated above in subsection 3.4.4, a number of SPs have continued expanding their fibre networks. Many of them can compete for multi-site contracts on a national basis, either using their own networks or using wholesale inputs from other operators such as Enet and SIRO (in the absence of regulation). Further, the multi-site nature of the contract requires SPs to compete on a national basis, rather than focusing on certain areas given customer demand can be spread across different locations.
- 3.170 As such, in ComReg's view the geographic scope of the retail MI LL market is National and wholesale geographic considerations are analysed at the wholesale level in Section 4 below.

3.6.4. Conclusion on Geographic Market Definition

- 3.171 Having considered the conditions of competition for both the demand for and supply of MI LLs, ComReg is of the view that the conditions of competition in are sufficiently homogenous across the country to define the geographic scope of the Retail MI Product Market as being national. In their Submissions, Respondents agreed that the Retail MI Product Market is

national, however some Respondents did refer to wholesale geographic markets, Zone A and Zone B when referring to the retail market and this is considered in Section 4.4 below.

- 3.172 It should be noted that as part of the market definition assessment of the WDC markets in Section 4.4, ComReg has undertaken a detailed analysis to ascertain whether there are differences in the conditions of competition between different areas, based on differences in the condition of wholesale supply and demand. In this regard, ComReg finds that there are sub-national geographic markets at the wholesale level due to the differences in the conditions of supply and demand. However, it is this demand behaviour at the retail level that underpins the need for a precise and granular geographic market definition and competition assessment at the wholesale level to allow regulation to ensure that the retail market is effectively competitive at a national level.

Chapter 4

4. WDC Market Definition

4.1 Introduction

- 4.1 In this section, ComReg sets out its position in relation to the definition of the relevant WDC markets from both product and geographic perspectives. For the reasons set out below, ComReg defines the product market as the market for MI WDC,¹⁷¹¹⁷² which consists of all fibre based LLs with modern interfaces including Ethernet, xWDM, and with dark fibre also included in the market.
- 4.2 The MI WDC market is further divided into the following four sub-national geographic markets:
- (a) **MI WDC Market 1:** which equates to a unique and separately distinguishable set of 2,888 WPZs, all of which contain CPs and have satisfied the criteria for assessing differences in conditions of competition as set out in sub-section 4.4.3;
 - (b) **MI WDC Market 2:** which equates to a unique and separately distinguishable set of 2,261 WPZs, all of which contain CPs and have failed the criteria for assessing differences in conditions of competition as set out in sub-section 4.4.3;
 - (c) **MI WDC Market 3:** which equates to a unique and separately distinguishable set of 1,095 WPZs, which contain no CPs and have satisfied the criteria for assessing differences in conditions of competition as set out in sub-section 4.4.3; and

¹⁷¹ As discussed in Subsection 3.4.1, we do not consider it necessary to define a relevant market for TI market as the market definition will not alter our view that this market is in terminal decline and does not warrant further regulation.

¹⁷² In the 2020 Decision, ComReg included Ethernet in First Mile (“EFM”) in the relevant MI WHQA market. EFM is a set of specifications that allow SPs to run Ethernet over multiple bonded copper pairs in the access segment (LLU) to connect the “first mile” from the customer to the nearest node. Given the continued decline of LLU (from over 27,000 in Q1 2019 to just over 7,000 in Q2 2023) and the impending switch-off of Eircom copper network, ComReg considers that EFM no longer forms part of MI WDC relevant market. LLU was deregulated following ComReg’s Market Reviews - Wholesale Local Access (WLA) provided at a fixed location & Wholesale Central Access (WCA) provided at a fixed location for mass-market products. Response to Consultation and Decision. ComReg D05/24 (the ‘**2024 WLA Decision**’). Further, from the data submitted by SPs, there are no EFM lines reported in the last few years.

(d) **MI WDC Market 4:** which equates to a unique and separately distinguishable set of 975 WPZs, which contain no CPs and have failed the criteria for assessing differences in conditions of competition as set out in sub-section 4.4.3.

4.3 As part of its assessment, ComReg considers Respondents' Submissions to the 2024 Consultation and other information sources as outlined in Section 2.5.1 above. In defining the relevant WDC markets, ComReg begins by identifying the narrowest focal product as a basis for the subsequent substitutability analysis. From there, ComReg examines whether this focal product constitutes a market of its own, or whether it should be broadened to include other products or services, taking into account demand-side and supply-side substitution at the wholesale level. ComReg also considers the strength of any indirect constraints arising from downstream retail markets. After identifying the relevant product market(s), ComReg then assesses the geographic scope of the WDC markets.

4.4 Accordingly, this section is organised as follows. Section 4.2 identifies the focal product. Section 4.3 defines the relevant wholesale product market following a demand-side and supply-side substitutability analysis. Section 4.4 defines the geographic scope of the wholesale markets, with section 4.5 setting out the overall conclusions.

4.2 Identifying the Focal Product

4.5 The first step in defining the WDC market(s) involves identifying the relevant focal product(s). A focal product is a product where a potential competition bottleneck is believed to occur, that is, a product which Access Seekers rely on to offer effective competition on downstream markets. According to BEREC,

“The focal product is defined as the main product under investigation and the focal area is the area under investigation, in which the focal product is sold. The definition of the focal product may depend on specific market conditions and on the issues that NRAs want to address during the market analysis.”

(.....) an NRA should start by identifying the focal product considering their national market conditions. One of the possible criteria chosen by NRAs might be to define the focal product as the one where competition problems are believed to exist.”¹⁷³

- 4.6 ComReg identifies wholesale Ethernet LL services provided over a fibre medium (**Fibre Ethernet WDC**) as the focal product, as this is the prevailing technology used by SPs to provide WDC services at the wholesale level.
- 4.7 Table 7 below shows the trends between 2020 and 2024 of technologies used to deploy WDC services for on-net wholesale services (including self-supply). It is evident that fibre Ethernet is the main technology underpinning WDC services, accounting for just under 70% of overall WDC services across this time period, outstripping wireless and wired TDM and Analogue LLs.

Table 7: WDC technology wholesale trends 2020 – 2024 On-Net CPs¹⁷⁴ (inc. self-supply)¹⁷⁵

Period	2020 - H2	2021 - H2	2022 - H2	2023 - H2	2024 - H1	2024 - H2
Fibre Ethernet	18,523	18,321	20,613	21,459	21,247	20,990
xWDM	2,014	2,031	2,392	2,626	2,760	2,851
Fibre Total	20,537	20,352	23,005	24,085	24,007	23,841
TDM (Inc B ends)	2,092	1,857	1,698	1,106	748	618
Analogue (circuits)	1,234	1,142	1,108	1,042	990	941
Fixed Total	23,863	23,351	25,811	26,233	25,745	25,400
Wireless (All Ethernet)	3,454	3,848	4,269	4,322	4,494	4,623
Overall Totals	27,317	27,199	30,080	30,555	30,239	30,023
% fibre Ethernet overall	67.8%	67.4%	68.5%	70.2%	70.3%	69.9%
Wireless % overall	12.6%	14.1%	14.2%	14.1%	14.9%	15.4%
TDM % overall	N/a	6.8%	5.6%	3.6%	2.5%	2.1%

¹⁷³ BEREC Report on Impact of Fixed-Mobile Substitution in Market Definition, at p.12. BoR 12 (52), 24 May 2012. Available online at https://www.berec.europa.eu/eng/document_register/subject_matter/berec/reports/363-berec-report-impact-of-fixed-mobile-substitution-fms-in-market-definition

¹⁷⁴ Includes duplicate CPs.

¹⁷⁵ All copper based LLs excluding analogue are assumed to be TDM - the TDM volumes of fibre are trivial and so have been added to fibre count; All analogue circuits are double-ended so B-ends have been removed from the analogue count. There was likely an under reporting of wireless lines by certain operators prior to 2024.

TDM YoY change	N/a	-11.2%	-8.6%	-34.9%	-32.4%	-17.4%
Fibre YoY change	N/a	-0.9%	13.0%	4.7%	-0.3%	-0.7%
Wireless YOY change	N/a	11.4%	10.9%	1.2%	4.0%	2.9%

- 4.8 ComReg notes that Fibre Ethernet WDC include such services whether provided via point-to-point or PON based technologies¹⁷⁶. Services provided over PON can deliver bandwidth symmetry, guaranteed high-quality service availability (based on active network management, where required) and business class SLAs which meet the product characteristics of a LL.
- 4.9 In its Submission, BT disagreed that PON based Ethernet LL services fall within the MI LL product market, as they are delivered over a shared and contended access network, and they do not provide business class SLAs¹⁷⁷. It also argued that NBI and SIRO price their PON based LL services, and Eircom its wholesale business broadband services, much closer to the prices of the broadband WLA equivalent, rather than the P2P WDC equivalent. It further furnished a table¹⁷⁸ listing pricing for these products and for Eircom Wholesale Next Generation Network ('**NGN**') Ethernet product, for various speeds for comparison.
- 4.10 Contention may be activated on PON based LLs just as with some P2P LLs, depending on the CoS offered. However, SPs such as SIRO and NBI offer a level of guaranteed bandwidth that is uncontended based on historical and expected performance of their networks. Such performance guarantees for specific customers can also be augmented by intervention using active network management, if the performance falls below the expected levels. For example, some Access Seekers use SIRO PON based LLs to meet stringent service requirements of customers such as HEAnet. NBI's contract is with the Irish State which also requires it to design its network to meet such anticipated demands with business class SLAs.
- 4.11 Further, PON based LL services are sold and marketed as LLs by SIRO and NBI and are priced accordingly. The prices of PON based LLs are multiples of mass market broadband products¹⁷⁹.

¹⁷⁶ Including GPON and XGS-PON. See paragraphs 2.14 and 2.15 in Chapter 2 for a detailed description. SIRO and NBI currently provide PON-based LL products.

¹⁷⁷ Pages 8,9 and 10 of BT's Confidential Submission.

¹⁷⁸ Table 2, Page 9 of BT's Confidential Submission.

¹⁷⁹ See, for example, NBI's SES price list here: [NBI-Interconnect-and-SES-Reference-Offer-v2.0-Clean.pdf](#)

- 4.12 With the development of PON technology in recent years, SPs can offer higher bandwidth symmetric LLs. SIRO is currently offering up to 10Gbps symmetric LLs¹⁸⁰. It is likely that PON technology will be able to support even higher speeds over the period of this market review.
- 4.13 In light of the above, ComReg has decided that LL services based on PON technologies have sufficiently similar characteristics to point-to-point Ethernet LLs (such as uncontended capacity, symmetric speeds, and business class SLAs) and so are included in the focal product.

4.3 Product market

- 4.14 The EC's 2020 Recommendation states that "*The distinguishing product characteristics of dedicated capacity are their ability to provide dedicated and uncontended connections and symmetrical speeds and should be assessed, as for products in other markets, by means of a substitutability analysis*"¹⁸¹.
- 4.15 The following products are considered in ComReg's substitutability analysis to determine if they can act as an effective direct constraint on the focal product, i.e., Fibre Ethernet WDC, and therefore whether they are to be included in the same relevant product market:
- (a) xWDM and other MI products;
 - (b) P2P Wireless Ethernet WDC products;
 - (c) Broadband including business broadband; and
 - (d) Dark fibre.
- 4.16 In addition, the assessment also considered whether there is a bandwidth break within the MI WDC products by conducting a chain of substitution analysis for MI WDC of all bandwidths. A bandwidth break considers whether LLs, which are offered over a range of bandwidths, should be segmented at a market level according to bandwidth ranges.

4.3.1. Is WDC provided over xWDM an effective substitute for Fibre Ethernet WDC?

- 4.17 In section 3.5.6, ComReg sets out its position that Retail LL services provided over xWDM technologies are effective substitutes for Ethernet LLs due to, inter alia, sufficient similarity of product characteristics and the intended use of these services. ComReg is of the view that there is also likely to be

¹⁸⁰ [Medium to Large Enterprise - SIRO](#)

¹⁸¹ Para 33, the 2020 Recommendation.

effective substitutability between WDC based on Ethernet and xWDM at the wholesale level.

- 4.18 As demand for WDC is primarily derived from demand for retail LLs, we consider that the reasons set out in section 3.5.6 to include LLs provided over xWDM in the relevant retail market are also relevant at the wholesale level. xWDM based WDC services have sufficiently similar product characteristics compared to wired Ethernet WDC services as both can provide dedicated connections, symmetric speeds and high-quality services. Our data shows that SPs purchase both xWDM and ethernet based WDC services for the same purposes, i.e., own network use as well as downstream supply of retail and wholesale LL services.
- 4.19 When high speed fibre-based Next Generation Network ('**NGN**') Ethernet networks were deployed in Ireland, in general xWDM technology was used in the core network to connect the customer facing NGN Aggregation ('**AGG**') nodes to a pair of NGN core nodes, known as Primary Edge ('**PE**') nodes.¹⁸² This core transmission delivered high bandwidth circuits to AGG nodes which then in turn connected to customers premises, (via fibre) to provide lower speeds. For instance, the core network may provide a diverse pair of $n \times 10\text{Gbit/s}$ circuits to an AGG node which in turn would connect multiple customer premises at lower speeds.
- 4.20 The individual SP network arrangements were designed by network planners to affect the most economic solutions, based on the expected demand, their customers' profiles, forecast expansion requirements, fibre availability and distances involved and of course equipment costs. Fibre Ethernet access technology is typically based on a minimum LL access speed of 1Gbit/s so if a customer requires 10Mbit/s, the access bearer component of the LL is still 1Gbit/s. Similarly, for incremental speeds above 1Gbit/s, the Ethernet access bearer is 10Gbit/s.
- 4.21 As bandwidth requirements increase, it can be more efficient for an SP to connect customers directly to the xWDM platform rather than investing in the collocated Ethernet nodes. This also becomes more economic particularly as these equipment costs continue to fall and where availability of ports on an Ethernet node many be approaching exhaustion. Hence, where a customer requires 1Gbit/s or above it may be more efficient to provide their service via xWDM.
- 4.22 The use of xWDM and Ethernet equipment has overlapped, and the data clearly shows that many SPs use both Ethernet and xWDM technologies, to

¹⁸² By 2028, Eircom plan to replace PE nodes with IP Backbone Nodes.

varying degrees, to provide circuits greater than 1Gbit/s. Over 46%¹⁸³ of circuits greater than 1Gbit/s were provided over xWDM while the majority of the remainder were Ethernet, a trivial volume being TDM circuits. Hence, our conclusion is that xWDM is an effective substitute for Ethernet based WDC service.

- 4.23 In terms of pricing, as wholesale LL pricing information is not readily available, we use Eircom's published prices to compare the prices of Ethernet and WDM LLs¹⁸⁴. We consider that the prices of WDM LLs are comparable to those of Ethernet LLs.¹⁸⁵
- 4.24 On the supply side, ComReg notes that all xWDM WDC SPs also provide wired Ethernet WDC services. ComReg considers that there are low barriers to switching between supplying xWDM and Ethernet based WDC services. This is because the majority of cost incurred in providing such services are sunk costs for associated civil engineering and cabling, estimated at up to 80% of the overall cost¹⁸⁶.
- 4.25 In their responses to the QQ, LL SPs did not consider there to be any reason to warrant any change to the position in the 2020 Decision which included xWDM LLs in the same relevant product market as wired Ethernet LLs. Similarly, Respondents did not disagree with the inclusion of xWDM LLs in the same relevant product market as wired Ethernet LLs.
- 4.26 Having regard to above, ComReg considers that wired xWDM WDC is an effective substitute for wired Ethernet WDC and therefore should be included in the same product market.

4.3.2. Is Wireless Ethernet WDC an effective substitute for Wired Ethernet WDC and xWDM WDC

- 4.27 As set out Table 7 above, on-net wholesale wireless MI LLs sales (including self-supply) only accounted for between 10-15% of total on-net LLs¹⁸⁷ between 2020 and 2024¹⁸⁸.

¹⁸³ H2 2024 Data (on-net data including retail self-supply).

¹⁸⁴ Eircom's Network Price List available at Openeir.ie.

¹⁸⁵ This is based on the comparison of WUP (up to 25km with local tail up to 500m) and WSEA (Local tail up to 500m, Same Region High Density, Option 6 class of service) at speed of 1Gbit/s.

¹⁸⁶ Page 62, EC 2020 Recommendation.

¹⁸⁷ Based on H2 2024 data.

¹⁸⁸ There appears to be an increase of wireless LLs between 2020 and 2024. This is due to under reporting of wireless lines prior to 2024.

4.33 Furthermore, most SPs, including some who supply wireless LLs, in their responses to the QQ (with the exception of Eircom and EU networks) agreed that P2P wireless LLs do not constitute an effective substitute for wired Ethernet WDC. ComReg's views on Eircom's examples in support of its view have been set out in paragraph 3.97 above.

4.34 In its Submission, Eircom, largely through its consultant's¹⁹⁴ report, argued that wireless is an effective substitute for wired LLs and should therefore be included in the market. Eircom contended that ComReg based its exclusion of wireless entirely on the opinion of HEAnet, which did not represent the broader market; and even if HEAnet was representative, it stated that:

"its tender process explicitly allows for the use of wireless technology as a viable option. Although lower marks may be assigned to wireless in its tenders, this demonstrates that HEAnet itself nevertheless considers wireless a substitute." Eircom particularly named a few customers¹⁹⁵ as examples that do not use wireless leased lines for back-up".¹⁹⁶

4.35 The 2025 Customer Survey highlighted that the majority (14 of 16) of these retail end users indicated they used wired LLs as their primary connections and they did not consider wireless as a viable substitute. The 14 retail end users stated that they use wireless mainly as a back-up connection for resilience, with one exception¹⁹⁷.

4.36 ComReg also asked these retail end users how they would respond to a 10% increase in the prices of their wired LLs and whether they would switch to a wireless LL instead. 11 out of 14 end users respondents, who answered this question indicated they would continue to use wired LL with none indicating that they would switch to wireless.

4.37 In its Submission, SIRO also considered that while wireless services should be excluded from the market in Zone A stating¹⁹⁸:

"..they are often viable substitutes in Zone B, particularly where deploying fixed-line infrastructure is cost prohibitive".

4.38 Upon further engagement and clarification from SIRO, SIRO confirmed that it did not consider wireless as a substitute for wired LLs, with the context for

¹⁹⁴ Through Line Advisors Ltd

¹⁹⁵ [REDACTED]

¹⁹⁶ Point 32 of Eircom's Submission.

¹⁹⁷ [REDACTED].

¹⁹⁸ Page 12 of SIRO Submission.

the above statement being wireless can be used in circumstances where fibre LL are not available to customers (either physically or because it would be cost prohibitive). It noted its experience of customers switching from wireless to dual wired LLs as fibre became available, but not vice versa.

- 4.39 In light of the above, ComReg's position is that wireless WDC is not an effective substitute for wired Ethernet and xWDM WDC.

4.3.3. Is wholesale broadband an effective substitute for wired Ethernet WDC and xWDM WDC?

- 4.40 In section 3.5.8 above, ComReg set out its view that, at the retail level, broadband (including business broadband) is not likely to be an effective substitute for wired Ethernet LLs and xWDM LLs as there are sizeable differences in terms of product characteristics, pricing, as well as intended use of these services by customers.¹⁹⁹ ComReg considers that these differences equally apply at the wholesale level given most wholesale demand is derived from retail demand.

- 4.41 In particular, many business customers including large corporate and public sector end-users require symmetric and dedicated connections with guaranteed speed and service levels. This cannot be satisfied by broadband products and is why businesses are prepared to continue to pay a premium for LL services. Indeed, the 2025 Customer Survey revealed that the majority of retail end users (13 out of 15) did not consider Broadband as a substitute, while the 2 others considered that broadband may be a substitute at the lower end. Despite the rollout of high-speed fibre broadband in Ireland, we have not observed any downward trend in the volume of MI LLs sold. Contrarily, the volumes of MI LLs sold has increased in both retail²⁰⁰ and wholesale markets since 2020.

- 4.42 Furthermore, there are significant gaps between prices of LLs and broadband. As illustrated in Table 5 and Table 6 in section 3.5.8, Eircom's monthly rental costs of wholesale LLs (prices shown are for speed of 10Mbit/s) are multiples of Eircom's broadband products. Despite such price differences, we have not seen a trend of migrations from LL to broadband products at the retail level, even with increased availability of higher bandwidth broadband services.

¹⁹⁹ See subsection 3.4.2 above.

²⁰⁰ See Figure 3 Volumes of Retail MI leased lines sold over past years.

- 4.43 Many SPs (including Eircom, Enet, Vodafone, Virgin Media, Siro²⁰¹) agree with ComReg's position that wholesale broadband does not constitute an effective substitute for wired ethernet WDC in their responses to ComReg's QQ.
- 4.44 In its Submission, Eircom noted that it was seeing increasing evidence of a trend in businesses operating branch networks to use broadband within their connectivity portfolios and named a few such customers as examples ([REDACTED])²⁰². It claimed that ComReg has undertaken no such surveys or substantial analysis and infers its SSNIP positions based on dated and high-level questionnaire responses from operators and from a meeting(s) with HEAnet and OGCIO. Eircom also claimed that ComReg did not properly consider 5G FTTH and GEA products.
- 4.45 Arising from the 2025 Customer Survey, 13 of the 15 retail end users asked did not consider broadband to be a substitute but use it instead as a backup connection to LLs. The remaining 2 considered that broadband may be a substitute at lower bandwidths.
- 4.46 When asked how they would respond to a 10% price increase of all wired LLs, 11 retail end-users answered there would be no change, while three said they would consider alternatives but would not compromise on reliability or SLAs. Two retail end users were not asked this question as they mainly use DF.
- 4.47 Despite many broadband products now being able to provide very high "up to" speeds, they are not symmetrical and importantly, do not offer SLAs comparable to LL SLAs, which are highly valued by LL customers. Based on the above, ComReg does not consider that broadband forms part of the relevant WDC product market and is not an effective substitute for wired Ethernet and xWDM WDC.

4.3.4. Is dark fibre an effective substitute for wired Ethernet WDC and xWDM WDC?

Overview

- 4.48 DF refers to rental of fibre optic cable (typically a single or pair of fibre strands within a cable) from a fibre provider. This is a product that requires the purchaser to install and manage the electronic equipment (lasers, switches, multiplexers, repeaters etc.) necessary to transmit data over the fibre cable.

²⁰¹ ComReg's views on their responses are detailed in section 3.5.8.

²⁰² Point 21 of Eircom's Submission.

In contrast, LLs are sold with the equipment and managed services to enable an end-to-end connection between locations.

4.49 Many operators currently provide DF at the wholesale level, including Eircom, Enet, EU Networks, etc. Table 8 below lists the main DF suppliers and their volumes of DF circuits (see further explanation in paragraph 4.51) in 2022. Enet was by far the biggest DF supplier in 2022, representing [REDACTED] of all DF sales by operators. Enet sells DF on its MANs and connections to data centres on its Dublin metro rings. Its main customers are [REDACTED].

Table 8: SP DF Sales²⁰³ 2022 [PARTIALLY REDACTED]

Dark Fibre Sales	Volume	%
Enet	[REDACTED]	[REDACTED] ²⁰⁴
EU Networks	[REDACTED]	[REDACTED] ²⁰⁵
Eircom	[REDACTED]	[REDACTED] ²⁰⁶
Virgin Media	[REDACTED]	[REDACTED] ²⁰⁷
ESBT	[REDACTED]	[REDACTED] ²⁰⁸
ZAYO	[REDACTED]	[REDACTED] ²⁰⁹
Aurora	[REDACTED]	[REDACTED] ²¹⁰
EXA	[REDACTED]	[REDACTED] ²¹¹
BT	[REDACTED]	[REDACTED] ²¹²
Viatal	[REDACTED]	[REDACTED] ²¹³
Total	2,847	100%

4.50 The other main SP suppliers in 2022 were EU Networks, Eircom and Virgin Media. [REDACTED] were among the biggest customers of EU Networks. Eircom's main customers were [REDACTED].

²⁰³ Excludes resale of just over 500 dark fibre lines – [REDACTED]

²⁰⁴ Between 50% and 60%.

²⁰⁵ Between 10% and 20%.

²⁰⁶ Between 10% and 20%.

²⁰⁷ Between 10% and 20%.

²⁰⁸ Between 0% and 10%.

²⁰⁹ Between 0% and 10%.

²¹⁰ Between 0% and 10%.

²¹¹ Between 0% and 10%.

²¹² Between 0% and 10%.

²¹³ Between 0% and 10%.

[REDACTED]. It also sold a smaller amount of DF to [REDACTED] for backhaul purposes, replacing LLs previously purchased from [REDACTED]²¹⁴. Virgin Media sold mainly to [REDACTED] and a number of private and public customers.

- 4.51 The updated sales data for 2024 is shown in Table 9 below using the metric of DF connected premises. This differs from the 2022 data shown in Table 8 above which was based on the volume of DF circuits, so the data sets are not directly comparable. The reason for this change was to rationalise the collection methodologies used to collect DF and LL data i.e., to use same approach for DF as that used for collecting LL data.
- 4.52 Thus, using DF CPs allows ComReg to input the location data of both DF and CPs into the proximity algorithm to calculate Zones A and B, and market shares of SPs in each Zone. This is following the treatment of the combined DF and LL data sets to remove duplicate CPs on a per operator basis. ComReg’s approach to the collection and treatment of data in arriving at this Decision is described in detail in Annex: 15.
- 4.53 Table 9 below shows that in 2024, as previously in 2022, many operators provide DF at the wholesale level, including Eircom, Enet and EU Networks. Enet maintained its position as the largest supplier of DF, having [REDACTED] of all DF sales by CPs. Enet sells DF on its MANs and connections to data centres on its Dublin metro rings. Its main customers are [REDACTED].

Table 9: SP On-Net DF Sales 2024 Connected Premises²¹⁵ [PARTIALLY REDACTED]

SP	Vol On-Net DF CPs	% On-Net DF CPs
Aurora Telecom	[REDACTED]	[REDACTED] ²¹⁶
BT Ireland	[REDACTED]	[REDACTED] ²¹⁷
Eircom Limited	[REDACTED]	[REDACTED] ²¹⁸
eNet	[REDACTED]	[REDACTED] ²¹⁹

²¹⁴ Enet response to QQ July 2022.

²¹⁵ Includes duplicate CPs.

²¹⁶ Between 0% and 10%.

²¹⁷ Between 0% and 10%.

²¹⁸ Between 0% and 10%.

²¹⁹ Between 50% and 60%.

ESB Telecom	[REDACTED]	[REDACTED] ²²⁰
EUNetworks	[REDACTED]	[REDACTED] ²²¹
Hibernia Atlantic/EXA	[REDACTED]	[REDACTED] ²²²
Virgin Media Ireland Ltd	[REDACTED]	[REDACTED] ²²³
Zayo	[REDACTED]	[REDACTED] ²²⁴
Total DF CPs	7,121	100%

4.54 The other main SP suppliers are EU Networks, Eircom and Virgin Media. [REDACTED] are among the biggest customers of EU Networks. Eircom's main customers are [REDACTED]. [REDACTED]. It also sells a small amount of DF to [REDACTED] for backhaul purposes, replacing LLs previously purchased from [REDACTED]²²⁵. Virgin Media sells mainly to [REDACTED] and a number of private and public customers.

4.55 On the demand side²²⁶, Table 10 below shows [REDACTED] was the biggest purchaser of DF in 2022, accounting for [REDACTED] of the total DF circuit purchases. It has maintained this position as shown in the 2024 figures in Table 11 below. It had agreements with [REDACTED] to purchase DF and these are still its suppliers. [REDACTED] were also among the main SP purchasers and remained so in 2024. Apart from SPs, there is a significant amount of direct purchases by end customers, including large enterprises and public sector organisations such as HEAnet and OGCIO.

²²⁰ Between 0% and 10%.

²²¹ Between 10% and 20%.

²²² Between 0% and 10%.

²²³ Between 0% and 10%.

²²⁴ Between 0% and 10%.

²²⁵ [REDACTED] response to QQ July 2022.

²²⁶ Purchasers are a mix of SPs and large and sophisticated enterprises and public sector organisations.

Table 10: DF Purchases 2022 [PARTIALLY REDACTED]

Dark Fibre Purchaser	Vol	%
Vodafone	[REDACTED]	[REDACTED] ²²⁷
Viatel	[REDACTED]	[REDACTED] ²²⁸
BT Ireland	[REDACTED]	[REDACTED] ²²⁹
HEAnet	[REDACTED]	[REDACTED] ²³⁰
Amazon Data Services	[REDACTED]	[REDACTED] ²³¹
Virgin Media	[REDACTED]	[REDACTED] ²³²
Microsoft Ireland	[REDACTED]	[REDACTED] ²³³
Magnet Networks	[REDACTED]	[REDACTED] ²³⁴
Interxion	[REDACTED]	[REDACTED] ²³⁵
Enet	[REDACTED]	[REDACTED] ²³⁶
SIRO Ltd	[REDACTED]	[REDACTED] ²³⁷
GovNet	[REDACTED]	[REDACTED] ²³⁸
Equinix (Ireland)	[REDACTED]	[REDACTED] ²³⁹
Others	[REDACTED]	[REDACTED] ²⁴⁰
Total	2,847	100%

Table 11: DF purchases (CPs) 2024 [PARTIALLY REDACTED]

Dark Fibre Purchaser	Vol CPs	% CPs
Amazon	[REDACTED]	[REDACTED] ²⁴¹
BT	[REDACTED]	[REDACTED] ²⁴²

²²⁷ Between 40 and 50%.

²²⁸ Between 0% and 10%.

²²⁹ Between 0% and 10%.

²³⁰ Between 0% and 10%.

²³¹ Between 0% and 10%.

²³² Between 0% and 10%.

²³³ Between 0% and 10%.

²³⁴ Between 0% and 10%.

²³⁵ Between 0% and 10%.

²³⁶ Between 0% and 10%.

²³⁷ Between 0% and 10%.

²³⁸ Between 0% and 10%.

²³⁹ Between 0% and 10%.

²⁴⁰ Between 10% and 20%.

²⁴¹ Between 0% and 10%.

²⁴² Between 0% and 10%.

Eircom	[REDACTED]	[REDACTED] ²⁴³
Magnet Networks	[REDACTED]	[REDACTED] ²⁴⁴
Microsoft	[REDACTED]	[REDACTED] ²⁴⁵
Others	[REDACTED]	[REDACTED] ²⁴⁶
Viatel (VGL)	[REDACTED]	[REDACTED] ²⁴⁷
VMI	[REDACTED]	[REDACTED] ²⁴⁸
Vodafone	[REDACTED]	[REDACTED] ²⁴⁹
Total	7,121	100%

4.56 The two large public sector networks, OGCIO and HEAnet, were significant purchasers of DF in 2022. OGCIO accounts for the majority of all Government/public service demand, including Government departments, hospitals and local authorities. OGCIO has used DF to establish a large capacity national network connected to its hub sites in many locations around the country²⁵⁰. Previously, OGCIO purchased high bandwidth leased lines from SPs for this purpose. HEAnet also purchases DF to provide connectivity for third level institutions. HEAnet states that DF is the preferred technology in comparison to wired and wireless LLs. ComReg met with OGCIO²⁵¹ and HEAnet²⁵² and their positions in regard to DF remain largely unchanged since 2022.

4.57 Table 12 below shows the purposes of DF purchases. SPs mostly use DF as an input to extend the reach of their own networks, accounting for 60% of all

²⁴³ Between 0% and 10%.

²⁴⁴ Between 0% and 10%.

²⁴⁵ Between 0% and 10%.

²⁴⁶ Between 30% and 40%.

²⁴⁷ Between 0% and 10%.

²⁴⁸ Between 0% and 10%.

²⁴⁹ Between 30% and 40%.

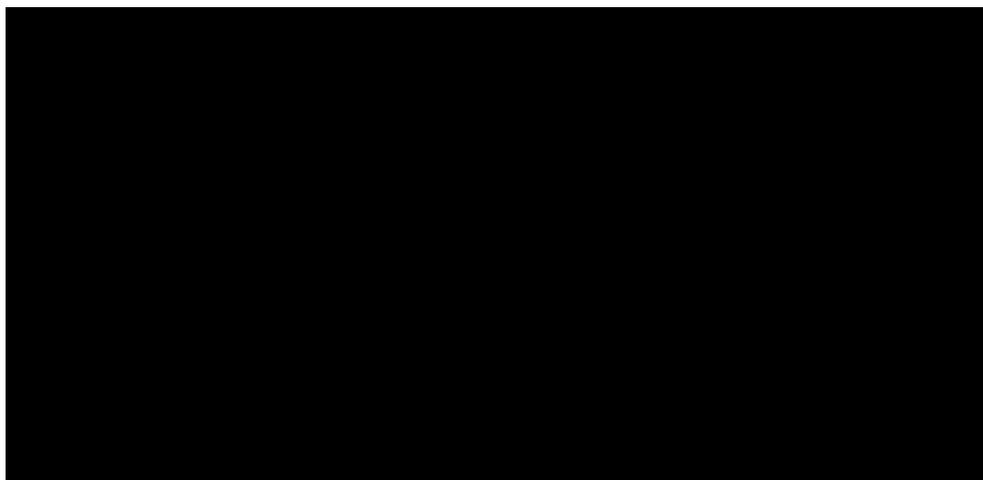
²⁵⁰ Meeting with OGCIO of 18 April 2023. OGCIO uses dark fibre to connect various government and public services premises including offices, hospitals etc. It also deploys its own wireless into fibre 'not-spots' and only uses managed LL services as a last resort. [REDACTED]

[REDACTED]. Its preference is for DF rather than managed LL services (including wavelengths) and it stated that the commercial advantage of using DF is overwhelming. [REDACTED]

²⁵¹ 6 May 2025.

²⁵² 29 April and 7 May 2025.

Table 14: Eircom DF Sales by Customer 2024 CPs [REDACTED]



Approach to Assessment of DF

4.60 The Explanatory Note to the 2020 Recommendation²⁵⁴ explains that:

“Dark fibre could, based on an appropriate substitutability analysis under certain conditions and in certain geographic areas, be included in the dedicated capacity product market, due to its flexibility in terms of technical characteristics, price and bandwidth.....The substitutability depends on the ability of the access seeker to self-provide the knowledge and active equipment needed as well as the difference in price to active products. If dark fibre is found to exert sufficient competitive constraint over the pricing of leased lines, it could be included in same relevant market for dedicated capacity”.

And further:

“There is evidence from a number of countries (notably including those with significant PtP fibre deployment) that operators and larger businesses purchase and make use of dark fibre (fibre unbundling) in a similar manner to the way in which they would use active leased lines.”

4.61 From the supply-side it states²⁵⁵ that *“there are relatively low barriers to a dark fibre supplier to offer active leased line connectivity and vice versa, and*

²⁵⁴ Page 58.

²⁵⁵ Page 58.

many commercial suppliers of dedicated capacity make both options available in areas in which they are present”.

- 4.62 ComReg notes that a number of countries have included DF in the WDC market, including Austria²⁵⁶, Iceland²⁵⁷, the Netherlands²⁵⁸ and the UK²⁵⁹.

Substitutability Analysis

- 4.63 From a demand substitutability perspective, at the wholesale level ComReg considers there to be sufficient similarities in product characteristics between dark fibre and MI WDC, especially for high-capacity wholesale leased line customers. Both products can ultimately provide high capacity symmetric and dedicated connections. There is an additional requirement for the dark fibre purchaser to install and manage the electronic equipment themselves in order to light the dark fibre. However, ComReg is of the view that most SPs have the expertise and ability to do this as they already use dark fibre for either their own network buildout, or as inputs to delivering LL services. Further, with respect to intended use, both dark fibre and wholesale LLs are used by SPs as network inputs or as an input to downstream wholesale and/or retail services.

- 4.64 ComReg does not have reliable data to compare the prices between DF and active LLs. However, ComReg notes the growing demand for DF in recent years, and evidence of certain SPs switching from LLs to DF for backhaul connectivity. For example, Enet noted in its response to the QQ that [REDACTED]
[REDACTED]
[REDACTED] [REDACTED] This migration has been completed. Also, as mentioned in paragraph 4.40, [REDACTED] [REDACTED] [REDACTED]
[REDACTED]
[REDACTED] [REDACTED].

- 4.65 In addition, there is evidence of SPs using both LL and DF as wholesale input to provide downstream LL services. One SP [REDACTED] [REDACTED] informed ComReg at the meeting on 10 October 2022 that it [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

²⁵⁶ [Cullen International \(cullen-international.com\)](https://www.cullen-international.com)

²⁵⁷ [PTA Decision no.8 2014 M6 Appendix A.pdf \(fjarskiptastofa.is\)](https://www.fjarskiptastofa.is/PTA_Ddecision_no.8_2014_M6_Appendix_A.pdf)

²⁵⁸ [NL-2021-2353%20Adopted EN.pdf \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021L2353&from=doctrinal)

²⁵⁹ [Consultation: Business connectivity market review - Ofcom](https://www.ofcom.gov.uk/consult/condocs/bcm/bcm19/bcm19.pdf)

[REDACTED]
[REDACTED]” Similarly, in its meeting with ComReg on 22 September 2022, another SP [REDACTED] informed ComReg that they use wholesale LL (DIA and Layer 2 access) and dark fibre to provide LL services.

4.66 In its response to the QQ [REDACTED] indicated its preference for DF stating [REDACTED] [REDACTED]”.²⁶⁰

4.67 On the supply side, all the DF suppliers in Ireland, bar one, also supply wired ethernet LLs. The main difference between a LL and DF is the requirement for the purchaser to purchase, install and manage the electronic equipment (lasers, switches, multiplexers, repeaters etc.) necessary to transmit data over the DF. ComReg considers that most SPs active in the LL markets (other than pure resellers) can easily light the DF for the provision of LLs, whether this is for network extension or onward resale at the wholesale or retail level, as they have already done so to greater or lesser extents. Therefore, ComReg considers there are low barriers to switching between supplying dark fibre and leased lines.

4.68 In their response to the QQ, many SPs (Eircom, Virgin Media, Vodafone, etc) indicated they do not see any developments to alter the conclusion in the 2020 Decision which excluded DF from the relevant market. SIRO, on the other hand, considered that dark fibre should be included in the relevant market, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]”²⁶¹ BT also noted that Ofcom mandated certain dark fibre to be regulated and the approach should be consistent across regulators.

4.69 In its Submission, Enet argued that:

“The majority of service providers neither have the expertise nor desire to undertake the complexity of lighting dark fibre due to the cost and complexity of having to procure, light and manage this physical infrastructure in-life on a national basis given the widespread geographic spread of their target end customers and the proven ability of those customers to easily churn away to

²⁶⁰ [REDACTED] response to Q.5 in QQ.

²⁶¹ Siro response to Q.17 in QQ.

*[another] different service provider given relatively short contract terms (typically 1 to 3 years) of leased lines in the market. This is the very reason these service providers purchase leased lines in the first instance.*²⁶²

4.70 ComReg’s analysis of the LL and DF data contradicts Enet’s assertion. Also, it did not provide any examples or evidence of specific barrier to NO’s lighting DF. ComReg’s analysis shows that all the wholesale WDC suppliers that have their own networks also purchase and light DF. This indicates that there are no significant or insurmountable barriers to LL SPs lighting and managing DF.

4.71 Eircom also disagreed with ComReg that DF should be included in the WDC market. In its view, DF is not a dedicated capacity service in itself but is a passive facility that can enable the provision of dedicated capacity services. It noted that in ComReg Decision D03/24 ComReg placed DF alongside PIA mandating it as a contingent remedy when there is insufficient space in PI for duct or pole access. It argued that if DF was included in the market, then PIA should be included by the same logic. Eircom also claimed²⁶³ that it was necessary to undertake a SSNIP test to correctly determine whether or not DF was a substitute to managed WDC services, despite noting that ComReg does not have sufficient data available to conduct such a test. Its view was contradictory however, in that while it considered DF was not in the market, it stated that DF CPs should nonetheless be included in the algorithm.

4.72 Similarly, BT stated that:

*“DF is an input to networks & WDC services - SPs can chose to build it from the own inputs, buy in the inputs they need, or simply buy a 3rd party MI LL.... Wholesale or retail supply of dark fibre helps another party to build an MI LL if that party is an end user, this activity is not part of the market for MI LL.”*²⁶⁴

4.73 To clarify, ComReg did not include DF in the relevant market in the 2024 PIA Decision; rather, it included DF as a remedy which applied only under specific circumstances, such as when duct access is not available. This does not mean it is a substitute to PIA and it was not characterised as such in the 2024 PIA Decision.

²⁶² Enet supplementary submission dated supplementary submission on 27 February 2025, page 2.

²⁶³ Through Line Report Page 11 and Eircom main submission Pages 8-11 and 16-18.

²⁶⁴ BT Submission Pages 13,14 Sections b and c.

- 4.74 ComReg notes that there has been a sizeable increase in the volume of DF sold and purchased by SPs since the 2020 Decision. The demand and supply substitutability assessment carried out above suggests that DF is part of the WDC market. To reiterate, on the demand side, SPs can and do purchase DF and use it for similar purposes as LLs. On the supply side, many LL NOs supply both DF and WDC and there are no significant barriers to procuring DF and then lighting it themselves to offer LLs. ComReg considers that the supply side substitution in this context is consistent with the conditions identified in the European Commission’s revised Notice on Market Definition.²⁶⁵
- 4.75 In relation to the SSNIP test, ComReg does not consider it is necessary to conduct an empirical SSNIP test, as suggested in the 2024 EC Notice on Market Definition:
- “Therefore, while the Commission may rely on the principles of the SSNIP test in its assessment of the relevant market, there is no obligation on the Commission to apply the SSNIP test empirically, and other types of evidence are equally valid to inform the market definition, as further described in Section 3 (56). In fact, in most cases the SSNIP test serves only as a conceptual framework for the interpretation of available evidence.”²⁶⁶*
- 4.76 ComReg adopted this approach in its analysis. Given the evidence of demonstrable demand and supply behaviour in the form of sales and purchase activities of DF shown in paragraphs 4.49 to 4.58, ComReg does not consider it necessary to apply an empirical SSNIP test. However, ComReg’s analysis incorporated the conceptual SSNIP approach in the considerations of substitutability between DF and active WDC services.
- 4.77 Although Eircom did not agree with the inclusion of DF in the WDC market, it nevertheless considered that ComReg was correct to include connected premises serviced by DF in ComReg’s geographic assessment in subsection 4.4.
- 4.78 ComReg is of the view that it is appropriate to allocate the DF CPs to the owner of the fibre network, rather than the purchaser of the DF, in accordance with the modified greenfield approach. This is a more accurate measure of the relative market power of operators and better reflects the footprint and scale of each network.

²⁶⁵ EC Notice on Market Definition Document No. C/2024/1645, published 22 February 2024.

²⁶⁶ Ibid Paragraph 31.

- 4.79 In light of the foregoing discussion, ComReg finds that dark fibre is an effective substitute for wholesale wired ethernet and xWDM LLs and should be included in the relevant WDC market.

4.3.5. Bandwidth analysis

- 4.80 ComReg's view is that, consistent with the 2020 Decision, a chain of substitution exists for MI WDC of all bandwidths so there is a single market for all MI WDC services at all bandwidths.
- 4.81 A chain of substitution²⁶⁷ refers to the substitutability between a number of similar products, which could lead to each of these products being part of the same market. A chain of substitution implies that a product at one end of the chain can potentially exert an indirect constraint on a product at the other end of the chain.²⁶⁸
- 4.82 For example, if product B is a substitute for products A and C, while A and C may not be direct substitutes, they may be considered to be in the same product market since their respective pricing may be constrained by substitution to B.²⁶⁹
- 4.83 As such, it is possible that an increase in the price of one of the products in the chain could lead to a rise in the demand for a product further up the chain, in which case the associated products would be considered part of the same market for the purposes of a competition assessment.
- 4.84 In the context of MI WDC, ComReg assesses whether a chain of substitution exists between MI WDC products offered at various bandwidths, and thereby subject to a common pricing constraint. For example, products that are close to the ends of the "chain" such as 10 Mbit/s and 1 Gbit/s circuits may not be close substitutes for each other, but both may be seen as substitutable for a 100 Mbit/s LL in terms of product characteristics, pricing and intended use. If they are sufficiently close substitutes for a 100 Mbit/s LL, then there may be a complete chain of substitution, meaning that all three LL products are part of a single product market.

²⁶⁷ The concept of a 'chain of substitution' is described in the EC Notice on Market Definition (paragraphs 56-58) and is further described in the UK Office of Fair Trading document "Market definition: Understanding competition law", December 2004 at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284423/oft403.pdf

²⁶⁸ Aproskie, J. and S. Lynch (2012) 'The Chain of Substitution in Market Definition: Pitfalls in Application' <http://www.compcom.co.za/wp-content/uploads/2014/09/Aproskie-and-Lynch-Chain-of-substitution-in-market-definition-Competition-Conference-2012.pdf>.

²⁶⁹ EC Notice on Market Definition.

4.85 In their responses to the QQ, most SPs agreed that there was no bandwidth break. Eircom stated that [REDACTED]
[REDACTED]
[REDACTED]”.²⁷⁰ Virgin Media, Vodafone and NBI also agreed that a bandwidth break is not required.

Demand-side substitutability

4.86 ComReg considers that MI WDC products across different bandwidths have sufficiently similar product characteristics such as dedicated connections, symmetric speeds and high-quality services. The speed requirements may vary by customers, but by way of chain of substitution as demonstrated below, all bandwidths can be considered to belong to in the same market.

4.87 Table 15 below shows Eircom’s WSEA logical prices²⁷¹ across a range of bandwidths (for same node conveyance/handover) published in Openeir’s Network Price List. We can see that Eircom’s prices go up gradually with the bandwidths. The price increments between adjacent bandwidths are very small. In the event of a 5-10% SSNIP, it is likely that a purchaser would switch to a higher bandwidth product in order to save costs and avail of a better product, thus rendering the SSNIP unprofitable. For example, if the price at 100 Mbit/s for high density increases by 5-10% (i.e., to €661.5 - €693), a purchaser would be better off switching to a 150 Mbit/s product. Similarly, if the price at 1 Gbit/s increases by 5-10%, a purchaser would likely switch to 1.5 Gbit/s. Therefore, MI WDC products of adjacent bandwidths are likely to be on the same market, and by extrapolation there exists a chain of substitution between MI WDC of all bandwidths.

Table 15: Eircom Zone B WSEA Annual Rental - Logical circuits

Mbit/s	Same site high density	Same site medium density
1	€340	€382
10	€463	€704
20	€478	€754
30	€495	€805
40	€531	€916
50	€559	€1,033
75	€592	€1,147
100	€630	€1,297
150	€704	€1,500
200	€723	€1,649

²⁷⁰ Eircom response to Q.18 in QQ.

²⁷¹ eircom RIO Network Price List available at openeir.ie. Version V16.0 31/01/2025

250	€766	€1,734
300	€808	€1,898
450	€937	€2,326
500	€980	€2,414
600	€1,020	€2,598
750	€1,061	€2,788
1000	€1,149	€3,129
1500	€1,257	€3,162
2000	€1,361	€3,477
2500	€1,464	€3,709
3000	€1,534	€3,749
4000	€1,648	€3,847
5000	€1,753	€3,964
6000	€1,848	€4,079
7000	€1,915	€4,185
8000	€1,972	€4,195
9000	€2,033	€4,240
10000	€2,101	€4,289

Supply-side substitutability

- 4.88 On the supply side, wired MI WDC services of all bandwidths are delivered using the same physical medium, i.e. fibre. Once the fibre is connected, it can be scaled up or down to provide a wide range of bandwidth services. The barriers involved in doing so (e.g., scaling from 1 Gbit/s to 10 Gbit/s where the existing MI WDC service is provided on a 1Gbit/s port) are merely to change the NTU equipment and the corresponding exchange card or module. This does not require significant costs or work. ComReg considers that SPs are able to change the equipment easily and in a timely manner as they already supply a wide range of bandwidths with different specifications of equipment installed. Therefore, all bandwidths of fibre MI WDC services are substitutable and belong to the same market.
- 4.89 In their Submissions, a number of Respondents suggested possible bandwidth breaks. Eircom stated that ComReg relied on SPs' views from 2 years ago²⁷² to conclude that there was no bandwidth break. It argued that ComReg's evaluation of any bandwidth break was limited and did not adequately reflect either the demand or the supply side of the market. It proposed a bandwidth break at 500 Mbps as it claimed that the majority of MI LLs fall below 500Mbps. It further suggested that broadband should be

²⁷² Eircom Submission (Through Line Report) page 7.

included in the lower bandwidth market; or alternatively, if there was no bandwidth break, broadband and wireless should be included in the market.²⁷³

- 4.90 However, it is not correct to say that ComReg conducted limited demand and supply side analysis. Given that there is no reliable pricing data to conduct the chain of substitution analysis, ComReg applied a conceptual SSNIP analysis using Eircom regulated prices, as shown in paragraph 4.87. This shows that a 10% SSNIP is not likely to lead to a break in the chain of substitution as it is possible to switch to the higher bandwidth with similar cost at any bandwidth. From the supply side, again, as shown above, the nature of the fibre means that SPs can easily scale up or down to provide a wide range of bandwidth services.
- 4.91 SIRO stated in its Submission that ComReg appeared to group all bandwidths into a single product market without explicitly recognising potential discontinuities (e.g., around 1Gbps or higher), noting that in ComReg's 2020 Decision Oxera had suggested that price differentials and customer segmentation may indicate separate demand-side preferences for high-capacity circuits. To clarify, ComReg notes that the Oxera analysis referred to by SIRO examined a possible bandwidth break at 1Gbps but concluded there was none.
- 4.92 Enet's Submission suggested a bandwidth break at 10Gbit/s, arguing that:
- "...from a supply perspective, the submarket for 10Gbit/s and above allows connection of premises at greater distances from the AN (given the higher service revenue for faster speeds)".²⁷⁴*
- 4.93 ComReg considers that the above demand and supply side analysis remains appropriate. The majority of wholesale LL SPs already supply LLs with capacities equal to or greater than 10Gpbs and they can switch relatively easily to upgrade or downgrade bandwidths. If high-value opportunities arise to supply services greater than 10Gpbs, SPs can compete by upgrading their equipment or connecting customers directly onto higher capacity core equipment.
- 4.94 BT considered that with services that are more dependent on GPON solutions a customer would need to make a risk assessment of using lower service assurance SLAs for business-critical high bandwidth dedicated

²⁷³ Ibid Pages 5 and 10.

²⁷⁴ Enet main Submission Page 9.

capacity services.²⁷⁵ As already discussed in paragraphs 4.8 to 4.13, PON based LLs can provide very high capacities with SLAs similar to wired Ethernet LLs. Such operators can also bypass optical splitters and provide P2P solutions should a commercially attractive proposition arise. ComReg considers that the evidence and analysis does not support a bandwidth break.

- 4.95 ComReg notes that its approach is consistent with other NRAs. Portugal is the only NRA that has found a bandwidth break at 24 Mbps. This is based on the copper/fibre technology break which does not apply to Ireland.
- 4.96 Based on the above, ComReg's position is that there is a single market for fibre MI WDC of all bandwidths.

4.3.6. Assessment of Indirect Constraints – MI WDC

- 4.97 Even in the absence of actual or potential direct constraints, a vertically integrated alternative SPs' self-supply of retail LLs could be part of a relevant MI market if it is shown that its presence in related retail markets is able to exercise a sufficiently effective and immediate indirect pricing constraint on a HM's supply of MI WDC products. In this respect, retail customers' behaviour may, through demand-side substitution at the retail level, indirectly impact the ability of the HM supplier of WDC to profitably sustain a SSNIP above the competitive level, i.e., indirect retail constraints arising from the retail market may affect wholesale price setting behaviour in the WDC markets.
- 4.98 The main distinction between an MI WDC LL and an MI retail LL is that the former is sold to another SP and the latter is provided to an end-user who is not an SP.²⁷⁶
- 4.99 Currently, all SPs that have their own network to supply retail leased lines are also active in supplying WDC LL services. This means that indirect constraints are not a relevant consideration in defining the relevant WDC market as they have been already accounted for in the context of the assessment of direct constraints²⁷⁷.

²⁷⁵ BT Submission Page 10.

²⁷⁶ As noted earlier, a Wholesale LL can be used to provide retail services and/or act as network inputs for a SP.

²⁷⁷ Furthermore, they are not considered relevant to the SMP assessment for similar reasons. However, ComReg considers whether services external to the relevant markets delivered over wireless P2P radio links when undertaking its competition assessment of the MI WDC markets in Section 5 below.

PIA

- 4.100 In its Submission, Eircom argued that ComReg overlooked competitive constraints from supply-side substitution and potential competition and incorrectly dismissed PIA as a viable alternative²⁷⁸. Eircom claimed that PIA reduced barriers to entry and facilitated supply-side substitution by enabling Eircom's competitors to leverage existing infrastructure. According to Eircom, this mechanism allowed new or existing operators to enter the market and/or extend their network presence thereby exerting downward pressure on prices, constraining the pricing power of a hypothetical monopolist. Eircom re-iterated this in its Submission dated 10 September 2025.
- 4.101 Eircom undertook a comparative analysis²⁷⁹ of the costs for an operator consuming Eircom's PIA products to connect a business premises compared to the costs of civil engineering dig as well as the costs of renting wholesale WDC input from Eircom. Eircom claimed that its analysis clearly demonstrated that its PIA products were more economic than SPs own dig or Eircom's WDC rental.
- 4.102 According to Eircom, there have been [redacted] duct access orders (other than NBI) since the product set was launched a number of years ago. Notably two thirds of these have occurred since the start of 2024 and the issuance of the 2024 PIA Decision. Its view was that the current use of PIA demonstrated that duct access is being used to support local access and to support LL services to business premises and Business Parks.
- 4.103 Based on the evidence and arguments it put forward, Eircom was of the view that PIA duct access was economically and technically viable to substitute for Eircom MI LLs. Eircom went on to say that by ignoring supply-side substitution and potential competition facilitated by PIA, ComReg's market definition failed to reflect the dynamic nature of the telecommunications sector.
- 4.104 In its Submission, BT noted [redacted]
[redacted]
[redacted] [redacted].
- 4.105 ComReg recognises that there has been an increase in the take-up of PIA since the 2024 PIA Decision. ComReg has collected data on the uptake of Eircom PIA from Eircom and Virgin Media. Despite the small increase in PIA orders, the overall volume is still relatively low (excluding NBI), at

²⁷⁸ Eircom Submission of 31 January 2025, pages 13-16.

²⁷⁹ Eircom Submission of 31 January 2025, Appendix 2.

approximately 1,100 orders in 2024. The majority of these orders are for the Open eir Sub-duct Self Install ('SDSI') product, with the rest being the Open eir Sub-duct product. The main difference between the two products is that SDSI involves the installation of the sub-duct by the SP requesting PIA, whereas in the case of the latter product the sub-duct is installed by Eircom for use by the PIA purchaser.

- 4.106 Based on the data provided to ComReg, other than NBI, the main purchaser of Eircom PIA products is [redacted], accounting for almost 80% of all orders, followed by [redacted] and [redacted]. Outside these SPs, there are few orders of Eircom PIA from other SPs, despite some small pick up in recent periods. The majority of the orders from these three SPs were for network extensions, with a small proportion used to connect LLs to business premises.
- 4.107 ComReg also held meetings with Enet/SFG, SIRO and Virgin Media regarding their experience with Eircom's PIA products. They generally considered the experience with the Open eir Sub-duct product poor. Two of the SPs saw SDSI as a significant improvement on this but still believed that further improvements were needed. The third SP was in the process of commencing trialling the SDSI product soon.
- 4.108 To summarise, despite an increase in the take-up of PIA, the volume of usage still remains low (with the exception of NBI). SPs use PIA to varying degrees and their views on the practical effects of PIA are mixed. The primary use of PIA is for network build as opposed to for connecting premises to supply LLs. While ComReg recognises the potential for PIA to have a greater impact on the downstream markets in the long term, PIA is still at its early stage of use and has not had a material impact on the WDC market (and is not likely to do so within the review period). We will continue to monitor developments in this regard.
- 4.109 In order to determine if PIA is a supply-side substitute for MI WDC services, ComReg has conducted a supply substitutability assessment. In this context, supply substitutability measures the extent to which SPs would have the ability and incentive to rapidly use PIA to deliver MI WDC services to premises where it had no presence previously. We do not consider PIA to be a demand-side substitute given the very obvious differences in product characteristics and functionality between the two.
- 4.110 As per the EC's Notice on Market Definition, supply substitution is only relevant for market definition in specific cases, i.e., when it is as effective and as immediate as demand-side substitution and when it leads to similar competitive conditions across the products concerned. It further states that:

*“The necessary conditions for the market to be broadened based on supply substitution are that **most, if not all**²⁸⁰, suppliers are able to switch production between products in the range of related products; that suppliers incur only insignificant additional sunk costs or risks when they switch production; that suppliers have the incentive to and would do so when relative prices or demand conditions change; and that they can offer all products in the range effectively in the short term.”²⁸¹*

- 4.111 ComReg does not consider the above conditions are met in the case of PIA facilitated LLs. As indicated in paragraph 4.108, the volume of PIA orders is still low (noting that Eircom, in its Submission²⁸², indicated that BT and SFG had ordered [REDACTED] of duct in 2025, which for the avoidance of doubt we consider to be minimal), and SPs primarily use PIA for network build, instead of final drop connections for MI WDC delivery to individual premises²⁸³, indicating limited substitution between PIA and WDC services on the supply side.
- 4.112 Secondly, the time taken and the uncertainty involved in delivering MI WDC services based on PIA may prevent SPs from competing with Eircom. For example, SPs may need to install a chamber to reach and utilise the relevant segment of the Eircom PIA towards the end-user premises; or there may be repair and de-silting involved in installing the duct²⁸⁴, which may cause delays. SPs are likely to face a significant disadvantage vis-à-vis Eircom which has a delivery time of 37 working days for the provision of active leased line services classified as ‘standard’ (with such delivery incorporating the use of its own duct infrastructure and where the end user premises is within 500m of an available open eir access fibre).
- 4.113 In addition, ComReg’s analysis of the data shows that Eircom’s active MI WDC services have remained stable despite the low but increased use of PIA since 2024 (excluding NBI), as shown in Table 16 below.

²⁸⁰ Emphasis added.

²⁸¹ Paragraph 33, OJ C, 22.2.2024.

²⁸² Eircom Submission of 10 September 2025, page 4.

²⁸³ ComReg’s meeting with VMI on 7 July 2025 and meeting with SIRO on 10 April 2025. Virgin Media in particular noted during its meeting with ComReg on 3 September 2025 that it mainly used PIA [REDACTED] VMI: [REDACTED]. Eircom did not provide any supporting evidence to the contrary.

²⁸⁴ VMI indicated in an email dated 9 July 2025 that [REDACTED] [REDACTED].

Table 16: Eircom Active On-net WDC Lines (excl. DF) [REDACTED]

- 4.114 Therefore, ComReg considers that SPs are unlikely to be able to readily switch to providing PIA based MI WDC services in the event of a SSNIP in MI WDC services to exert a sufficient supply-side competitive constraint on MI WDC.
- 4.115 In any event, where SPs have installed fibre and built networks (whether for network expansion or LL connection) using Eircom's PIA products, these are considered part of the SPs' networks and are included in the market and considered in our analysis.
- 4.116 ComReg notes Eircom's business case for wholesale LLs based on its PIA as input. As Eircom is aware, key to the results are the assumptions on the number of sites, the distance to OAO's nodes, the level of duct remediation, the selling price and contract duration. Therefore, ComReg's concerns regarding the viability of PIA for MI WDC delivery remain, in particular for smaller scale and/or shorter duration projects or contracts.
- 4.117 Even taking Eircom's business case at face value, ComReg is of the view that PIA is not a substitute for MI WDC services based on demand side substitutability. As discussed above, SPs primarily use PIA for network expansion. There are extra costs and risks involved in using PIA compared to purchasing wholesale LL input. It is unlikely that SPs will switch readily to using PIA instead of MI WDC products such as Ethernet based LLs in the event of a SSNIP in MI WDC prices.
- 4.118 In its Submission of 10 September 2025, Eircom expressed the view that since the close of the 2024 Consultation further developments have reinforced the importance of PIA as a competitive constraint. Eircom included in this what it described as the launch of new PIA processes effective since 1 September 2025, that reduce deployment costs and timelines that will in its view accelerate PIA usage and deepen competitive pressure in the MI WDC markets. Eircom describes these processes as relating to programme management services, automated ordering, and subcontracting options for installation and fibre deployment.²⁸⁵

²⁸⁵ Paragraph 17 of Eircom's submission of 10 September 2025.

- 4.119 ComReg notes however that the processes that Eircom refers to relate to PIA Programme Services, that include PIA Programme Management and Authorised Contractor Services,²⁸⁶ which are intended for Access Seekers ‘engaged in a large-scale fibre rollout programme’²⁸⁷ and not for the use of PIA in the context of leased lines. With respect to Eircom’s reference to new processes for automated ordering, ComReg notes that at the time of Eircom’s submission of 10 September 2025, Eircom had provided advance notification to Access Seekers of a revised PAR Download User Guide. The amendments to this document concern some clarifications and revised screen shots of a pre-existing process for the download of Physical Access Records and does not have a material impact on PIA in the context of leased lines in the manner suggested by Eircom.
- 4.120 Based on the above, ComReg has formed the view that PIA is not part of the MI WDC market, but it is an upstream input to MI WDC services. ComReg is not aware of any NRAs that have included PIA in the WDC market definition.²⁸⁸

4.3.7. Conclusion on the WDC product market

- 4.121 ComReg’s position is that the relevant WDC product market (the ‘**WDC Product Market**’) consists of the provision of wholesale dedicated capacity over a fibre medium (including point-to-point and PON network configurations) using modern interfaces (“**Fibre MI WDC**”), which include Ethernet, xWDM and other modern interfaces, and dark fibre. ComReg further considers the market consists of wired MI WDC of all bandwidths, i.e., there is no bandwidth break.

4.4 Geographic Scope of the Relevant WDC Product Markets

- 4.122 In this Section, ComReg considers the geographic scope of the WDC Product Market described in Section 4.3 above. In doing so, ComReg follows

²⁸⁶ As set out on page 114 of the Eircom document titled ‘*open eir Physical Infrastructure Access (PIA) Product Descriptions and Operational Processes*’ version V2.0 dated 1 September 2025, Authorised Contractor Services provides Access Seekers with an option to outsource to Eircom a process that enables them to deploy their cable (e.g. sub duct installation) when purchasing a Sub-Duct Self-Install product.

²⁸⁷ Page 112 of the Eircom document titled ‘*open eir Physical Infrastructure Access (PIA) Product Descriptions and Operational Processes*’ version V2.0’.

²⁸⁸ BEREC: [Draft BEREC Report on the regulation of physical infrastructure access](#), BoR (24) 178 10.12.24.

the approach recommended by the EC in the 2020 Recommendation, the Notice on Market Definition, and the SMP Guidelines.

4.123 The Notice on Market Definition²⁸⁹ notes that the approach used:

“.. to define the relevant geographic market is that of assessing conditions of competition. A common starting point is to identify the areas where the relevant conduct or concentration is likely to have effects, by identifying the location of the undertaking(s) involved and of their customers. The Commission then analyses whether the conditions of competition in a certain area are sufficiently homogenous for the effects of the conduct or concentration to be able to be assessed and whether that area can be distinguished from other areas because the conditions of competition are applicably different in those areas”

4.124 In addition, the 2020 Recommendation²⁹⁰ states that:

“When identifying relevant geographic markets within their territory in accordance with Article 64(3) of the Code, national regulatory authorities should carry out a granular analysis of demand and supply-side substitutability, starting from an appropriate geographic unit, and aggregating such units that exhibit similar competitive conditions. The assessment of competitive conditions should be forward-looking and should be based, inter alia, on the number and characteristics of competing networks, distribution of and trends in market shares, prices and behavioural patterns.”

4.125 The SMP Guidelines in particular points out that:

“In the electronic communications sector, the geographical scope of the relevant market has traditionally been determined based on two main criteria:

(a) the area covered by a network; and

(b) the existence of legal and other regulatory instruments”²⁹¹.

4.126 In assessing any potential geographic variances in conditions of competition, ComReg has also taken utmost account of the BEREC report on the application of the common position on geographic aspects of market analysis²⁹². Therein BEREC notes that NRAs generally adopted criteria based on “structural market indicators”, such as the coverage of the

²⁸⁹ Notice on Market Definition, paragraph 38.

²⁹⁰ Paragraph 3.

²⁹¹ Paragraph 51.

²⁹² BEREC [“Common Position on Geographic Aspects of Market Analysis”](#), BoR (18) 213, 06.12.2018.

alternative networks, the market share of the incumbent operator and the number of “significant” competitors, rather than on market outcomes, such as prices (either retail or wholesale) or non-price features of the products.

4.127 In light of the above, ComReg focused on the following “structural” criteria in its geographic assessment:

- (a) The number of alternative networks (paragraphs 4.141 to 4.151); and
- (b) Coverage of alternative networks (para 4.152 to 4.189).

4.4.1. The Context for the Geographic Market Assessment

4.128 Before conducting its assessment, ComReg:

- (a) details the rationale behind its choice of geographic unit for assessing the boundaries of the geographic market (discussed in subsection 4.4.2 below);
- (b) sets out the reasoning behind the criteria that it has employed in assessing the conditions of competition in its overall assessment of the geographic scope of the WDC market (discussed in subsection 4.4.3 below); and
- (c) describes the mapping process that it has undertaken to analyse the relevant supply and demand criteria (discussed in subsection 4.4.4 below).

4.4.2. Geographic Unit

4.129 The first step in assessing the geographic scope of a market is to define a basic geographic unit as a starting point for assessing any differences in competitive conditions across geographic areas. The 2020 Recommendation²⁹³ indicates that the geographic unit should be:

- (a) of an appropriate size, i.e. small enough to avoid significant variations of competitive conditions within each unit but big enough to avoid a resource-intensive and burdensome micro-analysis that could lead to market fragmentation;
- (b) able to reflect the network structure of all relevant operators; and
- (c) have clear and stable boundaries over time.

4.130 In the 2020 Decision, ComReg adopted Workplace Zones (**WPZ(s)**) as the geographic unit of reference. WPZs are an administrative unit created by

²⁹³ 2020 Recommendation, paragraph (37).

Ireland's Central Statistics Office ('CSO') and are designed to capture 'daytime population' of areas. The daytime population includes everybody who indicated they worked or studied in the area, along with persons in that area who do not work or study (and so are there during the day)²⁹⁴. ComReg's position in the 2020 Decision was that the WPZ was a better fit for the analysis of business-oriented markets; it is far fewer in number than small areas and is publicly available for stakeholders to inspect.

- 4.131 WPZ were created by the CSO following the 2016 census in response to stakeholders' requirements for a more suitable unit for business market analysis. While WPZs do not reflect the structure of the networks, other alternative geographic units have the same issues. For example, the locations of Eircom's exchanges were designed around the distance limitation of the traditional copper based PSTN²⁹⁵ service, while alternative network ('AN') deployments are designed to connect customers and/or urban centres in the most efficient manner and are not planned based on administrative boundaries.
- 4.132 Many Respondents to ComReg's QQ (BT, Virgin Media, NBI, Orange, Pure Telecom, Hibernia) did not see any reason to change WPZ as the geographic unit. Eircom stated that if the market is correctly defined to include wireless then a granular geographic assessment will not be required. However, it also noted that if ComReg is able to justify the exclusion of wireless then the choice of WPZ was acceptable to Eircom. Enet had no objection *per se* to using WPZs as a starting point but suggested case by case assessment for certain areas with unique characteristics, such as St Stephen's Green and the new cycle lane in Clontarf. It also noted the importance of conducting interim reviews in areas where there is a material change in competitive conditions.
- 4.133 Some respondents to the QQ did not agree with the choice of WPZ. Vodafone considered WPZs to be unduly complex and suggested Eircom's exchange area footprint as a more appropriate alternative. Verizon and ESBT also considered that WPZs are overly granular or complex. On the other hand, ESBT was of the view that the more granular an assessment is, the more accurate will be the result, and therefore suggested using townlands as the geographic unit as they are smaller than WPZs.

²⁹⁴ Currently, there are 7,219 WPZs in Ireland. Further details on the CSO construct of WPZs are available [HERE](#).

²⁹⁵ Public switched telephone network.

- 4.134 Further comments were received in Respondents' Submissions. Eircom claimed that the WPZs may be too small and WPZs are not representative of the location of businesses consuming dedicated capacity and also considered that they were not representative of network deployment. SIRO stated that there may be situations where competitive conditions vary within a single WPZ (implying a smaller unit should be used) and recommended re-evaluating WPZ boundaries regularly. The other Respondents either agreed (BT, Virgin Media) with WPZ as the geographic unit or had no comment on it (Enet, Vodafone, Alto).
- 4.135 Having considered all the views above, ComReg considers that the WPZ continues to be the most suitable geographic unit. It is of an appropriate size to allow for detailed analysis (compared to Eircom exchange areas), and is big enough to avoid a burdensome micro-analysis (compared to small areas or townland areas). Eircom exchanges are also not as relevant to the location of businesses using LLs and so greatly diminish any results which they may produce when compared to WPZs. Also, as noted in the 2020 Decision, Eircom exchange areas can vary greatly in size and therefore the conditions of competition are much less likely to be homogenous within them when it comes to assessing the WDC market, noting in particular that in the main, the purchase of WDC is to serve medium to large businesses with the scale of this demand being lower relative to other services such as broadband. ComReg also notes that no geographic unit would map directly to the footprints of individual operators' networks, given each networks' topology can differ.
- 4.136 On the above basis, ComReg has decided that WPZs are a good match for the business focused WDC market.

4.4.3. Criteria for Assessing Differences in Conditions of Competition

- 4.137 In the 2020 Decision, ComReg set the following two main criteria for the assessment as to whether the conditions of competition differed sufficiently across WPZs having LL connected premises, namely:
- (a) **Criterion 1:** A WPZ has two or more ANs present (3 networks including Eircom)²⁹⁶; and

²⁹⁶ Section A.1.5.7 of the 2020 Decision.

(b) **Criterion 2:** 75% of current demand must be within 50 metres of two or more ANs²⁹⁷.

4.138 For WPZs where there are no connected premises, the criteria adopted in the 2020 Decision was whether the WPZ intersects with at least two ANs.

4.139 ComReg also included additional tests for business parks and “WPZ islands”. Given its higher business density, business parks have different demand and supply conditions from WPZs. WPZ islands refer to WPZs initially identified as areas not meeting the two criteria but are surrounded entirely by WPZs that do.

4.140 ComReg has re-examined these criteria in this market review, as set out below.

Criterion 1: A WPZ has two or more ANs present

4.141 The European Commission’s Explanatory Note to the 2020 Recommendation states, in relation to the criteria for assessing the geographic dimensions of competition and the homogeneity of competitive conditions, that:

“NRAs should define relevant geographic markets within their territory by taking into account, inter alia, the degree of infrastructure competition in those areas. The mapping of networks, ... where relevant, can once again be useful for that purpose.”²⁹⁸

4.142 ComReg describes below how it has mapped all the ANs capable of supplying MI WDC services in the State, and how it identified how many such ANs were present in or at each WPZ.

4.143 The BEREC Common Position²⁹⁹ notes that a criterion based on the number of operators present in an area has an advantage over other potential criteria, in that it is more direct and easily observable. ComReg is of the view that where a WPZ has two or more competing ANs (in addition to Eircom), it is likely to have sufficiently different competition conditions compared to WPZs where there is only one or no AN network present. This is supported by precedents from both the academic literature and the NRA and NCA decisions:

²⁹⁷ *Ibid.*

²⁹⁸ Explanatory Note to the 2020 Recommendation, p20.

²⁹⁹ At page 25.

- (a) In its 2014 Review of wholesale broadband markets, Ofcom considered that the presence of two or more competitors to the incumbent at an exchange was sufficient to lead to significant declines in BT's market share. In contrast, exchanges with only one operator in addition to BT were included in the same market as monopoly exchanges, as Ofcom considered the competitive conditions to be sufficiently homogeneous;³⁰⁰
- (b) Bresnahan and Reiss³⁰¹ showed that, in certain oligopolistic retail markets, the largest benefits to competition come with the addition of the third firm in a market;
- (c) The Dutch NRA concluded that, while there is no 'magic number' for the minimum number of competitors necessary for effective competition, unless significant economies of scale are apparent, competition is unlikely to be effective with just two firms, and the social optimal is a market with more than two firms;³⁰²
- (d) In considering BT's appeal of Ofcom's 2016 Business Connectivity Market Review, the UK Competition Appeals Tribunal heard expert evidence that *"mergers from five to four firms are nearly always approved by competition authorities and four to three mergers are sometimes approved, suggesting that between three and four competitors is judged sufficient for effective competition"*;³⁰³ and
- (e) Xiao and Orazem show that, in US broadband markets, the entry of a fourth firm on the market has little effect on competitive conduct; due to data limitations, they surmise (at p.27) - but cannot demonstrate – that where a fourth entrant makes little difference to competitive conduct on broadband markets, then as few as three providers may suffice to create a competitive environment.³⁰⁴

³⁰⁰ Ofcom Review of the Wholesale broadband access markets, Statement, 26 June 2014, paragraphs 4.132 – 4.133 and 4.139 – 4.141. [wba-final-statement.pdf](#)

³⁰¹ Bresnahan, T.F., & P.C. Reiss. *"Entry and Competition in Concentrated Markets"*. The Journal of Political Economy, Vol. 99, No. 5. (Oct., 1991), at Figure 4 (p.996).

³⁰² OPTA, "Is two enough", 2006, page 10. [OPTA- EAT](#).

³⁰³ CAT case 1260/3/3/16, British Telecommunications v Office of Communications (BCMR). First expert report of Chris Osborne, paragraph 4.20.

³⁰⁴ Mo Xiao and Peter Orazem, *"Does the fourth entrant make any difference?: Entry and competition in the early U.S. broadband market"*. International Journal of Industrial Organization, 2011, vol. 29, issue 5, 547-561.

- 4.144 Eircom stated in its Submission that there was insufficient justification offered supporting the case for the need for the presence of 3 operators³⁰⁵. It criticised ComReg for using what it considered outdated references in paragraph 4.84 of the Consultation (now paragraph 4.143 of this Decision) to support its position. Eircom noted the European Commission's push back against the 3 operator criterion in the recent Malta WLA analysis, as well as its comments on the same issue in ComReg's WLA review leading to the adoption of ComReg Decision D05/24.
- 4.145 ComReg is aware of the European Commission's position in the Maltese WLA review. In Ireland's case, the WLA market review was notified to the European Commission around the same time but was not vetoed by the EC, despite the EC's comments that the ComReg requirement for a minimum of 3 operators was conservative. This reflects the different market conditions in Ireland compared to Malta.
- 4.146 ComReg also notes that the 3-network criterion has been used to conduct geographic market assessments in other European countries, including Spain, Slovenia and the UK in the context of the review of WLA markets, and Belgium and the UK in the context of the review of WDC markets. For example, Ofcom defined the high network reach ('HNR') area as the areas where there are two or more alternative networks in its 2020 decision³⁰⁶ and its recent consultation³⁰⁷. Ofcom considers that a single competitor would not be able to exert a sufficiently strong constraint on BT and the existence of two current material and sustainable competitors would be more likely to allow it to identify areas where the constraint on BT is sufficiently strong.
- 4.147 In addition, the practices by the Competition Authorities in merger reviews also suggest that 4 to 3 and 3 to 2 mergers in the telecoms sector almost always raise competition concerns with competition authorities and are only likely to be cleared with substantial commitments attached³⁰⁸. This indicates that the EC and national competition authorities consider the presence of three firms to be important for ensuring competition in the market.
- 4.148 Similarly, in a recent joint statement by a number of competition authorities in response to European Commission's recent 'Competitiveness Compass':

³⁰⁵ Eircom Submission Pages 1, 23, 24 and 25.

³⁰⁶ See paragraph 7.7, [2020 WFTMR Volume 2: Market assessment](#)

³⁰⁷ See paragraph 5.50, [volume-2-market-definition-and-smp-assessment.pdf](#)

³⁰⁸ Vodafone/O2 (UK), Orange/MásMóvil (Spain), Vodafone/Nowo (Portugal), M.10663 - Orange/Voo/Brutele (Belgium).

"Specifically, regarding the electronic communication sector, competition in most relevant markets still takes place at a national level and across multiple layers, at the infrastructure level (roll-out, wholesale access, coverage, drop-rates, etc.) as well as in the services market. While helpful, service competition cannot offset potential disadvantages arising from a reduced number of competing infrastructure providers. A reduced number of infrastructure providers can also weaken incentives to improve service quality, network coverage, density, and innovation."³⁰⁹

- 4.149 Given the ubiquity of Eircom's network and its advantage as an incumbent operator, ComReg considers that one alternative network is not sufficient to suggest there are sufficient differences in the conditions of competition across different geographic areas.
- 4.150 It is important to note that the 3-network criterion is not required at all the premises within a WPZ. Instead, this criterion is combined with the proportionality and distance criteria described below, suggesting that only a proportion of the premises (60%) within a WPZ are within close proximity (50 metres) of 2 ANs.
- 4.151 Based on the above, ComReg maintains its position that the 3-network criterion is the appropriate criterion for assessing the degree of homogeneity in competitive conditions across different geographic areas.

Criterion 2: 60% of current or potential demand must be within 50 metres of two or more ANs

- 4.152 Having two or more rival networks alone does not mean that most (if not all) of the demand in a WPZ can be served by these networks. We need to consider if the demand is sufficiently close to rival networks, and how much of the demand is covered by rival networks. This leads us to the discussion of the distance criterion and the proportion criterion below.

Distance Criterion

- 4.153 The distance criterion examines how close to a network operator a business customer needs to be so that it makes economic sense for the network operator to extend its network to serve that customer.
- 4.154 In the 2018 Further Consultation, ComReg proposed a 100-metre criterion, i.e., so long as a premises was within that distance of an AN, it could be

³⁰⁹ In January 2025, the European Commission presented the competitiveness compass, a new roadmap to restore Europe's dynamism and boost our economic growth.

served by that AN. This was chosen based on the wayleave notification period that were required by local authorities to undertake civil engineering work associated with extending telecommunications networks. Distances over 100 linear metres automatically require a 3 month notice period which may exclude SPs from being able to bid for many retail contracts. Many SPs objected to the 100-meter criterion in their responses to the 2018 Further Consultation, noting that network digs are conducted “as the dog walks” and not “as the crow flies”, therefore making the then proposed 100 metre radial distance criterion far too high. In addition, SPs also claimed that civil engineering costs associated with excavation for laying duct was prohibitive, making the “economic dig distance” far shorter than 100 metres. As a result, ComReg reduced the radial distance criterion to 50 metres in its 2020 Decision.

4.155 In their responses to the QQ, a number of SPs were happy with the distance criterion applied in the 2020 Decision. Vodafone stated that it [redacted]
[redacted]
[redacted] [redacted] ³¹⁰.
Virgin Media also stated that it did [redacted]
[redacted]
[redacted] ³¹¹.

4.156 Some SPs disagreed with the 50-metre distance criterion in their responses to the QQ. Eircom was of the view that it was too low due to developments of the CEI access products and stated that: [redacted]
[redacted]
[redacted]
[redacted]
[redacted] ³¹².

4.157 In its Submission to the 2024 Consultation, Eircom put forward further arguments against the 50-metre criteria³¹³. First, Eircom claimed that it had demonstrated the economic feasibility of using PIA as an alternative to digging and wholesale rental (see more details at paragraphs 4.100-4.1094.103). It was surprised that ComReg had not undertaken such analysis

³¹⁰ From Vodafone response to QQ, question 22
³¹¹ From Virgin Media response to QQ, question 22
³¹² From Eircom response to QQ, question 22
³¹³ Eircom Submission: pages 27-31.

but had simply dismissed PIA due to a perception of low take-up with the exception of NBI. Eircom claimed that many of the observed and likely WDC duct access route lengths are multiples of 100 metres and some are in excess of 2 kilometres. Eircom made further submission to this effect on 10 September 2025, which is set out in paragraphs 4.100-4.109.

- 4.158 Second, Eircom argued that in the 2024 Consultation ComReg relied on outdated views from SPs without adequately testing or verifying their validity to support its view that the economics for an AN to dig to connect a new premises for WDC is significantly less than 100m. According to Eircom, ComReg had not tested these views and provided no evidence for its insistence on using digging as the primary method for connecting LLs to business premises.
- 4.159 Third, Eircom stated that ComReg's proposed distance criteria is based on its unsubstantiated belief that circuits must be delivered to end-users within three months of the conclusion of a tender process. Eircom said that its extensive experience in wholesale and retail bidding demonstrates that longer delivery windows are routinely accommodated, giving a recent HEAnet tender as an example. Eircom claimed that ComReg failed to provide evidence or analysis to support its view and also failed to consider alternatives to digging.
- 4.160 As discussed in paragraphs 4.100 to 4.109, ComReg has formed the view that PIA is still at its early stage of deployment on the basis that, contrary to Eircom's suggestion, PIA usage remains low (with the exception of NBI); the views from the SPs on PIA's practical effects are mixed, with some SPs citing concerns about SLAs and repair times; and the primary use of PIA is for general network build as opposed to LLs (noting ComReg's analysis takes account of such network build). ComReg does not consider that the distance criteria should be amended. However, ComReg will continue to monitor market developments.
- 4.161 With respect to Eircom's second argument, ComReg notes that four of the Respondents (BT, SIRO, Virgin Media and ALTO) did not raise any issue with the distance criteria in their Submissions in response to the 2024 Consultation. Vodafone largely agreed with ComReg's proposal but asked that accessibility of infrastructure within 50m (i.e. chambers) should be considered. Enet was of the view that the distance criteria should be reduced to 20 metres.
- 4.162 Enet argued that the digging cost for road crossings have increased by up to 550% between 2019 and 2024 due to increasing labour rates, reinstatement regulations and possible uplifted labour costs if work is carried out during restricted working hours. Enet provided an example to substantiate its

claim³¹⁴. Accordingly, Enet proposed a revised distance criterion of 20 metres (as well as mapping connected premises co-ordinates to the nearest road).

- 4.163 In relation to the third point made by Eircom, ComReg rejects Eircom's assertion that it is ComReg's belief that circuits must be delivered to end-users within three months of the conclusion of a tender process. Each end-user will have its own connection timeline requirements and such timelines are likely to vary. ComReg had chosen 100 metres in the 2018 Further Consultation because the wayleave notification period of 3 months (90 days) for any dig greater than 100 metres will add significantly to the lead time of the civil work, causing a significant disadvantage for SPs in a tendering process vis-à-vis Eircom which has a delivery time of 37 working days for the provision of active leased line services classified as 'standard' (with such delivery incorporating the use of its own duct infrastructure and where the end user premises is within 500m of an available open eir access fibre)³¹⁵.
- 4.164 In contrast, the notice period for a license for digging less than 100 metres is 21 days or 3 days depending on whether it is a T2³¹⁶ and T3³¹⁷ application. This can reduce the lead time significantly for civils works, allowing SPs to compete for the tender in a timely manner. Therefore, ComReg considered 100 metre criterion reasonable, but considering that network digs are conducted "as the dog walks" and not "as the crow flies", ComReg reduced the radial distance criterion to 50 metres as the radial distance ('as the crow flies') does not take into account the practical consideration that digging is undertaken on the carriageway.
- 4.165 In its response to the QQ, Enet was of the view that it was more appropriate for the criteria to have regards to access to alternative network chambers,

³¹⁴ Enet Submission: page 9 and Annex A.

³¹⁵ Note that a T2 approval (see footnote below) is needed in addition to the 3-month wayleave notification before the civil work can commence. Other factors may add further to the lead time and costs. For example, the activity involved in pre-planning and detailed survey in advance of the application can be considerable, such as significant additional reinstatement requirements, restricted working hours, etc. which will add to cost and lead-times. Restricted working and additional permissions may also be required when working close to rail networks. Further unexpected problems may also arise during the course of the work, such as encountering unmapped services, directly buried cables etc. and unforeseen Special Engineering Difficulties ('**SEDs**') which will extend lead-times and costs. Therefore, the lead-time for the entire civils works, from planning to completion, can be far greater than the 3-month wayleave period.

³¹⁶ T2 licence is for works of moderate impact due to the location, extent, amount or duration of work. They are generally between 10 and 100 metres for urban roads and between 100 and 1000 metres for rural roads. The T2 application period could be up to 21 days.

³¹⁷ T3 licence is for works of low impact due to location, extent, amount or duration of the work. They are generally no longer than 10 metres for urban roads and no longer than 100 metres for rural roads. The T3 application could be up to 3 days.

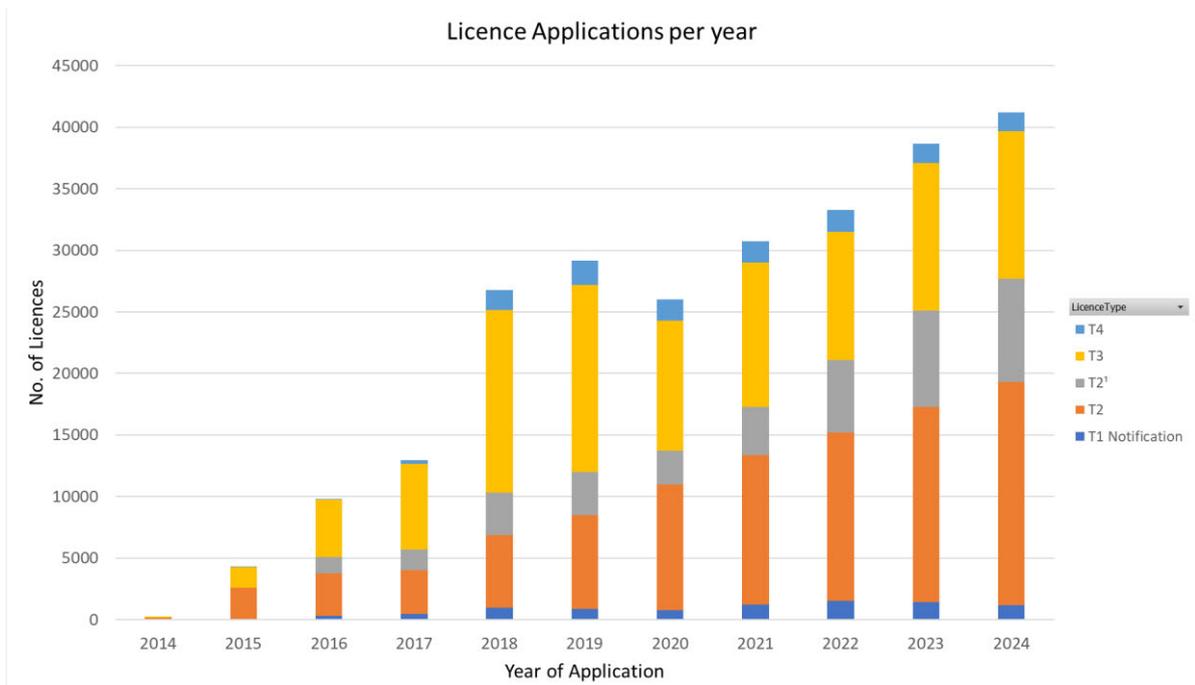
- 4.168 SFG further stated that even though "*Member States "may" adopt certain provisions or apply exceptions to PPAN, it was highly improbable that any of these would be ready in less than 3 months' time*" (i.e. 12 November 2025).
- 4.169 ComReg notes that the GIA entered into force on 11 May 2024 and will be applicable from 12 November 2025. However, there are derogations with respect to the dates at which certain articles come into effect, including the above-mentioned Article 6(1), which will be applicable from 12 May 2026, contrary to SFG's understanding.
- 4.170 Also contrary to SFG's belief that PPAN applies to any planned civil works, ComReg notes that while operators have the right to negotiate civil work coordination under Article 5(1) of GIA, under Article 5(2), they are only obliged to coordinate when performing or planning to perform civil works that are "*...fully or partially financed by public means...*".
- 4.171 DCCS has confirmed during its meetings³²¹ and email correspondence³²² with ComReg that the above understanding is correct. DCCS also informed ComReg that it intends to put legislation in place prior to the applicable date for Article 6(1) (i.e., 12 May 2026) to provide exemptions for certain types of civil works considered to be limited in scope. In this respect, DCCS stated that it "*...intend to have legislation in place for Article 6 within the timelines set out in Article 19(3)(d), i.e. 12 May 2026*".
- 4.172 DCCS also informed ComReg that the objective is to ensure that the new legislation is no more burdensome than what is currently in place. In this regard, DCCS stated that "*the consideration of civil works that could be exempt is very much aligned to the need for policies that will speed up, simplify and lower the costs of the deployment of very high-capacity networks (VHCNs) across Ireland...*".
- 4.173 In any event, as PPAN only applies to civil works that are fully or partially financed by public funds, ComReg considers that its impact on civil works across the majority of market participants would be limited.
- 4.174 Figure 15 below shows the number of road opening licence applications each year between 2014 and 2024.³²³ T2 and T3 applications account for the overwhelming majority of the applications. This indicates that the 50 metre distance criteria adopted by ComReg in the 2024 Consultation is reasonable.

³²¹ 29 August 2025 and 4 September 2025.

³²² Email correspondence between DCCS and ComReg dated 8 September 2025 and 9 September 2025.

³²³ Road Management Office – RSTG Annual Conference 2025

Figure 15: Road Licence Applications



4.175 On the basis of the above, ComReg remains of the view that, notwithstanding the provision of the GIA and noting DCCS views, 50 metres remains a reasonable distance for a SP to reach a customer premises within a reasonable timescale. It is also important to note that wayleave is not the only consideration for choosing 50 metres as the distance criterion. ComReg has also taken into account the reasonable economic dig distance and the operators' views on this.

4.176 In a Submission dated 1 September 2025, SFG raised concerns regarding a new requirement by South Dublin County Council ('SDCC')³²⁴ to apply for permission a minimum of one year in advance for works of 50m or more in length and/or include construction of an access chamber. ComReg notes that this is a 'policy' and is of the view that this requirement is likely inconsistent with the legal provisions set out in the GIA, and in that case the GIA will ultimately override SDCC's policy.

4.177 In light of the above, and considering the diverging views from the SPs, ComReg considers that, on balance, the 50 metre radial distance criterion remains appropriate.

³²⁴ [Roadworks - SDCC](#)

Proportionality Criterion

- 4.178 In this section ComReg examines what proportion of premises should meet the 50 metre distance criterion in a WPZ such that that WPZ can be considered to have sufficiently different competitive conditions to form part of a separate geographic market (we refer to this as the ‘proportionality criterion’). In the 2020 Decision ComReg decided that the most reasonable proportionality criterion was 75%.
- 4.179 In its “comments letter”³²⁵, in response to ComReg’s notification of the draft measures that were ultimately adopted in the 2020 Decision, the EC stated, under the heading “**Need for forward-looking and dynamic market analysis**”:
- “The Commission takes note of ComReg’s approach in defining four separate sub-national geographical markets for modern interfaces based on ComReg’s criteria. It further notes that, while the criteria might be considered rather conservative¹⁶, variations of the selected threshold of 75% of premises connected to two or more networks do not appear to have a significant impact on the number of WPZs belonging to either the competitive or uncompetitive areas.”*
- 4.180 Looking at the international experience, we note that Ofcom used a network coverage of 65%³²⁶ in its analysis. Ofcom considered that if rival networks were able to supply more than 65% of large business sites in an area, the area can be sufficiently considered covered by rival networks and that it distinguishes such areas from areas that do not meet this criterion. On the other hand, TKK, the Austrian regulator, applied a 25%³²⁷ AN coverage criterion. ComReg notes that although Austria’s proportionality criterion is low, it has other criteria in place, for example, whether the incumbent’s market share is below 50%.
- 4.181 There is no precise number when it comes to determining the appropriate proportionality criterion. The proportionality criterion is essentially determining how much of the premises in a WPZ an AN would need to cover to be considered to be a competitive constraint so as to change the competition conditions of the WPZ. ComReg considers that a 60% threshold to be appropriate, as it means that ANs are able to cover a clear majority of

³²⁵ EC Case IE/2029/2214 Published 3 December 2019.

³²⁶ Ofcom Business Connectivity Market Review 2028.

³²⁷ [29297 \(cullen-international.com\)](https://www.cullen-international.com).

premises in a WPZ and therefore is suggestive of sufficient differences in the conditions of competition in that WPZ relative to those that do not meet this criterion. A threshold of above 60% is also sufficient but not necessary. In contrast, a 50% threshold is considered too low as ANs would then not be able to cover half of the premises. On that basis, ComReg considers a 60% threshold is the appropriate criterion.

- 4.182 ComReg has conducted a sensitivity analysis using a threshold of 75%, 65%, 60% and 50% (see Annex: 2). ComReg has found that the geographic boundaries and SPs market shares do not change significantly when the threshold is reduced gradually from 75% to 50%. ComReg is therefore satisfied that the 60% proportionality criterion is robust.
- 4.183 In their responses to the QQ, some SPs expressed concerns about the use of 75% as the proportionality criterion. Eircom noted that the 75% figure was considered conservative and stated in their response that “[redacted]
[redacted]
[redacted]”³²⁸.
- 4.184 Enet also voiced concerns about the 75% proportionality criterion, suggesting an additional criterion using business premises be introduced. It stated “[redacted]
[redacted]
[redacted]”³²⁹. ComReg rejects the suggestion of the additional “[redacted]
[redacted]” criterion as only a small proportion of all businesses require LLs and it is not possible to identify such potential demand in a reliable manner.
- 4.185 Further, ComReg notes its attempts detailed in the 2020 Decision to use NACE³³⁰ codes, the Irish Times top 1,000 business list and business locations extracted from the Eircode database to generate a database of potential LL customer locations. ComReg compiled a list of 15,000 business locations of forecast demand, referred to as the “Organisations” database. However, these efforts were abandoned for a number of reasons, mainly due to the very low correlation between the forecast and the actual demand which manifested at a later date. Other significant challenges encountered were the absence of locations in the Irish Times data and ambiguity in NACE code

³²⁸ From Eircom response to QQ, question 22.

³²⁹ From Enet response to QQ, question 22.

³³⁰ European Industrial Activity Classification.

classifications. For instance, a local pharmacy could have the same code as a major pharmaceutical production facility. Further details can be found in in Annex 1³³¹ of the 2020 Decision.

- 4.186 Eircom and BT offered further comments in their Submissions. Eircom argued that ComReg's overall approach is flawed and that the change to 60% is:

*"...somewhat meaningless in demonstrating that the proposed approach is in any way more proportionate or less conservative. The insensitivity of this criterion is a product of the major flaw in the overall approach which is the minimal concentration of CPs in each WPZ."*³³²

- 4.187 BT argued that the change to 60% is:

*"a substantial largely unsupported shift"*³³³

and that

"The justification for this appears to be a comment by the European Commission with no detailed supporting analysis and high-level benchmarking of a few countries without any actual analysis to similarity of the market situations in those countries".³³⁴

- 4.188 The points raised by Eircom and BT have already been considered by ComReg at the Consultation stage. As already shown in Annex: 2 of the Consultation and Annex: 2 of this Decision, there is no 'cliff edge' when changing the proportionality criterion. A slight adjustment of the criterion from 75% to 60% can still make sure that the majority of the premises satisfy the criteria for differentiating competition conditions, while at the same time bring us more in line with other NRAs and European Commission's views. As such ComReg considers that its approach is still methodologically sound.

- 4.189 In light of the above, ComReg is of the view that a criterion at 60% is fair and reasonable.

³³¹ Section A.1.5 Summary and Assessment of Respondent Views in relation to the Geographic scope of the relevant WHQA Markets.

³³² Eircom Submission point 41.

³³³ BT Submission Page 4.

³³⁴ Ibid.

4.4.4. Business Parks Test

- 4.190 In the 2020 Decision, ComReg introduced a “Business Parks” test to address contiguity issues whereby WPZs that failed the above criteria but overlapped with Business Parks with multiple ANs present, were deemed to pass the test. ComReg assessed geographic differences over time and was of the view that there were certain areas such as business parks³³⁵ and data centres³³⁶ and campuses of third level educational establishments, collectively referred to as ‘Business Parks’³³⁷ as areas likely to hold high concentration of AN infrastructure due to higher demand in such areas. To address the contiguity issues, ComReg decided that any WPZ that overlapped with a Business Park which passed the 2 AN test would be considered as having met the criteria, i.e., the Business Park Test.
- 4.191 The list of business parks and commercial areas subjected to this test in the algorithm were listed in Section 5.4 of Annex 4 of the 2020 Decision. This list has been updated and is contained in Annex: 3 of this Decision.
- 4.192 Enet made a number of comments in its Submission. First, Enet was of the view that the Business Park test gives rise to a significant number of cases where WPZs with no significant infrastructure competition are inappropriately allocated to Zone A. Examples of such were provided by Enet. Enet proposed to either remove the Business Parks Test, or tighten the test with two additional criteria, i.e., a 20% overlap threshold and two or more ANs present (excluding NBI) in both the business park and remainder of WPZ. Second, Enet requested that the geographic boundaries of the Business Parks listed by ComReg in Annex: 7 should be disclosed in a digital shapefile format. It also suggested that any NBI premises should be ignored because:

“ComReg should make conclusions regarding infrastructure competition based on infrastructure that is actually deployed as of today, rather than infrastructure that has not yet been (and may not yet be) realised.”³³⁸

³³⁵ Business parks are sites that contain clusters of typically commercial businesses. They tend to be located in suburban areas and near to main roads. As these tend to group similar types of end-user demand (i.e. corporate or IT specific firms) in one location, the costs for operators connecting to these sites are lower compared to areas where end-user premises are more dispersed.

³³⁶ Data centres, in the broadest sense, are premises whose main purpose is to house computing and communications equipment in secure locations and which therefore require very high capacity LL as well as dark fibre to carry data to and from their facilities.

³³⁷ 209 such Business Parks was listed in Appendix 5 of the 2016 Consultation.

³³⁸ Enet Submission Page 8.

- 4.193 ComReg is of the view that boundary issues will always occur with any geographic unit. No geographic unit will align exactly with Business Park boundaries. ComReg has inspected the examples provided by Enet and other Business Parks and is satisfied that the mapping algorithm has worked correctly, with only one exception³³⁹. This was where a BP boundary encroached by a few metres onto a carriageway, and thereby into a neighbouring WPZ. ComReg has adjusted this accordingly. There are also a number of instances where BP WPZs were included in Zone A due to the manner in which their boundaries were drawn by Tailte Éireann. ComReg does not propose to publish maps of the BPs as these areas are readily identifiable and available for inspection on publicly available maps such as Tailte Éireann maps, Google maps and Open Street maps etc.
- 4.194 It is also noteworthy that in large provincial and rural towns, there are many occurrences of very large WPZs which overlap Business Parks in the centre/edge of the town and extend outward to incorporate considerable agricultural hinterland. The WDC demand is usually concentrated in the town and the associated BP, with little or no demand outside these areas. Hence, it is appropriate to designate such large WPZs in Zone A if they pass the test.
- 4.195 The data used in the Consultation showed that over two-thirds (71%) of CPs in area A2 (consisting of WPZs which pass the Business Parks Test) were contained within the boundary of Business Parks. The figure for the H2 2024 data used in this Decision is c.68%. This shows that the Business Park Test is a reasonable and proportionate approach whereas, Enet also proposed the inclusion of an additional step in the analysis, namely“...*at least 20% of the area of a WPZ overlaps with the BP.*”³⁴⁰ This does not take into account the feature of large WPZs incorporating high concentrations of CPs in much smaller commercial areas and BPs. Additionally, its suggestion to ignore the presence of NBI because its network rollout has not been completed is rejected by ComReg, for the reasons laid out in detail in Section 4.4.7 below.
- 4.196 Eircom identified in its Submission 12 additional Business Parks and campuses that it considered should be included in the Business Parks test. ComReg is satisfied that it is reasonable to submit these to the test and has included them in the updated list of Business Parks in Annex: 7.
- 4.197 BT argued that ComReg should focus on a list of Business Parks where open access is not available and adjust the Business Part Test to reflect this.

³³⁹ WPZ KY0232 and Monavalley Industrial Estate, Tralee, Co. Kerry.

³⁴⁰ Enet Submission Figure 1, Step 3, Page 3.

- 4.198 ComReg considers that the effort required to investigate access to each BP on an individual basis makes such an undertaking infeasible and unreasonable. ComReg considers that the proximity test is a reasonable approach and recognises the fact that BPs are generally areas of higher demand and supply for LL services than those outside.
- 4.199 ComReg considers that it remains appropriate to include the Business Parks Test in the current market review. The supply and demand conditions of many business parks remain sufficiently different due to high level of economic activity and AN infrastructure presence. WPZs are independently designed by the CSO and are publicly available. ComReg considers that the issues raised in relation to the BP test are not material in the overall context where there are over 7K WPZs and consequently is not changing the Business Park Test.

4.4.5. “Islands” Test

- 4.200 A similar issue also arises in respect of WPZs that failed the criteria above even though all surrounding WPZs met the criteria (“Islands”). In the 2020 Decision, ComReg considered it reasonable that ANs could extend their networks to meet demand in these Islands. As such, the conditions of competition in these Islands are sufficiently similar to those surrounding them, that they should be considered part of the same geographic market.
- 4.201 In responding to the Consultation, Enet suggested removing the Island Test, or applying additional stricter criteria which require that the WPZ is surrounded by WPZs allocated to groups A1/A2; has the access network routes of two ANs in or within 20m of the WPZ; and excludes NBI. Enet questioned the results of the Island Test in relation to a number of WPZs it identified.
- 4.202 Eircom agreed with the logic of the Island Test, but questioned how it was applied, and provided a list of Island WPZs for which it questions the test results.
- 4.203 Arising from the Submissions, ComReg is making a clarification in relation to the explanation of the application of the Island Test. In Figure 16 “Flowchart of the Algorithm” of the Consultation, Steps 3 and 6 specified Island as “*Isolated WPZ among Zone A WPZs of similar size*” but omitted to explain what was meant by “similar size”. This appears to have led to a misinterpretation by Eircom and Enet and the identification of the WPZs mentioned in paragraph 4.201 and 4.202. To clarify, the Island Test is satisfied if the size of the WPZ is within 20% of the average area of surrounding Zone A WPZs. This is the same test as set out in our 2020 Decision. Figure 16 of this Decision further clarifies this.

- 4.204 ComReg has checked each of the WPZs identified by Eircom and Enet above and is satisfied that the Island Test was applied correctly.
- 4.205 Therefore, ComReg maintains its position that it remains appropriate to include the Island Test in the current market review to address the contiguity issues.

4.4.6. Mapping Process

- 4.206 In this subsection, ComReg sets out the methodology it has employed in mapping the supply and demand conditions in WPZs according to the geographic assessment criteria set out above.

Mapping of Supply

- 4.207 Firstly, ComReg describes the process of mapping SPs' networks. ComReg requested networks maps from the SPs in its SIRs issued for mapping data for end of 2024³⁴¹. ComReg received network maps from the following SPs:

- (a) Aurora;
- (b) BT;
- (c) Colt;
- (d) Digiweb/Viatel;
- (e) Enet;
- (f) ESBT;
- (g) EU Networks;
- (h) Hibernia;
- (i) Magnet;
- (j) SIRO;
- (k) Virgin Media;
- (l) Vodafone; and
- (m) Zayo

- 4.208 ComReg has not mapped Eircom's network as it considers Eircom to have a ubiquitous network allowing Eircom to reach most premises in the State within a reasonable timeframe.

³⁴¹ ComReg issues a SIR for mapping information on an annual basis. Additional requests are issued on an interim basis to specific SPs if deemed appropriate.

- 4.209 As discussed in section 3.4.5, in light of the acquisition by SFG of BT Communications Ireland Limited, in this Decision ComReg has adopted the approach to utilise separate BT and Enet network maps but to treat them as one network.
- 4.210 ComReg notes it is not feasible to distinguish which side of the road the network was running on, and indeed many networks are routed along the centre of roadways. For this reason, ComReg considers that it is appropriate to allocate a ‘thickness’ or effective width of 20 metres to the SPs’ networks. This also takes into account the fact that the majority of Eircodes (which can be used to derive the location of a connected premises) use the centroid of premises rather than their perimeter for their location coordinates.
- 4.211 These network maps were then refined to remove SPs’ core network elements, as ComReg considers that it is unlikely that local network access break-out from those locations is possible. For example, core networks that are routed along mainline railways, motorways and high-tension electricity pylons or co-located with high pressure cross-country gas pipes, typically cannot facilitate break-out locations from which LLs services could be provided.
- 4.212 Some portions of SPs’ networks routed on national primary roads (“N routes”) are also treated in this manner as road openings on N routes are subject to a 3-month wayleave period by Transport Infrastructure Ireland (‘TII’). As such they cannot be accessed in a timely fashion to allow many SPs to bid for retail LL contracts. Many such routes traverse exclusively agricultural areas and are used for backhaul and rarely, if ever, are used to connect customers’ locations.
- 4.213 However, it should be noted that such core network elements were taken into account when considering the availability of alternative backhaul services. This allows us to gauge whether or not local access networks have access to backhaul services, including those that could be self-provisioned.

Mapping of Demand – Connected Premises

- 4.214 Below ComReg details its approach to mapping the current demand for MI LLs (both wholesale and retail) in the State. As in the 2020 Decision, the current demand is in the form of a list of premises currently connected with LL services.
- 4.215 ComReg collects LL and now Dark Fibre data on a regular basis through SIRs. As a result of the difficulties encountered in obtaining and verifying geolocation information from the SPs, a complete dataset, including reliable geolocation information, has only been available to ComReg since April 2024. This dataset used for analysis in this Decision is the H2 2024 dataset. Previously, the data used for Dark Fibre connected premises which was

included in the dataset used in our calculations, was for Q3 2022, which had some quality issues which were addressed in as far as possible at the time. ComReg has since obtained Dark Fibre data for H2 2024 which contains more detailed and accurate geolocation information.

4.216 The treatment of H2 2024 SP LL and DF data produced a final data set of 14,286 CPs. This was inputted into the algorithm which produced the areas for the Geographic Markets 1, 2, 3 and 4 and Zones A and B. It was then used to calculate the corresponding market shares for SPs in each of these Markets/Zones as described in Section 4.4.9 below. The overall national market shares of volumes of CPs for each SP are shown in Table 17 below. A detailed description of the treatment of SPs data is provided in Annex: 15 below.

Table 17: Premises Served by MI WDC Network, H2 2024 [X PARTIALLY REDACTED X]

Service Provider	Premises served by MI WDC Network	% Premises served by MI WDC Network
COLT	[X [REDACTED] X]	[X [REDACTED] X]
EIRCOM	[X [REDACTED] X]	[X [REDACTED] X]
SFG	[X [REDACTED] X]	[X [REDACTED] X]
ESBT	[X [REDACTED] X]	[X [REDACTED] X]
EUNetworks	[X [REDACTED] X]	[X [REDACTED] X]
SIRO	[X [REDACTED] X]	[X [REDACTED] X]
Virgin Media	[X [REDACTED] X]	[X [REDACTED] X]
Vodafone	[X [REDACTED] X]	[X [REDACTED] X]
Others	[X [REDACTED] X]	[X [REDACTED] X]
Total	14,286	100%

4.4.7. Treatment of National Broadband Ireland in Geographic Market Assessment

4.217 As noted in section 3.4.4, one of the notable developments since the 2020 Decision is the ongoing rollout of the NBP³⁴² in the IA area. Although the IA is identified as areas of market failure in the provision of high-speed broadband, NBI is required or permitted to provide a number of wholesale LL products in the IA.

³⁴² See earlier discussions on NBP at paragraphs 3.54 to 3.62.

- 4.218 As of Q1 2025 the take up of NBI LLs is very low (single digits), but it has made significant progress in its fibre deployment programme and is expected to complete its rollout by the end of 2026 as detailed in paragraph 4.229 below. ComReg is required to take a forward-looking view in conducting its market review, and therefore takes the following approach to take account of NBI's potential impact on the WDC market.
- 4.219 First, ComReg has assessed NBI's impact after assessment using the criteria described in section 4.4.3. This is because NBI's presence is unlikely to materially change the competition conditions in areas already meeting the criteria. ComReg will focus on the areas that fail the criteria and examine if NBI's rollout will change the competition conditions in these areas.
- 4.220 Second, ComReg does not consider it appropriate to map NBI's network the same way as it maps other networks given that NBI is only permitted to provide LL services to premises included on the NBI IA list of premises³⁴³. Even if a premises is close to NBI's network, it cannot be served by NBI unless it is a premises designated as falling within the IA premises list.
- 4.221 ComReg therefore adopts the following approach having regard to the circumstances of NBI:
- (a) In WPZs where there is at least 1 CP and where a CP is on the IA list of premises, we make the assumption that NBI's network is also at that premises (as NBI is obliged to connect it if so required by the customer). We recognise that NBI's network may not yet be available at a particular location today, but it will be by 2027 at the latest. NBI is therefore treated as an AN at these premises.
- 4.222 In WPZs where there are no CPs, the test is whether the WPZ intersects with two ANs. As noted in paragraph 4.220 , it is not appropriate to map NBI's network the same way as other networks are mapped and a proxy is required to represent NBI's network presence in these WPZs. We recognise that most of the IA premise are residential premises which are unlikely to require LL services. We remove these residential premises from the IA list using NACE codes. We also remove farms from the list as they are unlikely to require LLs. We deem NBI's network to be present at the remaining business premises (again, as NBI is obliged to provide LL if so required) and treat NBI as an AN having a presence there. We recognise, as set out earlier, NACE codes are not a good proxy for LL demand, but the exercise is not concerned with demand, but with NBI's network presence at business premises.

³⁴³ With the exception of [redacted] identified by NBI within the IA area. NBI are permitted to provide mast backhaul to these sites on a self-funded basis.

- 4.223 In their Submissions Eircom, Enet, BT, Vodafone, SIRO and ALTO all provided views on the treatment of NBI.
- 4.224 Eircom said that treating NBI as an alternative operator is inconsistent with ComReg's 2024 WLA Decision where the presence of NBI alone was considered sufficient for the IA to be considered competitive. In Eircom's view all CPs in the IA should be considered competitive and must be fully deregulated.
- 4.225 The NBP was to set up to address a market failure in the provision of broadband, i.e., the lack of incentives by commercial providers to provide high-speed broadband in certain parts of the country known as the Intervention Area ('IA'). The IA was therefore established on the basis that there were no other commercial operators providing **broadband** services at specific premises. NBI is obliged to provide broadband to every premises in the IA under the terms of the NBP Contract with the State, and the obligations imposed on NBI through this contract were deemed by ComReg to be sufficiently robust to constrain NBI's behaviour with respect to the provision of WLA and therefore the finding by ComReg that it did not have SMP.
- 4.226 Furthermore, the NBP IA was not established on the basis of there being no providers of LL services and it is not therefore correct to draw an analogy with the approach adopted by ComReg in the 2024 WLA Decision. As suggested by the evidence, it is not the case that NBI is the only operator present for WDC supply at IA premises. Based on H2 2024 data, there were 902 WDC CPs that fall within the IA, of which 437 (or 48.4%) fall in Zone A, i.e., 48.4% of these CPs have 2 alternative networks available, indicating sizeable overlap by LL commercial operators at premises in the IA. Therefore, the basis of the IA being drawn over a broadband market failure does not carry over to the WDC market.
- 4.227 Enet suggested removing NBI entirely from the geographic analysis and revisiting the market review in 2027 when the NBI rollout is completed³⁴⁴. Enet stated that ComReg should be cautious in terms of deregulating based on infrastructure competition stemming from NBI's planned roll-out.
- 4.228 BT, SIRO, Vodafone and ALTO all expressed similar views to those of Enet. SIRO said NBI's competitive presence is limited, and its pricing is benchmarked against Eircom's regulated rates. This would create a dependency on Eircom's pricing structure, effectively neutralizing NBI's ability to act as a strong competitive constraint. Additionally, the small volume of MI WDC services currently sold by NBI exacerbates its concerns about

³⁴⁴ Enet main Submission Page 3.

NBI's ability to exert sufficient market pressure. BT questioned whether NBI could connect a customer within a reasonable period where it has not yet rolled out network. Vodafone was of the view that NBI is a newly established SP and take-up of NBI's MI WDC services has been very small to date. It is therefore unclear whether NBI is currently considered a trusted provider of WDC services by Access Seekers.

- 4.229 As stated in paragraph 4.218, ComReg is obliged to take account in its market definition exercise "*existing market conditions as well as expected or foreseeable market developments over the course of the next review period*". Since its launch in 2019, NBI has made steady progress, having passed 386,397 premises at Q2 2025³⁴⁵. NBI has publicly stated that it expects its network rollout to be completed by the end of 2026³⁴⁶, which is within the early part of period of this market review. ComReg also notes that NBI is required under its contract to offer DF products. It has forecast that it will begin offering this service in 2026³⁴⁷.
- 4.230 ComReg acknowledges that the take up of NBI LL products is still low, [§< ██████████ §>], and that NBI's pricing is currently benchmarked against Eircom's regulated prices. However, as the rollout continues over the current review period, it is reasonable to expect that NBI will place greater emphasis on LL and DF opportunities as these products mature and when the rollout is completed. Therefore, ComReg considers it appropriate and consistent with EC guidance to take into account NBI's publicly (and contractually) committed future network rollout.

4.4.8. The Algorithm for Applying the Criteria for the Geographic Market Analysis

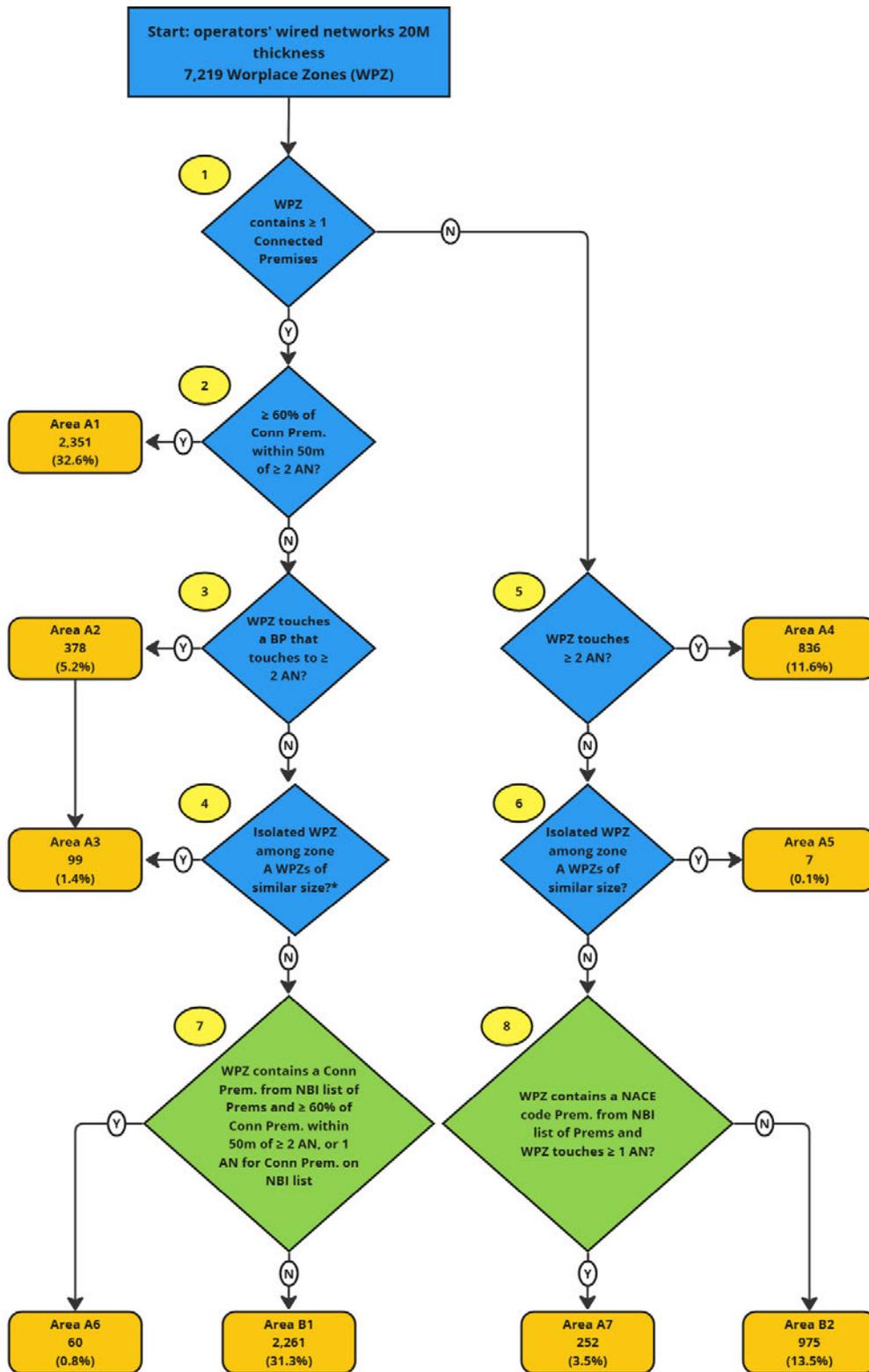
- 4.231 The flowchart of the operation of the algorithm for the geographic market analysis in this Decision (the '**Algorithm**') is illustrated in Figure 16 below.

³⁴⁵ ComReg QKDR data

³⁴⁶ NBI statement 19 August 2024 www.nbi.ie: [National Broadband Plan on track as half of premises can now order fibre broadband - NBI](http://www.nbi.ie)

³⁴⁷ NBI Product Development Roadmap 2024 – 2027, published 5 March 2025, available at <https://nbi.ie/service-provider-portal/>

Figure 16: Flowchart of the Algorithm



*Similar size means that a WPZ is within 20% of the average area of surrounding Zone A WPZs.

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- 4.232 As shown in the diagram, steps 1-4 relate to WPZs with at least one CP, steps 5 and 6 relate to WPZs with no CP, and steps 7 and 8 are carried out to assess NBI's impact on the geographic market. For further information, see sequence of the Algorithm for Applying the Geographic Assessment Criteria set out Annex: 4.
- 4.233 In total, the Algorithm produces nine areas based on variances in conditions of competition³⁴⁸:
- (a) **Area A1**³⁴⁹: consists of 2,351 WPZs within which a minimum of 60% CPs are within 50 metres of two ANs;
 - (b) **Area A2**³⁵⁰: consists of 378 WPZs which overlap with a Business Park which in turn intersects/is passed by two or more ANs;
 - (c) **Area A3**³⁵¹: consists of 99 WPZ Islands which are entirely surrounded by WPZs that have met the criteria and are therefore considered to meet the criteria as well;
 - (d) **Area A4**³⁵²: consists of 836 WPZs which do not contain CPs but which touch two ANs;
 - (e) **Area A5**³⁵³, consists of 7 WPZs which do not contain CPs but passed the Islands test;
 - (f) **Area A6**³⁵⁴, consists of 60 WPZs where NBI network is considered to be present. These WPZs are deemed meet the criteria after taking account of NBI's presence;
 - (g) **Area A7**³⁵⁵: consists of 252 WPZs which do not contain CPs but NBI is considered to be present along with 1 AN;
 - (h) **Area B1**³⁵⁶: consists of 2,261 WPZs which contain at least one CP but have failed the criteria, even after taking account of NBI's network presence.

³⁴⁸ See a list of WPZs and a map indicating area types in Annex: 5 and Annex: 6.

³⁴⁹ Refer to the Algorithm flowchart in Figure 15.

³⁵⁰ *Ibid.*

³⁵¹ *Ibid.*

³⁵² *Ibid.*

³⁵³ *Ibid.*

³⁵⁴ *Ibid.*

³⁵⁵ *Ibid.*

³⁵⁶ *Ibid.*

- (i) **Area B2**³⁵⁷: consists of 975 WPZs which do not contain CPs but have failed the criteria, even after taking account of the impact of NBI's presence.

4.234 It should be noted that Area B1 contains a small subset of CPs that fall within the IA list of premises. ComReg recognises that the conditions of competition for these premises may be somewhat different compared to the rest of Area B1, but the differences are not sufficient to suggest a separate geographic market. Instead, these differences are addressed as part of the pricing remedies design as discussed in Chapter 7.

4.4.9. Definition of the Geographic Markets

4.235 ComReg has grouped WPZs with similar competition conditions and defined four separate markets. ComReg considers that each of these markets has sufficiently homogenous conditions of competition and can be distinguished from the other markets in which the prevailing conditions of competition are appreciably different.

4.236 The geographic markets determined are as follows³⁵⁸:

- (a) **MI WDC Market 1:** Comprised of four areas: Area A1, Area A2, Area A3, and Area A6. These areas contain a total of 2,888 WPZs, all of which contain CPs and have satisfied the criteria set out in section 4.4.3³⁵⁹.
- (b) **MI WDC Market 2:** Comprised of only one area, Area B1, which has a total of 2,261 WPZs which contain connected premises but fail the criteria set out in section 4.4.3³⁶⁰.
- (c) **MI WDC Market 3:** Comprised of three areas: Area A4, Area A5 and Area A7. These areas contain a total of 1,095 WPZs with no CPs that have satisfied the criteria set out in section 4.4.3³⁶¹; and

³⁵⁷ *Ibid.*

³⁵⁸ The results shown here have already accounted for the effects of Enet and BT's merger. If the merger had not taken place, the markets would be MI WDC Market 1 (2,906 WPZs), MI WDC Market 2 (2,243 WPZs), MI WDC Market 3 (1,096 WPZs), and MI WDM Market 4 (974 WPZs).

³⁵⁹ This is a 82.6% increase from a total of 1,582 WPZs in this market in the 2020 Decision.

³⁶⁰ This is a 13.1% increase from a total of 1,998 WPZs in this market in the 2020 Decision.

³⁶¹ This is a 5.0% decrease from a total of 1,153 WPZs in this market in the 2020 Decision.

(d) **MI WDC Market 4:** Comprised of only one area, Area B2, with a total of 975 WPZs which contain no connected premises and have failed the assessment criteria set out in section 4.4.3³⁶².

4.237 The MI WDC Markets 1 to 4 are referred to together in this Decision as the '**MI WDC Markets**'. As noted later in Section 5, following the SMP assessment, for the purpose of considering competition problems and the imposition of remedies, as appropriate:

(a) The MI WDC Market 1 and 3 are collectively referred to in this Decision as the '**Zone A MI WDC Markets**'; and

(b) The MI WDC Market 2 and 4 are collectively referred to in this Decision as the '**Zone B MI WDC Markets**'.

4.238 There has been a movement of WPZs across Zone A and Zone B since the 2020 Decision. Overall, a total of 1,560 WPZs containing 2,684 CPs will have moved from Zone B to Zone A, mainly as a result of network expansion by SPs. At the same time 312 WPZs containing 627 CPs have moved from Zone A to Zone B, largely due to new demand (new CPs) in these WPZs which were not there in the 2020 Decision. Another relevant factor for the changes is the better geographic level information captured in the current data.

4.4.10. Impact of SFG Acquisition of BT

4.239 As outlined in Section 3.4.5 above SFG acquired sole control of BT Communications Ireland Limited on 1 September 2025. Eircom in its supplementary Submission³⁶³ claimed that there had been a material development in the structure of the market with the merger of BT Ireland and Enet, approved by the Competition and Consumer Protection Commission. Eircom claims that "*The CCPC's clearance of the merger - despite the reduction in the number of independent operators - is based on a finding that the transaction does not result in a substantial lessening of competition. This directly contradicts ComReg's continued reliance on the "rule of three" as a threshold for effective competition in geographic market definition.*"³⁶⁴

4.240 ComReg disagrees with Eircom. The CCPC assessed the acquisition in the context of merger control which, contrary to a market analysis, considers whether the merger would lead to substantial lessening of competition

³⁶² This is a 60.8% decrease from a total of 2,486 WPZs in this market in the 2020 Decision.

³⁶³ 11 September 2025, page 7.

³⁶⁴ Ibid

(‘SLC’). Indeed, the CCPC in its Merger Decision³⁶⁵ outlines how SFG will face competition from a number of other SPs, stating that “SFG will be competing against a larger network operator (namely, Eircom)” and “In addition.....SFG will continue to face competition from larger players in the overall telecoms industry (e.g. Virgin Media, SIRO, Colt and ESB Telecoms) who are operating nationally or currently rolling out competing fibre networks and penetrating the WDC markets in order to scale up their service offering”. ComReg does not see any conflict between the CCPC’s merger assessment and ComReg’s criteria of 2 AN’s in the context of the geographic market assessment (noting also that such assessment is to assess whether or not the conditions of competition between different geographic areas are homogeneous or not).

4.241 Enet in its supplementary Submission³⁶⁶, in relation to the SFG acquisition of BT Communications Ireland Limited, noted that “*The implication of the acquisition is that both BT Ireland and Enet will be under the common control of Speed Fibre Group and should be treated as the same undertaking for the purposes of calculating market shares in the context of market analysis and SMP assessments. This means where enet and BT Ireland are present in a WPZ they can no longer be regarded as “2 Alternative Networks” for the competitive conditions assessment of WPZs.*” Enet went to say that “*The implication is clear that certain WPZs identified as being in Zone A in the original consultation should now be designated as Zone B.*”

4.242 As outlined in Section 3.4.5 ComReg has combined BT and Enet network maps in the analysis. On assessment of the impact of the acquisition of BTCIL by SFG, ComReg has found that the acquisition has no material impact on the geographic assessment, largely because of the relatively low overlap between the two networks (pre-merger). Overall, only 19 WPZs move from Zone A to Zone B as a result of these two SPs becoming one network, mainly as a consequence of reducing the number of ANs available in these WPZs. This is not surprising considering that their networks are largely complementary, as noted by the parties to the acquisition where the CCPC notes in its Merger Decision that “*The Parties’ networks are largely complementary, with the Proposed Transaction only leading to a very small overlap in the Parties’ combined set of CPs*”.³⁶⁷ The impact of the merger on the distribution of market shares is set out sections 5.4 and 5.5 of this Decision.

³⁶⁵ Merger Decision, paragraphs 62 and 63

³⁶⁶ 21 August 2025, pages 1 and 2

³⁶⁷ Merger Decision, paragraph 57

4.5 The Trunk – Terminating Boundaries of the MI WDC Markets

4.5.1. Definition

- 4.243 The trunk-terminating boundary between networks delineates parts of a network that may face different competitive conditions of supply. In trunk networks, SPs may be able to aggregate traffic at relevant network points and so can exploit greater economies of scale, scope and density to overcome barriers to entry.³⁶⁸
- 4.244 In relation to the MI WDC markets, these trunk markets are effectively adjacent to the terminating MI WDC segments, as SPs require both terminating and trunk segments to complete LL end-to-end connectivity.
- 4.245 In the 2020 Decision ComReg defined Trunk Nodes as Eircom aggregation nodes with at least two ANs (other than Eircom) having either already established interconnection with Eircom or having infrastructure sufficiently close³⁶⁹ to Eircom Aggregation Nodes³⁷⁰ which could reasonably facilitate interconnection services with Eircom³⁷¹. ComReg identified 93 such Trunk Nodes and delineated the Trunk Market as the traffic traversing between each of the Trunk Nodes, irrespective of bandwidths. In practice, this means that the terminating segment of the LL runs from the connected premises up to and including a serving Trunk Node.
- 4.246 In this subsection ComReg sets out its assessment of the trunk market in respect of the MI WDC Market in the current market review.

4.5.2. Assessment of the Trunk Market

- 4.247 ComReg considers that the criteria used in the 2020 Decision to define Trunk Nodes remain appropriate. The two AN criterion ensures there are at least three networks (including Eircom) available to offer backhaul services from each of the Trunk Nodes and to establish interconnection with Eircom. ComReg will continue to apply a 100 metre criterion for interconnection, as opposed to the 50 metre criterion used in the Algorithm in the geographic

³⁶⁸ For example, SPs can use the trunk network to aggregate traffic for other services including (but not limited to) broadband and telephony.

³⁶⁹ A distance of 100 metres.

³⁷⁰ There are currently 191 Eircom Aggregation Nodes. Under the 2020 Decision, 93 of these were designated as Trunk Nodes.

³⁷¹ In addition, ComReg took into account backhaul networks and SPs which already have interconnections in place with a minimum of 3 backhaul providers.

market assessment for individual CPs. This is because Eircom Aggregation Nodes are network points where traffic from multiple LLs from various CPs (and other services such as WLA) will be handed over and therefore offers greater economies of scale and scope opportunities. It makes more economic sense for SPs to dig a longer distance. Additionally, plans by SPs to establish new points of interconnection with other networks are part of strategic high level network designs, and so are not under the same time constraints which can regularly apply in the case of LL/WDC customer connections. Interconnects may be subject to a three month notification commencement period which often apply to civil engineering digs over 100 metres as required by local authorities³⁷². However, these lengthier lead-times can more readily be absorbed as part of network expansion plans, which by their nature, involve longer term planning. For these reasons, ComReg considers the 100 metre distance is appropriate.

- 4.248 ComReg has conducted a sensitivity analysis by applying a 150 metre criterion. The increase in the number of Trunk Nodes is very small (6 non-Trunk Nodes would move to Trunk Nodes). This means that the 100 metre criterion is robust.
- 4.249 Applying the above criteria, ComReg has identified 142 Trunk Nodes out of a total of 191 Eircom aggregation nodes, which are listed in Annex: 12. All other aggregation nodes are designated as non-Trunk Nodes. There is a significant increase in the number of Trunk Nodes as compared with the 2020 Decision (93 Trunk Nodes), indicating development in the trunk market in recent years due to network build and expansion.
- 4.250 In its Submission, Eircom disagreed with ComReg's approach of placing the terminating boundary at the location of PE Node rather than the first Trunk Node as, in Eircom's view, this artificially extends the trunk segment, misrepresenting market conditions and distorting competition assessments.³⁷³ In its Submission, Eircom stated that by pushing more network elements into the trunk classification, ComReg misrepresents the level of competition in the terminating segment and that if the terminating boundary were set at the first Trunk Node, a greater portion of the network

³⁷² The 100 metre distance applied here is the radial distance, or the "crow flies" distance. Network dig distances will not typically follow the "crow flies" route, but the "dog walks" distance, which is usually longer than the former. Therefore a "crow flies" distance of 100 metres generally involves a dig distance of over 100 metres, which requires a three month notification period as required by local authorities.

³⁷³ Eircom Non-confidential Submission, paragraph 113.

would fall within the access segment, where more alternative providers already compete.³⁷⁴

- 4.251 However, while the point of handover of MI WDC traffic from a Zone B MI WDC access circuit served from a Trunk Node is on a MI WDC interconnection service provisioned on the same Trunk Node (i.e. Same Node Handoff), the point of handover of MI WDC traffic from a Zone B MI WDC access circuit served from a Non-Trunk Node is not on a MI WDC interconnection service provisioned on the “first Trunk Node”. In the case of a Non-Trunk Node, an Access Seeker does not have the choice of at least three networks (including Eircom) to purchase backhaul services so that it can deliver its MI WDC traffic from a Zone B MI WDC access circuit served from a Non-Trunk Node to its point of handover. For this reason, in addition to the option of Same Node Handoff at the Non-Trunk Node, an Access Seeker must have the ability to transport its MI WDC traffic from a Non-Trunk Node to a Trunk Node where at least three networks (including Eircom) offer backhaul services (i.e. Same Region Handoff, as outlined in Section 7.2.3 below).
- 4.252 ComReg maintains the view in the 2020 Decision that there is no need for a bandwidth break for the trunk market. As discussed in section 4.3.5, a chain of substitution exists between all bandwidths of MI WDC products and this equally applies to the trunk market.
- 4.253 Based on the above, ComReg’s position is that the trunk market should include all MI WDC irrespective of bandwidths between each of the Trunk Nodes set out in Annex: 12 of this Decision.

³⁷⁴ Eircom Non-confidential Submission, paragraph 115.

Chapter 5

5. Competition Analysis – SMP Assessment

5.1 Overview

- 5.1 In this Section, ComReg sets out its position in relation to the assessment of competition and SMP in the Relevant WDC Markets defined in Chapter 4.
- 5.2 In summary, ComReg has concluded that:
- (a) No Undertaking has SMP in MI WDC Market 1;
 - (b) Eircom has SMP in MI WDC Market 2;
 - (c) No Undertaking has SMP in MI WDC Market 3; and
 - (d) Eircom has SMP in MI WDC Market 4.
- 5.3 All 7 Respondents to the 2024 Consultation provided comments on the competition analysis. Eircom did not agree with ComReg's assessment of SMP and claimed that ComReg's assessment was flawed as it is based on an incorrect product and geographic market definition. Eircom's comments on both the product and geographic market definition have already been addressed in Chapter 4. Eircom also considered that ComReg's dismissal of PIA as a source of constraint created an artificial barrier to entry, effectively undermining competition. This point is discussed later in paragraphs 5.76 - 5.80.
- 5.4 Virgin Media agreed with ComReg's SMP assessment in the four Relevant Markets and noted that a three criteria test is not necessary given the presumption in favour of regulation at the EU level. Enet also agreed with ComReg's SMP assessment but disagreed with ComReg's definition of Zones A and B. Enet's views on the market definition are discussed already in Chapter 4.
- 5.5 SIRO generally agreed with ComReg's assessment but considered that it may not have accounted for varying competitive conditions within Zone A and Zone B. SIRO recommended that ComReg perform a more granular analysis to reflect inter-Zone variations, i.e., to identify residual market power within Zone A and refine regulatory interventions in Zone B. This view was echoed by ALTO.
- 5.6 As discussed in section 4.4, ComReg has conducted a granular geographic assessment to identify four markets. ComReg is satisfied that its analysis is

sufficiently robust to differentiate competitive conditions between different areas at sufficiently localised level. ComReg therefore disagrees with SIRO's suggestion that a more granular analysis is required.

- 5.7 SIRO also provided views on the assessment of vertical integration and leveraging of dominance into the downstream markets. This is discussed in paragraphs 5.70-5.72.
- 5.8 Vodafone agreed with ComReg's assessment for Zone B, but noted that its conclusion for Zone A may not be appropriate. This is discussed in detail in paragraphs 5.52- 5.58.
- 5.9 BT agreed with ComReg's analysis in MI WDC Markets 2, 3 and 4. BT's views on MI WDC Market 1 are discussed in subsection 5.4
- 5.10 Other views from the Respondents together with ComReg's responses are set out in the relevant subsections below.
- 5.11 This Section is organised as follows: subsection 5.2 sets out the framework for assessing SMP; subsections 5.3 to Section 5.7 set out ComReg's assessment of SMP in each of the defined Relevant WDC Markets, and subsection 5.8 designates Eircom with SMP in MI WDC Market 2 and MI WDC Market 4.

5.2 Assessment framework

- 5.12 Given that the WDC market is identified in the 2020 Recommendation as a market susceptible to *ex ante* regulation, it is not necessary to carry out a three criteria test ('3CT') before advancing to the SMP assessment, as the presumption in favour of regulation is already met at EU level by means of the 2020 Recommendation and Regulation 49(4) of the ECC Regulations. ComReg is entitled to form a presumption that regulation of the WDC markets is – in principle – warranted, and can therefore proceed to assess whether, based on the evidence available to it, there are grounds to conclude that an SP has SMP in each of the WDC Markets.
- 5.13 However, even if a 3CT was to be carried out, ComReg considers it would be passed in any event as demonstrated in the SMP assessment in MI WDC Market 2 (Subsection 5.5) and MI WDC Market 4 in (Subsection 5.7), which substantially overlaps with an assessment of the criteria which are the subject of a 3CT.
- 5.14 The European regulatory framework for electronic communications networks and services has aligned the concept of SMP with the competition law

definition of dominance advanced by the Court of Justice of the European Union in *United Brands v. Commission*:³⁷⁵

“The dominant position referred to [by Article 102 of the Treaty on the Functioning of the European Union] relates to a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its end users.”

- 5.15 Regulation 45(2) of the ECC Regulations effectively mirrors this definition of dominance and states that:

“An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.”

- 5.16 The European Commission’s SMP Guidelines, of which ComReg is required to take utmost account, describe a range of criteria that may be considered by NRAs when seeking to establish whether an undertaking(s) has SMP in a relevant market.

- 5.17 The SMP Guidelines state that:

“According to established case-law, very large market share held by an undertaking for some time — in excess of 50 % — is in itself, save in exceptional circumstances, evidence of the existence of a dominant position. Experience suggests that the higher the market share and the longer the period of time over which it is held, the more likely it is that it constitutes an important preliminary indication of SMP.”³⁷⁶

- 5.18 Market shares in excess of 50% therefore give rise to a strong presumption of SMP. However, the SMP Guidelines also state that the existence of a high market share alone is not sufficient to establish the existence of SMP; rather it means that the undertaking concerned *may* be in a dominant position and

³⁷⁵ Case 27/76 *United Brands v European Commission* [1978] ECR 207, Paragraph 65. See also paragraph 52 of the SMP Guidelines.

³⁷⁶ Paragraph 55 of the SMP Guidelines.

this needs to be considered alongside other potentially relevant criteria for assessing the existence of SMP, such as:

- (a) Overall size of the undertaking;
- (b) Control of infrastructure not easily duplicated;
- (c) Technological advantages or superiority;
- (d) Absence of, or low, countervailing buyer power;
- (e) Easy or privileged access to capital markets or financial resources;
- (f) Product/services diversification (e.g. bundled products or services);
- (g) Economies of scale;
- (h) Economies of scope;
- (i) Vertical integration;
- (j) A highly developed distribution and sales network;
- (k) Absence of potential competition; and
- (l) Barriers to entry and expansion.

5.19 The relative importance of each factor may vary from one analysis to another as the characteristics or dynamics of the market under assessment change. Consequently, flexibility is needed in applying the above criteria. In particular, ComReg considers that factors (a), (b), (d), (g), (h), (i), (k) and (l) above are most relevant to the analysis of SMP in the Relevant WDC Markets. The other factors are considered of less (or no) relevance for the purposes of the SMP assessment in the Relevant WDC Markets. The reasons are set out in Annex: 7³⁷⁷.

5.20 In addition, many of the above factors, while presented separately, may in fact be interrelated, and all available evidence is considered by ComReg collectively before a determination on SMP is made. The SMP Guidelines note that:³⁷⁸

“A dominant position can derive from a combination of the above criteria, which taken separately may not necessarily be determinative.”

³⁷⁷ Due to the lack of pricing information that is readily comparable across WDC services (noting services can be sold as part of a bundle of services and have variable factors such as distance) ComReg has not assessed factors such as historical and future pricing behaviour.

³⁷⁸ Paragraph 79 of the 2020 Explanatory Note.

- 5.21 Given an inherent degree of overlap, ComReg has combined its assessment of these factors under the following three broad headings:
- (a) Existing competition in the Relevant WDC Markets: an assessment of factors such as market shares, relative strength of existing competitors, barriers to expansion (including economies of scale, scope and density), vertical integration, and indirect constraints;
 - (b) Potential competition in the Relevant WDC Markets: an assessment of factors such as control of infrastructure not easily duplicated, economies of scale, scope and density, barriers to entry in the Relevant WDC Markets, as well as considering the overall strength of potential competitors; and
 - (c) Strength of any countervailing buyer power ('**CBP**'): an assessment of the impact posed by any strong buyers of the Relevant WDC products on the competitive behaviour of the Relevant WDC SPs.

5.3 Overview of the WDC Markets in Ireland

- 5.22 Before examining the competition conditions and SMP in each of the Relevant WDC Markets, we first provide an overview of the markets in Ireland as a whole. As shown in Table 18 below, there are many SPs active in the supply of MI WDC products, including among others Eircom, BT (now part of SFG³⁷⁹), Enet, Virgin Media, SIRO and Colt. Apart from Eircom, most network operators do not have national coverage, and smaller network operators mostly focus on major business parks, urban or commercial areas.
- 5.23 Overall, as of H2 2024 there was a total of 14,276 connected premises served with fibre MI LLs in Ireland. Eircom is by far the largest operator connecting these premises, accounting for [redacted]³⁸⁰ of the overall market, while SFG and BT have a combined share of [redacted]³⁸¹ of the national market. The rest of the network operators all have a market share below 10%.

³⁷⁹ See section 3.4.5 above.

³⁸⁰ Between 40% and 50%.

³⁸¹ Between 30% and 40%.

Table 18: Share of the Total Connected Premises³⁸², H2 2024 [REDACTED]

Network Operator	Premises supplied	Market Share
Eircom	[REDACTED]	[REDACTED] ³⁸³
SFG (excl. BT)	[REDACTED]	[REDACTED] ³⁸⁴
BT Ireland	[REDACTED]	[REDACTED] ³⁸⁵
VMI	[REDACTED]	[REDACTED] ³⁸⁶
SIRO	[REDACTED]	[REDACTED] ³⁸⁷
Colt	[REDACTED]	[REDACTED] ³⁸⁸
ESBT	[REDACTED]	[REDACTED] ³⁸⁹
EU Networks	[REDACTED]	[REDACTED] ³⁹⁰
Vodafone	[REDACTED]	[REDACTED] ³⁹¹
Others	[REDACTED]	[REDACTED] ³⁹²
Total	14,276	100%

5.4 SMP Assessment in MI WDC Market 1

5.24 In this subsection ComReg sets out its assessment of competition and SMP in MI WDC Market 1 based on the examination of factors outlined in paragraph 5.21

5.4.1. Existing Competition in MI WDC Market 1

5.25 For the purpose of assessing existing competition, ComReg examines factors such as market shares and the presence of competing ANs, vertical integration, and barriers to expansion in MI WDC Market 1.

³⁸² SIR LL H2 2024 and SIR Dark Fibre H2 2024 with duplicate premises removed.

³⁸³ Between 40% and 50%.

³⁸⁴ Between 30% and 40%.

³⁸⁵ Between 0% and 10%.

³⁸⁶ Between 0% and 10%.

³⁸⁷ Between 0% and 10%.

³⁸⁸ Between 0% and 10%.

³⁸⁹ Between 0% and 10%.

³⁹⁰ Between 0% and 10%.

³⁹¹ Between 0% and 10%.

³⁹² Between 0% and 10%.

Market Shares and Presence of ANs

- 5.26 In MI WDC Market 1, ComReg estimates that there are a total of 9,635 CPs supplied with MI WDC services, representing 67.5% of total CPs in Ireland in H2 2024³⁹³. This is an increase from 9,371 CPs in H2 2023, noting that MI WDC Market 1 consists of more WPZs in H2 2024 (2,888 WPZs) than in H2 2023 (2,565 WPZs).
- 5.27 Figure 17 and Table 19 below present the market shares measured based on the market boundaries at the time. In H2 2024 Eircom has the largest market share in this market prior to SFG's acquisition of BT, at [redacted] [redacted] %³⁹⁴. SFG is the second largest operator in this market, with a market share of [redacted] [redacted] %³⁹⁵³⁹⁶. There are also a number of other sizeable network operators that provide MI WDC services in this market, including BT, SIRO, and VMI.
- 5.28 Following SFG's acquisition of BT, SFG would have a combined market share of [redacted] [redacted] %³⁹⁷ in H2 2024 (See Figure 17), making it the biggest supplier in MI WDC Market 1, followed very closely by Eircom.

³⁹³ Includes Dark Fibre connected premises at H2 2024.

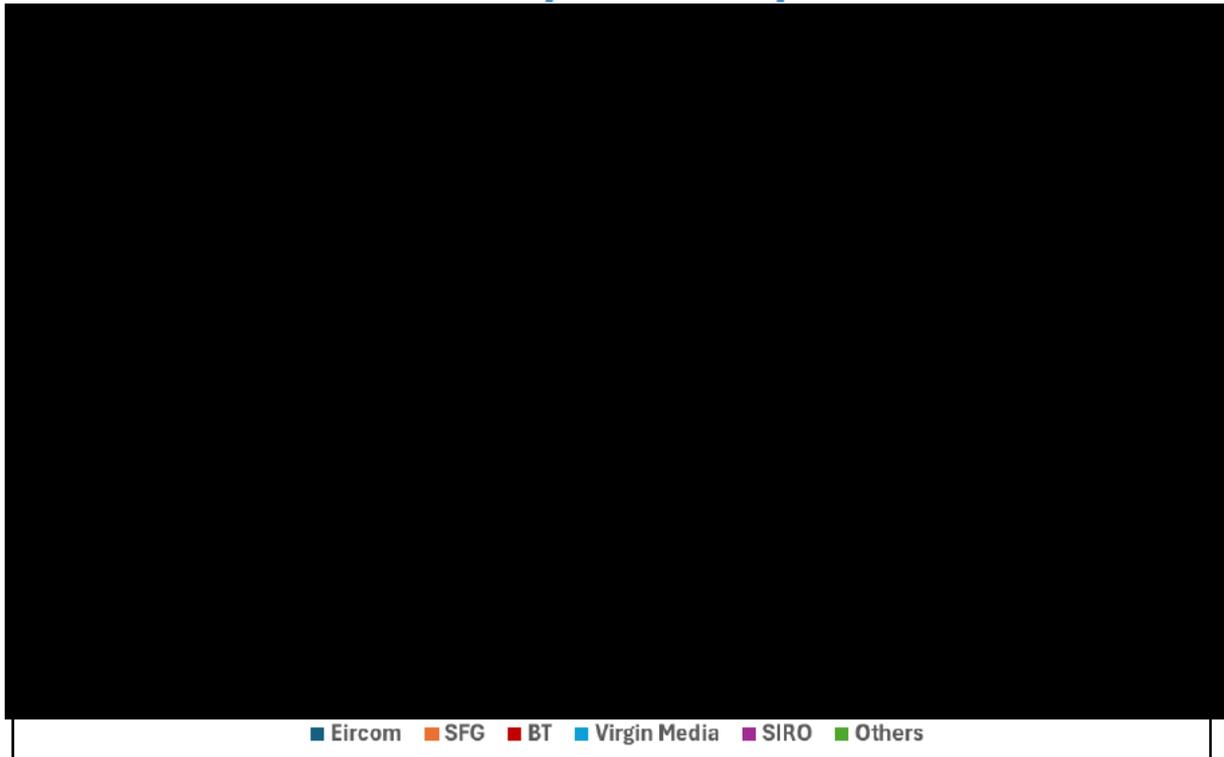
³⁹⁴ Between 30% and 40%.

³⁹⁵ Between 20% and 30%.

³⁹⁶ [redacted] Enet: [redacted]

³⁹⁷ Between 30% and 40%.

Figure 17: Market Shares CPs in the MI WDC Market 1, H2 2023 and H2 2024
[REDACTED]



- 5.29 Eircom’s market share and the combined SFG/BT market share are well below 50%, the threshold for a presumption of a finding of SMP. If the acquisition of BT by SFG is taken into account, Eircom becomes the second largest SP in this market, with a market share slightly below SFG.
- 5.30 As shown in Table 19 below, Eircom market share has remained largely stable since the 2020 Decision, at between 30 and 40%, as measured based on the MI WDC Market defined at the time. It should be noted that this is not a like-for-like comparison, as the boundaries of MI WDC Market 1 have expanded significantly (in terms of the number of WPZs) since the 2020 Decision (see paragraph 5.26).

Table 19: Market shares in MI WDC Market 1³⁹⁸, 2018, H2 2023 and H2 2024 based on market boundaries at the time [REDACTED]

Operator	2018	H2 2023	H2 2024
Eircom	[REDACTED] ³⁹⁹	[REDACTED] ⁴⁰⁰	[REDACTED] ⁴⁰¹
SFG (excl BT)	[REDACTED] ⁴⁰²	[REDACTED] ⁴⁰³	[REDACTED] ⁴⁰⁴
BT	[REDACTED] ⁴⁰⁵	[REDACTED] ⁴⁰⁶	[REDACTED] ⁴⁰⁷
VMI	[REDACTED] ⁴⁰⁸	[REDACTED] ⁴⁰⁹	[REDACTED] ⁴¹⁰
SIRO	[REDACTED] ⁴¹¹	[REDACTED] ⁴¹²	[REDACTED] ⁴¹³
Others	[REDACTED] ⁴¹⁴	[REDACTED] ⁴¹⁵	[REDACTED] ⁴¹⁶
Total	100%	100%	100%

5.32 In order to make a like-for-like comparison, ComReg has also calculated the market shares for 2018 and H2 2023 based on the MI WDC Market 1 defined in H2 2024 data, as shown in Table 20. The results show that there are minimal changes in the 2018 and H2 2023 market shares and thus the trend depicted in Table 19 above is robust.

³⁹⁸ Results from the 2020 Decision.

³⁹⁹ Between 30% and 40%.

⁴⁰⁰ Between 30% and 40%.

⁴⁰¹ Between 30% and 40%.

⁴⁰² Between 10% and 20%.

⁴⁰³ Between 20% and 30%.

⁴⁰⁴ Between 20% and 30%.

⁴⁰⁵ Between 10% and 20%.

⁴⁰⁶ Between 0% and 10%.

⁴⁰⁷ Between 0% and 10%.

⁴⁰⁸ Between 0% and 10%.

⁴⁰⁹ Between 0% and 10%.

⁴¹⁰ Between 0% and 10%

⁴¹¹ Between 0% and 10%.

⁴¹² Between 0% and 10%.

⁴¹³ Between 0% and 10%.

⁴¹⁴ Between 10% and 20%.

⁴¹⁵ Between 0% and 10%.

⁴¹⁶ Between 0% and 10%.

Table 20: Market shares in MI WDC Market 1, 2018, H2 2023 and H2 2024, based on H2 2024 market boundaries [PARTIALLY REDACTED]

	2018	H2 2023	H2 2024
Eircom	[REDACTED] ⁴¹⁷	[REDACTED] ⁴¹⁸	[REDACTED] ⁴¹⁹
SFG (excl BT)	[REDACTED] ⁴²⁰	[REDACTED] ⁴²¹	[REDACTED] ⁴²²
BT	[REDACTED] ⁴²³	[REDACTED] ⁴²⁴	[REDACTED] ⁴²⁵
VMI	[REDACTED] ⁴²⁶	[REDACTED] ⁴²⁷	[REDACTED] ⁴²⁸
SIRO	[REDACTED] ⁴²⁹	[REDACTED] ⁴³⁰	[REDACTED] ⁴³¹
Others	[REDACTED] ⁴³²	[REDACTED] ⁴³³	[REDACTED] ⁴³⁴
Total	100%	100%	100%

5.33 The market share differences between Eircom and its competitors' market shares, along with Eircom's share remaining below 40% over time, suggest that these competitors are likely able to exert a reasonable competitive constraint on Eircom. Noting SFG's acquisition of BT, this should also make it a stronger competitor in MI WDC Market 1 given its network footprint and, over time, the likely increased economies of scale it will be able to achieve.

5.34 It is worth noting that SFG/Enet operates and manages the MANs under a long-term concession agreement with the DCCS. Under this agreement, SFG/Enet is obliged to provide open access to SPs to WDC services on a

⁴¹⁷ Between 40% and 50%.

⁴¹⁸ Between 30% and 40%.

⁴¹⁹ Between 30% and 40%.

⁴²⁰ Between 10% and 20%. Note: this includes market shares of Enet, Airspeed and Magnet.

⁴²¹ Between 20% and 30%.

⁴²² Between 20% and 30%.

⁴²³ Between 10% and 20%.

⁴²⁴ Between 0% and 10%.

⁴²⁵ Between 0% and 10%.

⁴²⁶ Between 0% and 10%.

⁴²⁷ Between 0% and 10%.

⁴²⁸ Between 0% and 10%.

⁴²⁹ Between 0% and 10%.

⁴³⁰ Between 0% and 10%.

⁴³¹ Between 0% and 10%.

⁴³² Between 0% and 10%.

⁴³³ Between 10% and 20%.

⁴³⁴ Between 0% and 10%.

transparent and non-discriminatory basis. Data gathered by ComReg indicates SFG/Enet's MANs and its associated WDC services are used widely by SPs for LLs. This suggests that infrastructure-based competition is not solely confined to cities but is evident throughout the towns where the MANs are situated.

- 5.35 We also note that SIRO has grown its market share in MI WDC Market 1 since ComReg's 2020 Decision. It has grown from almost nil in 2018 to [redacted]⁴³⁵ in H2 2024. As SIRO continues to expand its network (although noting it is close to completion), it is expected to continue to act as a competitive constraint on Eircom over the period of this market review.
- 5.36 Further, as explained in subsection 4.4 above, MI WDC Market 1 is an area where a minimum of 60% of the CPs are within 50 metres of at least two ANs. This suggests that the ANs are able to supply a majority of the CPs in such WPZs and there is a greater degree of infrastructure-based competition in this area. Indeed, the Algorithm results show that 81.4% of the CPs in this market are within 50 metres of at least two ANs. This suggests, alongside the other evidence presented below, that a number of SPs have the ability to potentially provide services to these CPs and thereby exert a sufficient competitive constraint on each other's behaviour in the associated WPZs.
- 5.37 In ComReg's view, the presence of ANs and the market share distribution in MI WDC Market 1 indicates that there is reasonably strong competition within MI WDC Market 1.

Vertical Integration

- 5.38 ComReg is of the view that no SP is able to materially leverage its vertically integrated position to the detriment of competition in MI WDC Market 1. This is because Eircom's market share in this market is moderate (especially when compared with MI WDC Market 2), and Eircom's main competitors such as Enet (and Magnet), BT and Virgin Media are also vertically integrated, having already entered both the wholesale and retail markets. Given the number of these competitors and their significant market shares vis-a-vis Eircom's, they can pose a degree of competitive constraints on Eircom (and each other) at both the wholesale and retail level. Therefore, Eircom would have less of an ability and incentive to materially leverage its vertically integrated position to the detriment of competition in MI WDC Market 1. However, given the multi-site nature of the large portion of the LL demand at the retail level, some incentives may nonetheless remain.

⁴³⁵ Between 0 and 10%.

- 5.39 In commenting on ComReg's SMP assessment, BT stated that it agreed with ComReg concerning potential incentives for high value multi-site sales. BT was concerned that in large multi-site deals there were strong incentives to create a margin squeeze by reducing Zone A prices to cross subsidise zone B pricing and thereby win the bid. ComReg notes that leveraging is discussed in detail later in section 6.2.3.

Barriers to expansion

- 5.40 The existence of sunk costs associated with network buildout, economies of scale, scope and density⁴³⁶ are likely to act as significant barriers to expansion in the telecommunications sector. However, ComReg considers that these barriers are largely overcome in MI WDC Market 1, as evidenced by the presence of at least two ANs operating within close proximity of the majority of the premises (60%) in this market. The distance (50 metres) the ANs need to extend their networks to serve the premises of high value customers in this market is considered economically reasonable and is unlikely to act as a significant barrier.
- 5.41 Therefore, ComReg does not consider there are significant barriers to expansion in this market.

Conclusion on Existing Competition in MI WDC Market 1

- 5.42 In light of the above, it is ComReg's view that there is sufficiently strong existing competition in MI WDC Market 1 on the basis of the presence of ANs, the market shares, low barriers to expansion and vertical integration.

5.4.2. Potential Competition in MI WDC Market 1

- 5.43 Potential competition is assessed having regard to factors such as control of infrastructure not easily duplicated, barriers to entry and expansion, as well as considering the overall strength of potential competitors.
- 5.44 ComReg is of the view that barriers to entry have been largely overcome as evidenced from the existing infrastructure-based competition. The delineation of the MI WDC Market is partly based on the presence of rival network infrastructure. Additionally, the market shares presented above

⁴³⁶ Economies of scale, scope and density refer to potential advantages that larger incumbents may enjoy over smaller new entrants. Economies of scale generally refer to the cost advantage which a large-scale operator may have over a smaller operator where the marginal cost of production decreases as the quantity of output produced increases. Economies of scope refer to the potential efficiencies which may be gained by a firm jointly producing a range of goods and services, e.g. where a CATV network or a FTTC network could be used to provide LLs, retail fixed telephony services and broadband services simultaneously. Economies of density refer to potential efficiencies associated with supplying customers who are geographically concentrated.

indicate that MI WDC Market 1 has a number of strong competitors already operating within it.

- 5.45 Taking a forward-looking view, ComReg considers that the prospects for competition in MI WDC Market 1 are favourable having regard to the trend to date of increasing SP network presence. ComReg notes that as the rollout of SIRO, Virgin Media and NBI networks continues, to the extent it can be utilised to provide MI WDC LLs, it will further strengthen the infrastructure-based competition within this market over the lifetime of this market review.

5.4.3. CBP Assessment in MI WDC Market 1

- 5.46 CBP refers to the bargaining strength that the buyer has in relation to the seller in commercial negotiations *“due to its size, its commercial significance to the seller and its ability to switch to alternative suppliers”*⁴³⁷. As set out in the 2008 Guidance on Enforcement Priorities as amended, *“If countervailing power is of a sufficient magnitude, it may deter or defeat an attempt by the undertaking to profitably increase prices.”*⁴³⁸
- 5.47 ComReg considers that countervailing buyer power is sufficient (1) if there are credible alternative sources of supply available and (2) if customers’ purchase volume is material. ComReg is of the view that both these conditions are met in WDC Market 1 for the following reasons.
- 5.48 First, as explained earlier, 81.4% of the CPs in MI WDC Market 1 are within 50 meters of at least 2 ANs. As such, wholesale customers can make a credible threat to switch such that they can exert sufficient buyer power.
- 5.49 Second, MI WDC customers are typically significant suppliers of WDC services themselves. Many of these are significant purchasers, including BT, Vodafone and Enet⁴³⁹. They are likely to be able to exert a degree of countervailing buyer power vis-à-vis Eircom.
- 5.50 Third, as evidenced by Eircom’s market share in this market (relative to other markets), SPs do not appear to be as heavily dependent on Eircom for WDC services. They have in many cases options to purchase from ANs or self-supply.

⁴³⁷ Paragraph 64, Horizontal Merger Guidelines.

⁴³⁸ Paragraph 18, Communication from the Commission — Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings as amended on 27 March 2023 (“2008 Guidance on Enforcement Priorities as amended”).

⁴³⁹ SIRs, 2023 data.

- 5.51 BT stated that it did not agree with ComReg's SMP assessment in MI WDC Market 1 because it disagreed with the change in the proportionality criteria from 75% to 60%, as this alone appears to make a material change to the market. ComReg notes that BT's views on the 60% criterion have already been considered in section 4.4.3. As noted in paragraph 4.188 ComReg has conducted a sensitivity analysis using different thresholds and is satisfied that the 60% proportionality criterion is robust.
- 5.52 In its Submission, Vodafone considered that ComReg's conclusions regarding the competition assessment in Zone A may not be appropriate. This is because (i) ComReg does not appear to have considered all key relevant drivers of competition in WDC markets and (ii) available evidence suggests that Eircom could be making returns significantly above the cost of capital within Zone A, which is prima facie evidence of its holding SMP.
- 5.53 With respect to the first point, Vodafone stated that it is important that only the coverage of operators that actually provide WDC services are considered. This is because an operator may choose not to provide WDC services even though it has network infrastructure that is theoretically capable of doing so. To clarify, ComReg only takes into account the operators that actually provide WDC services in this market review.
- 5.54 Vodafone also stated that a range of other factors in addition to coverage need to be considered when determining the strength of competitive constraints in a given area, including
- (a) The actual and expected service take-up (or market share) of alternative operators.
 - (b) The "total size" / coverage of the operator (i.e. across geographic areas). Vodafone noted the experience in the UK which suggests that retailers of dedicated capacity services have a preference for using a smaller number of larger wholesalers, which means the overall coverage of an operator across Ireland is likely to be a relevant factor regarding the demand-side substitutability of services. Smaller-scale operators may impose a weaker competitive constraint on Eircom, as they may be less able to attract retailers onto their networks.
 - (c) The time period that an operator has provided a service for. "Newer" operators may impose a weaker competitive constraint than longer-established WDC providers.

- (d) Whether the operator has existing infrastructure connecting to the end user premises. This will determine the extent to which Eircom has a material cost advantage in serving a customer relative to competing networks. It could also impact the ability of the operator to provide a service over a comparable timeframe to Eircom, as it may take time to deploy the connection to the end user location if it doesn't already have one in place, particularly where permits and building access is required.
- 5.55 ComReg notes that point (a) above has already been considered when assessing SMP. In relation to (b), while it is true that smaller operators may impose a weaker constraint, there are operators that have significant network presence and, together with other operators, have the ability to place a sufficiently strong constraint on Eircom in MI WDC Market 1 (such as Enet and BT (now merged as a single entity)). In addition, SIRO continues to roll-out its network and has increased its market share.
- 5.56 In relation to (c), ComReg recognises that some SPs only started providing WDC services in recent years. However, ComReg is required to take a forward-looking view and as such has taken into account of competitive constraints placed by these 'newer' operators based on their current or projected network rollout. In relation to (d), this has already been factored in the geographic assessment where a 50 metre distance criterion was applied to allow for the time and effort taken to connect to the premises.
- 5.57 Vodafone suggested that ComReg assess Eircom's returns on WDC services in different markets (MI vs TI services, Zone A and Zone B), to determine in which WDC markets Eircom is making returns consistently and significantly above the competitive level - where returns in Zone A are significantly above a competitive level, ComReg should revisit its finding of no SMP in Zone A, and its decision to impose no price regulation in these areas. Where returns in Zone B are significantly above a competitive level, ComReg should revisit its proposed price regulation in this market, to ensure that this effectively prevents Eircom from setting excessive prices going over the next market review period.
- 5.58 ComReg is aware of the returns reported in Eircom's HCAs, which are consolidated across all WDC services, including TI and MI, and Zone A and Zone B. However, returns are only one of the factors in assessing market power. ComReg must take into account all the relevant factors when reaching its conclusions, including market shares of the incumbent and its competitors, infrastructure competition, barriers to entry and expansion, economies scale and scope, as discussed above.

5.4.4. Overall Conclusion on SMP Assessment in MI WDC Market 1

5.59 Having regard to the above analysis on existing competition, potential competition and CBP in MI WDC Market, as well as Respondents' views, ComReg has decided that no SP has SMP in MI WDC Market 1.

5.5 SMP Assessment in MI WDC Market 2

5.60 ComReg now turns to the assessment of competition in MI WDC market 2 and concludes that Eircom is likely to hold SMP in this market. ComReg's reasoning is set out below.

5.5.1. Existing Competition in MI WDC Market 2

Presence of ANs and Market Shares

5.61 Overall there are 4,641 CPs in MI WDC Market 2, equivalent to approximately 32.5% of total connected premises in Ireland. This is a decrease from 5,440 CPs in H2 2023. There is also a reduction in the size of MI WDC Market 2 from 2,455 WPZs in H2 2023 to 2,261 WPZs in H2 2024.

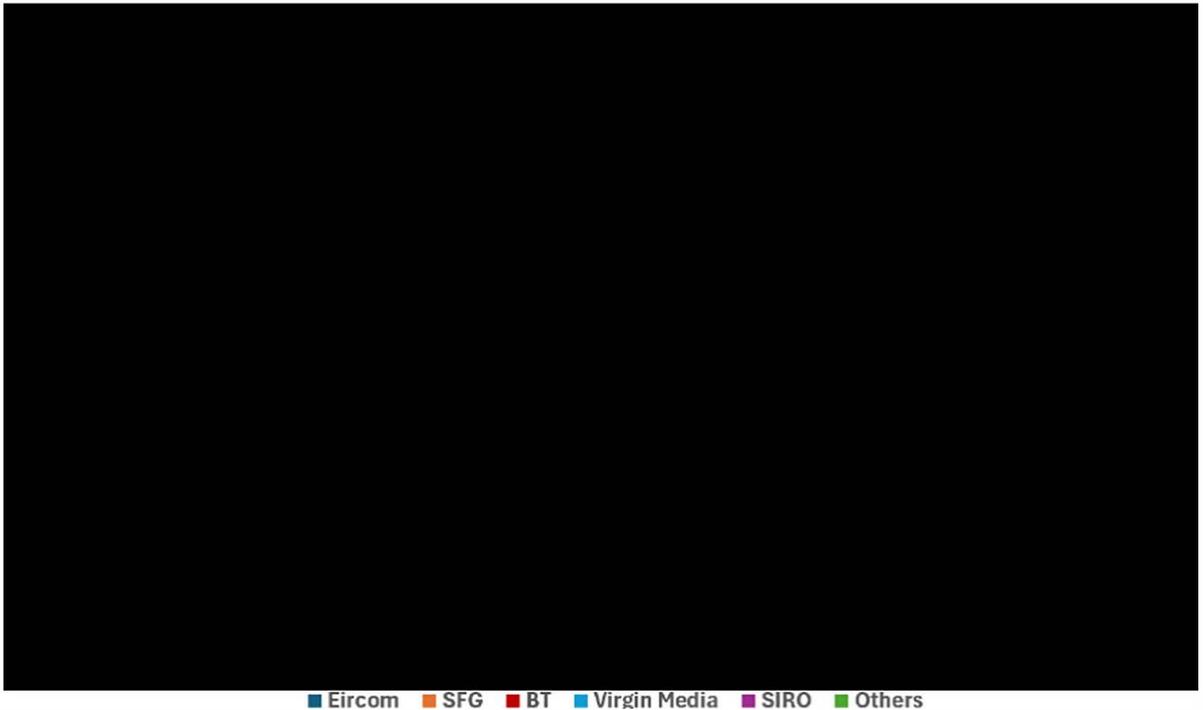
5.62 Figure 18 and Table 21 show the market shares based on the market boundaries at the time. Eircom is by far the biggest supplier in this market, accounting for [redacted] %⁴⁴⁰ of the market share in H2 2024. SFG is the second largest supplier with a market share of [redacted] %⁴⁴¹.and [redacted] %⁴⁴² before and after its acquisition of BT is accounted for. All the other SPs have a market share in the low to middle single digits in 2024.

⁴⁴⁰ Between 60% and 70%.

⁴⁴¹ Between 10% and 20%.

⁴⁴² Between 10% and 20%.

Figure 18: Market Shares in the MI WDC Market 2, H2 2023 and H2 2024[REDACTED]



- 5.63 Eircom’s market share is well above 50%, the threshold for a presumption of SMP pursuant to the SMP Guidelines. Its market share is multiples of its largest competitors such as SFG, Virgin Media [REDACTED]⁴⁴³, BT [REDACTED]⁴⁴⁴ and SIRO [REDACTED]⁴⁴⁵. Even when SFG and BT’s market shares are combined, they are only a fraction of Eircom’s market share.
- 5.64 Table 21 presents the market share trend since the 2020 Decision, demonstrating that Eircom’s market share has been consistently over 60%. These market shares are calculated based on the market defined at the time. It should be noted that this is not a like-for-like comparison, as the boundaries of MI WDC Market 1 have reduced since the 2020 Decision (see footnotes 360 and paragraph 5.61).

⁴⁴³ Between 0% and 10%.

⁴⁴⁴ Between 0% and 10%.

⁴⁴⁵ Between 0% and 10%.

Table 21: Market Shares in MI WDC Market 2, 2018⁴⁴⁶, H2 2023 and H2 2024 based on the market of boundaries at the time [REDACTED]

	2018	H2 2023	H2 2024
Eircom	[REDACTED] % ⁴⁴⁷	[REDACTED] ⁴⁴⁸	[REDACTED] ⁴⁴⁹
SFG(excl. BT)	[REDACTED] ⁴⁵⁰	[REDACTED] ⁴⁵¹	[REDACTED] ⁴⁵²
VMI	[REDACTED] ⁴⁵³	[REDACTED] ⁴⁵⁴	[REDACTED] ⁴⁵⁵
BT	[REDACTED] ⁴⁵⁶	[REDACTED] ⁴⁵⁷	[REDACTED] ⁴⁵⁸
SIRO	[REDACTED] % ⁴⁵⁹	[REDACTED] ⁴⁶⁰	[REDACTED] ⁴⁶¹
Others	[REDACTED] ⁴⁶²	[REDACTED] ⁴⁶³	[REDACTED] ⁴⁶⁴
Total	100%	100.00%	100%

5.65 In its Submission, Eircom (through its consultant’s report) stated that the composition of Market 2 had changed and ComReg provided no reliable support for any conclusion on the likely trend in Eircom’s market share in the set of WPZs designated as Market 2 in the 2024 Consultation.

5.66 ComReg is aware that the boundaries of MI WDC Market 2 have shrunk since the 2020 Decision (in terms of the number of WPZs falling in this market). In order to make a like-for-like comparison, ComReg has calculated the market shares for 2018 and H2 2023 based on the market defined using H2 2024

⁴⁴⁶ Results from the 2020 Decision.

⁴⁴⁷ Between 60% and 70%.

⁴⁴⁸ Between 60% and 70%.

⁴⁴⁹ Between 60% and 70%.

⁴⁵⁰ Between 10% and 20%.

⁴⁵¹ Between 10% and 20%.

⁴⁵² Between 10% and 20%.

⁴⁵³ Between 0% and 10%.

⁴⁵⁴ Between 0% and 10%.

⁴⁵⁵ Between 0% and 10%.

⁴⁵⁶ Between 0% and 10%.

⁴⁵⁷ Between 0% and 10%.

⁴⁵⁸ Between 0% and 10%.

⁴⁵⁹ Between 0% and 10%.

⁴⁶⁰ Between 0% and 10%.

⁴⁶¹ Between 0% and 10%.

⁴⁶² Between 10% and 20%.

⁴⁶³ Between 0% and 10%.

⁴⁶⁴ Between 0% and 10%.

data and compared them with the H2 2024 market shares (see Table 22). It remains the case that Eircom’s market share has remained above 60% over time.

Table 22: Market Shares in MI WDC Market 2, 2018, H2 2023 and H2 2024 based on the market defined in H2 2024 [REDACTED]

	2018	H2 2023	H2 2024
Eircom	[REDACTED] ⁴⁶⁵	[REDACTED] ⁴⁶⁶	[REDACTED] ⁴⁶⁷
SFG(excl. BT)	[REDACTED] ⁴⁶⁸	[REDACTED] ⁴⁶⁹	[REDACTED] ⁴⁷⁰
BT	[REDACTED] ⁴⁷¹	[REDACTED] ⁴⁷²	[REDACTED] ⁴⁷³
VMI	[REDACTED] ⁴⁷⁴	[REDACTED] ⁴⁷⁵	[REDACTED] ⁴⁷⁶
SIRO	[REDACTED] ⁴⁷⁷	[REDACTED] ⁴⁷⁸	[REDACTED] ⁴⁷⁹
Others	[REDACTED] ⁴⁸⁰	[REDACTED] ⁴⁸¹	[REDACTED] ⁴⁸²
Total	100%	100%	100%

5.67 Furthermore, MI WDC Market 2 is defined on the basis that it does not meet the criteria whereby a minimum of 60% of the CPs are within 50 meters of at least two ANs. Indeed, the Algorithm results show that over 90% of the premises in this market have access to only one or no ANs. As such, this

⁴⁶⁵ Between 60% and 70%.

⁴⁶⁶ Between 60% and 70%.

⁴⁶⁷ Between 60% and 70%.

⁴⁶⁸ Between 10% and 20%. Note SFG’s market share includes the shares of Enet, Airspeed and Magnet.

⁴⁶⁹ Between 10% and 20%.

⁴⁷⁰ Between 10% and 20%.

⁴⁷¹ Between 0% and 10%.

⁴⁷² Between 0% and 10%.

⁴⁷³ Between 0% and 10%.

⁴⁷⁴ Between 0% and 10%.

⁴⁷⁵ Between 0% and 10%.

⁴⁷⁶ Between 0% and 10%.

⁴⁷⁷ Between 0% and 10%.

⁴⁷⁸ Between 0% and 10%.

⁴⁷⁹ Between 0% and 10%.

⁴⁸⁰ Between 0% and 10%.

⁴⁸¹ Between 0% and 10%.

⁴⁸² Between 0% and 10%.

market is considered to have less infrastructure-based competition than in MI WDC Market 1.

- 5.68 Considering all the factors presented above, it is very unlikely that the existing SPs can exert a sufficient degree of competitive constraint on Eircom.

Vertical Integration

- 5.69 Although many of SPs in MI WDC Market 2 are vertically integrated, they have limited coverage in this market. As indicated in paragraph 5.67, over 90% of the premises in this market have access to only 1 or no ANs. In contrast, Eircom is the largest MI WDC supplier with a ubiquitous coverage, as well as being a significant provider of retail MI LLs. Vertically integrated ANs are therefore unlikely to place a sufficient competitive constraint on Eircom.
- 5.70 SIRO was of the view that while ComReg acknowledged the potential for leveraging wholesale dominance into downstream markets, the full impact was not explored in depth. SIRO suggested that ComReg include a detailed examination on this. This view was echoed by ALTO. ComReg notes that leveraging is discussed in detail later in section 6.2.3.
- 5.71 Eircom claimed in its Submission that the only argument advanced by ComReg in support of its view is that ANs have limited network presence in this market. It is not clear how ComReg can rely on vertical integration as an additional reason, above and beyond network presence, in its conclusion on existing competition in MI WDC Market 2.
- 5.72 To clarify, the limited presence by ANs in MI WDC Market 2 means that there are limited competitive constraints exerted by vertically integrated SPs on Eircom in this market. In contrast, Eircom's vertically integrated structure gives Eircom a competitive advantage compared to its competitors and could enhance Eircom's position in MI WDC Market 2.

Barriers to Expansion

- 5.73 The existence of sunk costs associated with the network buildout, economies of scale, scope and density can act as significant barriers to expansion for SPs in MI WDC markets. ComReg considers this is the case in MI WDC Market 2 in particular. The reasons are twofold. First, the density of demand (2.05 premises per WPZ) is lower in this market than in MI WDC Market 1 (3.34 premises per WPZ), which can act as a barrier for an AN to reach sufficient economies of scale or density to achieve potential efficiencies. Second, there are fewer premises within 50 metres of at least 2 ANs, which raises the economic costs for the ANs to extend their networks to serve the customers. Therefore, in ComReg's view, a significant expansion of existing

networks into the Area 2 MI WDC Market leads to sizeable uncertainties regarding the ability to recover the high fixed and sunk costs associated with such a network expansion.

- 5.74 In contrast, Eircom operates a ubiquitous duct/pole/fibre network with significant aspects of these costs likely to be already sunk. A significant portion of the sunk costs that were involved in the initial construction of Eircom's access network are now likely to be largely amortised at this point in time, although ongoing investment is necessary. ComReg recognises that Eircom, through its ongoing network upgrade is incurring additional costs. However, any competitor expanding its network in MI WDC Market 2 would, nonetheless, face higher sunk costs than that faced by Eircom given its existing network, including the upgrade of it.
- 5.75 ComReg notes the obligations imposed on Eircom in the 2024 PIA Decision may have an impact on the WDC markets as the use of PIA products could potentially reduce the costs of network expansion to the ANs. However, there is limited evidence of LL delivery based on PIA at scale as of yet (with the exception of NBI using PIA to build its network). ComReg believes that over the period of this market review, the extent to which ANs' expansion using upstream inputs would effectively constrain Eircom's SMP position in MI WDC Market 2 is likely to be limited. Nonetheless, ComReg will continue to monitor the market.
- 5.76 Eircom claimed in its Submission that ComReg disregarded the impact of PIA in the downstream WDC markets, particularly when PIA has been explicitly designed to lower barriers and facilitate infrastructure-based competition. Eircom was of the view that by failing to account for PIA's role, ComReg distorted the market analysis and misrepresented the availability of competitive alternatives.
- 5.77 In its Submission, BT claimed the offering of WDC requires a high standard service assurance which is unfortunately missing from the 2024 PIA Decision. BT found at this time there was no certainty for prompt in-life-repair for more urban PI duct-based services. BT fully agreed with ComReg's proposal in the 2024 Consultation to continue to monitor the upstream market for progress. BT also requested ComReg to investigate in detail as to why the take up was still low, for example, whether the poor service assurance SLAs (that were not agreed through negotiation) hinder the ability for others to meet the key high SLAs demanded in the WDC market.
- 5.78 As discussed in paragraphs 4.100 to 4.120, ComReg acknowledges that there has been an increase in the take-up of PIA since the 2024 PIA Decision was put in place – mainly by NBI. The use of PIA access products is still therefore at their early stage of deployment, the overall take-up volume

outside NBI is still relatively low, SPs primarily use Eircom's PIA for network build, and the views from the SPs on its practical effects are mixed. Therefore, ComReg does not consider that the deployment of PIA is able to exert a sufficiently strong constraint in MI WDC Market 2 to change the competitive conditions in this market. In any event, where PI products are used by SPs to install networks, these are already accounted for as part of the SPs' networks in the analysis so are included in the WDC markets.

5.79 As indicated in paragraph 5.75, ComReg will continue to monitor the market.

Conclusion on Existing Competition in the Market 2 MI WDC Market

5.80 Based on the assessment of the market shares and the network presence of ANs, vertical integration and barriers to entry, ComReg's position is that, absent regulation in MI WDC Market 2, it is unlikely that Eircom would be sufficiently constrained by existing competition such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers.

5.5.2. Potential Competition in the Market 2 MI WDC Market

5.81 ComReg now assesses the effectiveness of any constraints likely to be posed by potential competition in MI WDC Market 2, having regard to factors such as barriers to entry and expansion, control of infrastructure not easily duplicated, as well as considering the overall strength of potential competitors.

5.82 In paragraph 5.73, ComReg has already identified that there are barriers to expansion in MI WDC Market 2 largely due to low density of demand and the distance ANs are required to dig to reach the premises. These barriers are equally likely to deter SPs from expanding their networks in this market.

5.83 With respect to barriers to entry, ComReg considers that there are a number of factors that may act as barriers to this type of entry occurring in MI WDC Market 2:

- (a) There are substantial sunk costs that would be incurred when entering MI WDC Market 2;
- (b) Lower density of demand makes it more difficult for ANs to reach economies scale or density compared to MI WDC Market 1.
- (c) Eircom, on the other hand, operates a largely ubiquitous network and has a large-scale customer base and diversified product range. Therefore, Eircom is likely to benefit from significant economies of scale, scope and density; and

- (d) Eircom benefits from being vertically integrated as it is also a significant provider of retail MI LLs. A potential competitor would need to enter at both levels of the supply chain in order to impose a sufficient constraint on Eircom.

- 5.84 Given the presence of these barriers, ComReg considers that there is unlikely to be sufficient new network entry in MI WDC Market 2 during the period of this market review such that it would prevent Eircom from behaving, to an appreciable extent, independently of competitors, customers and consumers. ComReg notes there has been one new entrant since the 2020 Decision, NBI, which can potentially strengthen infrastructure-based competition. However, the entry of the NBI into the WDC market is as a result of State intervention rather than as a result of a commercial operator that has overcome barriers of entry. In addition, as explained in section 4.4.7, ComReg has already taken a forward-looking view in its geographic assessment and has assumed that NBI's network rollout will be complete within the time period of this market review (noting also that NBI can only serve premises in the IA and that only a subset of these are business premises⁴⁸³). As such the potential impact of NBI's rollout has already been accounted for in the assessment of existing competition.
- 5.85 Similarly, SIRO has also made significant progress in the roll-out of its network since the 2020 Decision. As it continues its roll-out, SIRO can potentially strengthen independent infrastructure-based competition within the period of this market review. However, given that SIRO's market share in MI WDC Market 2 is only [3< [REDACTED] 3<]⁴⁸⁴, its network still has limited coverage (compared to that of Eircom) in this market, indicating that its rollout is mainly focused in higher demand areas.
- 5.86 ComReg has also assessed potential entry based on access to upstream inputs (such as duct and poles). SPs can and have been using upstream inputs (such as duct and poles) to build or extend their networks on a very limited scale (with the exception of NBI).
- 5.87 ComReg recognises the potential for increased take-up of Eircom's regulated PIA products such as ducts, poles and dark fibre to build or extend networks. However, as discussed above in 4.100 to 4.120 the PIA products are at their early stage of the deployment and the take-up is still relatively low, particularly in the context of its use for connecting premises with LLs. ComReg believes that there is unlikely to be sufficient new entry using

⁴⁸³ With the exception noted in footnote 343.

⁴⁸⁴ Between 0% and 10%.

upstream inputs that would effectively constrain Eircom's position in MI WDC Market 2. Nonetheless, ComReg will continue to monitor the market.

Conclusion on Potential Competition in MI WDC Market 2

5.88 On the basis of the foregoing, ComReg considers it unlikely that ANs would enter or significantly expand their networks in MI WDC Market 2 over the period of this review to sufficiently constrain Eircom.

5.5.3. CBP Assessment in WDC Market 2

5.89 Below, ComReg examines where sufficient CBP exists in MI WDC Market 2 to impose a sufficiently effective competitive constraint on Eircom. ComReg adopts the approach set out in section 5.4.2 and examines if there are alternative sources of supply available and if the customers' purchase volume is material.

Credible Alternative Sources of Supply

5.90 As noted above, Eircom's market share in this market is very high, with this likely a result of its greater network presence relative to that of ANs. Access Seekers have limited switching options, due to the limited network reach of ANs. In this respect, ComReg notes that despite both BT and Enet being able to self-supply MI WDC products, they nonetheless buy a significant portion of their requirements from Eircom, thereby suggesting their own network reach is insufficient to fulfil their downstream demand in MI WDC Market 2.

5.91 Access Seekers are therefore highly reliant on Eircom's MI WDC services in MI WDC Market 2, and, in the absence of regulation, are unlikely to be in a position to credibly threaten to switch to alternative sources of supply.

5.92 Eircom claimed that CBP should be analysed at the retail level, which is dominated by multi-site bids, together with the consequent impact at the wholesale level at individual WPZs in MI WDC Market 2. This may be significant where, for example, buyers have access to ANs at most of the sites in the bid, leaving only a small number of sites in MI WDC Market 2.

5.93 ComReg does not consider that CBP should be analysed at the retail level. Even if the retail customers only have a small number of sites in MI WDC Market 2, they or their WDC suppliers still face limited options outside of Eircom in this market and are unlikely to make a credible threat to switch. It is also the case that retail customers would not likely know whether or not their supplier is using wholesale services provided by other operators.

Purchase volume of customers

5.94 The strength of CBP can be influenced by the relative size of the buyer, with this being measured according to the buyer's share of MI WDC products

purchased from the SP (in this case, Eircom) relative to total purchases of MI WDC products from the same SP. The degree to which high shares of MI WDC purchases are concentrated amongst one or more buyers could also be relevant.

- 5.95 Eircom was of the view that that the CBP acknowledged by ComReg in MI WDC Market 1 by virtue of the scale of the customers purchases should be extended into MI WDC Market 2. Eircom claimed that ComReg's rationale for dismissing this extension is unclear.
- 5.96 In MI WDC Market 2, Eircom has a few large customers such as BT, Enet and Vodafone. However, given their dependence on Eircom for wholesale inputs, they are unable to exert sufficient buyer power vis-à-vis Eircom. In contrast, Eircom is not heavily reliant on alternative operators to generate revenue. It sells a significant volume of WDC input to its own retail business. As a vertically integrated operator, Eircom may have an incentive to favour its own retail business. As such, Eircom's customers are unlikely to be able to make a credible threat to switch away a significant volume of purchases to constrain Eircom's market power.

Conclusion on CBP Assessment in MI WDC Market 2

- 5.97 Having regard to the analysis in paragraphs 5.54 to 5.57 above, ComReg's view is that it is unlikely that Eircom would be sufficiently constrained by CBP to counterbalance its SMP.

5.5.4. Overall Conclusion on SMP Assessment on MI WDC Market 2

- 5.98 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 49 of the ECC Regulations, that a given market identified in accordance with Regulation 46 of the ECC Regulations is not effectively competitive, ComReg is obliged to designate an undertaking under Regulation 49(8) of the ECC Regulations as having significant market power.
- 5.99 Given the lack of existing or potential competition, as well as the absence of sufficiently effective CBP in MI WDC Market 2, ComReg is of the view that Eircom has SMP in this market.

5.6 SMP Assessment in MI WDC Market 3

- 5.100 In this Section, ComReg presents its position on the assessment of competition and SMP in MI WDC Market 3.
- 5.101 As defined in section 4.4.7, MI WDC Market 3 is comprised of WPZs that contains no CPs and are touched by at least two ANs (including NBI), or

WPZs that pass the Island Test. There are no CPs in these WPZs and hence no demand in this market, ComReg is unable to assess the competitive characteristics of this market based on demand-side considerations. ComReg is also unable to gauge whether any future demand would be near or far (more than 50 metres) from ANs as no assumption can be made regarding the specific location of any such demand. However, from the supply side, there are already at least two ANs present in some part of this market. In the event that demand does arise in this market, these⁴⁸⁵ should be in a position to compete for such demand, placing an effective constraint on Eircom.

- 5.102 Based on the above, ComReg does not consider that any operator holds SMP in this market.
- 5.103 BT agreed with ComReg's SMP assessment in this market. Vodafone's views on the SMP assessment in Zone A are already discussed in section 5.6. SIRO and ALTO considered that ComReg should perform a more granular analysis to identify inter-zone variations. This is already discussed in paragraphs 5.4 and 5.6.

5.7 SMP Assessment in MI WDC Market 4

- 5.104 In this Section, ComReg presents its views on the assessment of competition and SMP in MI WDC Market 4.
- 5.105 BT and Vodafone agreed with ComReg's SMP assessment in this market. SIRO and ALTO's were of the view that ComReg should address geographic variations within Zone B to refine regulatory interventions. This is already discussed in paragraphs 5.5 and 5.6.

5.7.1. Existing Competition in MI WDC Market 4

- 5.106 As defined in section 4.4.7, MI WDC Market 4 contains WPZs that have no CPs and are touched by only one or no ANs. As such there is no effective demand and insufficient supply in this area. If demand was to arise in this market in the future, Eircom would be in a strong position to serve the customers as it has a ubiquitous network. There would be insufficient ANs to impose a competitive constraint on Eircom. This is in contrast to MI WDC Market 3, where there are at least two ANs already present. Therefore, the lack of ANs indicates a position of SMP by Eircom.

⁴⁸⁵These 2 ANs include NBI's network, which is mapped as outlined in subsection 4.99 above.

5.7.2. Potential Competition in MI WDC Market 4

5.107 ComReg considers barriers to entry and expansion have not been overcome, as evidenced by the lack of ANs present in this market. As there is no existing demand in this market, ANs would have little incentive to build or extend their networks. This means there is unlikely to be entry or expansion in the market to constrain Eircom's market power.

5.7.3. CBP Assessment in MI WDC Market 4

5.108 Due to the absence of CPs, ComReg is unable to definitively assess CBP in this market. However, given that this market is defined based on the absence of sufficient ANs, in the event that demand was to arise, customers do not have sufficient alternative sources of supply to make a credible threat to switch. As such ComReg does not consider that there is sufficient CBP to counter Eircom's market power.

5.109 In its Submission, Eircom claimed that there had been very substantial changes in MI WDC Market 4 since the 2020 Decision, noting that of the 2,500 WPZs included in MI WDC Market 4 in 2020, 550 (22%) were now in Markets 1 or 3, and 900 (37%) were now in Market 2 in the 2024 Consultation. Eircom was of the view that the continued rollout of the alternative networks, enhanced by the use of PIA, will ensure that these trends continue throughout the forthcoming regulatory period. Despite this, ComReg has failed to take this into account in either the methodology that it has deployed or the conclusions that it has reached.

5.110 ComReg acknowledges the changes to the boundaries of MI WDC Market 4 since the 2020 Decision. ComReg considers that it has adequately captured these changes in its market definition and competition analysis. As the market continues to develop, ComReg expects that MI WDC Market 4 will continue to contract. With respect to the impact of PIA, for the reasons set out earlier in paragraph 5.78, ComReg does not consider PIA will sufficiently impact in Market 4 over the market review period.

5.7.4. Overall Conclusions on Competition in the Market 4 MI WDC Market

5.111 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 49 of the ECC Regulations, that a given market identified in accordance with Regulation 46 of the ECC Regulations is not effectively competitive, ComReg is obliged to designate an undertaking under Regulation 49(8) of the ECC Regulations as having significant market power.

5.112 On the basis of the above, it is ComReg's view that Eircom has SMP in MI WDC Market 4.

5.8 Designation of Eircom with Significant Market Power in MI WDC Market 2 and MI WDC Market 4

5.8.1. Designation of Eircom with Significant Market Power in MI WDC Market 2

5.113 In Section 5.5 above, ComReg has considered a wide range of factors to identify whether any Undertaking enjoys a position of SMP in MI WDC Market 2. These factors include:

- (a) Existing competition in WDC Market 2;
- (b) Potential competition; and
- (c) CBP.

5.114 ComReg's position is that MI WDC Market 2 is not likely to be effectively competitive over the period of this market review and that Eircom would not be sufficiently constrained by the above factors such that it would prevent it from behaving, to an appreciable extent, independently of competitors, customers and consumers.

5.115 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 49 of the ECC Regulations, that a given market identified in accordance with Regulation 46 of the ECC Regulations is not effectively competitive, ComReg is obliged to designate an undertaking under Regulation 49(8) of the ECC Regulations as having significant market power.

5.116 Having regard to the conclusions of the above market analysis, ComReg has decided to designate Eircom with SMP in MI WDC Market 2.

5.8.2. Designation of Eircom with Significant Market Power in MI WDC Market 4

5.117 In Section 5.7 above, ComReg has considered a wide range of factors to identify whether any Undertaking enjoys a position of SMP in the Area 4 MI WDC Market. These factors include:

- (a) Existing competition in MI WDC Market 4;
- (b) Potential competition; and
- (c) CBP.

- 5.118 ComReg's position is that MI WDC Market 4 is not likely to be effectively competitive over the period of this market review and that Eircom would not be sufficiently constrained by the above factors such that it would prevent it from behaving to an appreciable extent independently of competitors, customers and consumers.
- 5.119 Where ComReg determines, as a result of a market analysis carried out by it in accordance with Regulation 49 of the ECC Regulations, that a given market identified in accordance with Regulation 46 of the ECC Regulations is not effectively competitive, ComReg is obliged to designate an undertaking under Regulation 49(8) of the ECC Regulations as having significant market power.
- 5.120 Having regard to the conclusions of the above market analysis, ComReg has decided to designate Eircom with SMP in MI WDC Market 4.
- 5.121 As referenced throughout Section 6 below, following the SMP assessment, for the purpose of considering competition problems and the imposition of remedies, as appropriate,
- (a) MI WDC Market 1 and MI WDC Market 3 are collectively referred to in this Decision as the **'Zone A MI WDC Markets'**; and
 - (b) MI WDC Market 2 and MI WDC Market 4 are collectively referred to in this Decision as the **'Zone B MI WDC Markets'**.

6. Competition Problems in the Zone B MI WDC Markets and Impacts on Competition and Consumers

6.1 Overview

- 6.1 In Section 5 of this Decision, ComReg sets out its finding, in accordance with Regulation 49 of the ECC Regulations, that the Zone B MI WDC Markets would not be effectively competitive in the absence of regulation and accordingly, that Eircom should be designated as having SMP in these markets.
- 6.2 In this Section, ComReg proceeds to identify those competition problems which, absent regulation⁴⁸⁶, arise in the Zone B MI WDC Markets (and related markets). ComReg is of the view that Eircom is likely to have the ability and incentive to engage in anti-competitive behaviour absent regulation in the Zone B MI WDC Markets due to its SMP and its position as a vertically-integrated supplier competing with its wholesale customers in downstream markets. In their Submissions, all Respondents, with the exception of Eircom, agreed.
- 6.3 SIRO and ALTO also indicated that additional considerations should be taken account of, such as intra-zone variations in competition and specific challenges whereby SMEs are more sensitive to price increases and service quality issues. As discussed in 4.4, ComReg has conducted a granular geographic assessment to identify four markets. ComReg is satisfied that its analysis is sufficiently robust to differentiate competitive conditions between different areas at sufficiently localised level. The challenges outlined by SIRO are addressed in the competition issues outlined in this Section and more specifically in the remedies outlined in Section 7.

⁴⁸⁶ WDC products have been provided by Eircom pursuant to regulatory obligations imposed on it under the 2020 Decision. The assessment carried out in this Section of the Consultation is carried out in the context of what competition problems would be likely, assuming that such SMP obligations were not in place.

6.2 Main Types of Competition Problems

- 6.4 In determining what form of *ex ante* regulatory remedies are justified in the Zone B MI WDC Markets, ComReg has carried out an assessment of potential competition problems that are likely to arise, assuming regulation is absent and taking account of the structure and characteristics of the Zone B MI WDC Markets.
- 6.5 In the absence of regulation in the Zone B MI WDC Markets, ComReg considers that Eircom would have the ability and incentive to influence competition through effects on prices, innovation, output and the variety or quality of goods and services provided. In general, there are a number of competition problems that may arise when an SMP operator employs:
- (a) Exclusionary practices, which would exclude or delay investment and market entry in the Zone B MI WDC Markets (and ultimately downstream markets);
 - (b) Exploitative practices, where an SP with SMP engages in exploitative behaviours, such as excessive pricing, to the detriment of both competition and end users; and
 - (c) Leveraging, where an SP with SMP Leverages its market power into adjacent vertically or horizontally related markets with a view to foreclosing or weakening competition.
- 6.6 These competition problems are discussed in detail below.

6.2.1. Exclusionary Practices

- 6.7 ComReg's view is that absent regulation Eircom has the ability and incentive to engage in exclusionary behaviour in Zone B MI WDC Markets to foreclose competition at the retail level. These practices include but are not limited to:
- (a) refusing to supply access, applying unreasonable or discriminatory terms and conditions of access, and/or creating or exploiting information asymmetries;
 - (b) engaging in exclusive contracts with downstream customers and exclusionary actions aimed generally at raising customer or consumer switching costs thereby impacting on potential competition; and
 - (c) raising costs of those competitors that rely on Eircom's MI WDC inputs in providing downstream retail and/or wholesale services.
- 6.8 SPs that rely on Eircom's inputs to supply in the downstream market will be foreclosed from the market if they could not get access to Eircom's wholesale input, or they may be put at a competitive disadvantage if they face higher costs than the incumbent's own retail arm. This may lead to lessened

competition in the downstream market which may lead to higher prices or poor quality services for consumers.

- 6.9 In addition, a SMP SP may also have the ability and incentive to set very low prices to foreclose competition at the wholesale level. For example, in certain parts of the Zone B MI WDC Markets where there is prospect of investment and where Eircom faces competition from ANs, Eircom may have the incentive to charge lower prices, with the intention of deterring market entry or forcing ANs out of the market. This would allow Eircom to further increase its market power and to raise its prices later. While consumers may benefit in the short run from lower prices, consumer welfare is reduced in the long run due to the elimination of competition and consumer choice in the market. As a result, the entry/expansion barriers in the Zone B MI WDC market and related markets are reinforced.

6.2.2. Exploitative Practices

Excessive Pricing

- 6.10 Excessive pricing occurs where the price which a firm with SMP charges for a product or service is not closely related to its value to the end user and/or the cost of producing or providing the relevant service.⁴⁸⁷ Concerns about excessive pricing arise where, absent regulation, price levels would likely be persistently high with no effective pressure (e.g. from new entry or innovation) to bring them down to competitive levels over the duration of the review period.
- 6.11 The Zone B MI WDC Markets are characterised by a high and stable incumbent share, a lack of existing and potential effective competition as well as the absence of sufficient CBP. Thus, there is likely to be insufficient competitive pressure to constrain Eircom from behaving to an appreciable extent, independently of its customers, competitors or consumers, including engaging in excessive pricing in the Zone B MI WDC Markets.⁴⁸⁸
- 6.12 For example, by charging excessive prices, Eircom could raise input costs for those SPs that purchase Eircom's MI WDC products/services. These above cost wholesale prices may be passed on by SPs to the downstream markets, ultimately leading to the detriment of retail customers.

⁴⁸⁷ Case C 27/76 United Brands v. Commission, [1978] ECR 207, [1978] 1 CMLR 429, paragraph 250. In United Brands the Court of Justice of the European Union held that: "...charging a price which is excessive because it has no reasonable relation to the economic value of the product supplied would be... an abuse".

⁴⁸⁸ Eircom's wholesale prices in the Zone B MI WDC Markets are currently regulated under the 2020 Decision.

- 6.13 Excessive prices could also distort competition in the downstream market. SPs' customers could, in response to price increases, switch to Eircom. This could potentially undermine SPs' revenues and cause them to contract within or exit from the relevant market. Therefore, Eircom's excessive pricing of MI WDC inputs could lead to the exclusion of competitors from the downstream retail and/ wholesale markets (noting multi-site nature of bids⁴⁸⁹), and ultimately hinder effective competition in these markets.
- 6.14 Excessive prices can also pose a deterrent to entry in downstream markets and distort investment incentives as the higher charges raise costs for SPs that purchase wholesale input from Eircom and thereby constrain their ability and incentive to invest in their own additional infrastructure.

6.2.3. Leveraging

- 6.15 Where a vertically integrated Undertaking SP has SMP in one market that has close links with other adjacent markets either at a similar (e.g. horizontal) or different (e.g. vertical) level in the production or distribution chain, the SMP Undertaking may attempt to transfer (leverage) its market power to such vertically and/or horizontally related markets. This could enable the SMP Undertaking to strengthen its position in those related markets and/or potentially reinforce its existing market power in the SMP market.
- 6.16 Given the close relationship between the Zone B MI WDC Markets and other horizontally related markets (e.g. Zone A MI WDC⁴⁹⁰) and vertically related markets (e.g. WLA and retail LL market(s)), there is potential for leveraging to occur, absent regulation. Leveraging may raise rivals' costs, introduce barriers to effective access to MI WDC products, services and facilities in a timely manner, reduce competitive pressures on related wholesale/retail services and enable the SMP Undertaking to extract additional revenues from its competitors, customers and ultimately consumers.

Horizontal Leveraging

- 6.17 Horizontal leveraging arises where an Undertaking with market power in one market is able to use it to exert undue influence into other markets that are at a similar level in the production or distribution chain.

⁴⁸⁹ Multi-site customers refer to organisations with more than one premises such as retail multiples, banks etc. and these customers typically tender for LL services for the multiple sites in one contract.

⁴⁹⁰ For example, an Access Seeker may purchase MI WDC services in both the Zone A MI WDC Markets and the Zone B MI WDC Markets from the same supplier. Absent a wholesale supplier having the ability to serve these needs, its position in both these markets may be undermined.

- 6.18 Absent regulation in the Zone B MI WDC Markets, Eircom could be incentivised to cross-subsidise retail and/or wholesale services offered in the Zone A MI WDC Markets (e.g. lower prices). This would allow Eircom to gain retail/wholesale market share in the Zone A MI WDC Markets by leveraging its position into the Zone B MI WDC Markets where it faces less infrastructure-based competition from other SPs.
- 6.19 Also where SPs who compete in the Zone B MI WDC Markets require MI WDC services for network extension, such as for backhaul, Eircom is likely to have the ability and incentive to deny access (including constructive denial) to such services. This can be done by leveraging its existing position into the Zone B MI WDC Markets where it faces less infrastructure-based competition from other SPs, thus potentially reducing further the competition in the Zone B MI WDC Markets for related services, such as WDC to premises.
- 6.20 ComReg considers that, absent regulation, these types of issues could arise in the Zone B MI WDC Markets as Eircom has the incentive to do so, given that it is competing in downstream markets within which Access Seekers also compete or may seek to compete.

Vertical Leveraging

- 6.21 Vertical leveraging arises where a vertically integrated Undertaking is able to leverage its SMP position at one level in the production or distribution chain into downstream markets in which it is also active.
- 6.22 Absent regulation, vertical leveraging may occur given that Eircom has the incentive, as a vertically-integrated Undertaking, to use its market power in Zone B MI WDC Markets to ultimately affect the competitive conditions in downstream retail markets. This can be achieved through its ability to control the key network inputs used by Access Seekers, which compete against Eircom in these downstream markets. This would serve to enhance its market power in these downstream markets.

Price Based Vertical Leveraging Behaviour

- 6.23 Eircom could attempt to foreclose competition in a downstream market by offering WDC products at a price that would not allow Access Seeker to compete in the downstream retail market. This can be achieved by Eircom charging a higher price (above competitive pricing) to downstream competitors than it implicitly charges to its own retail arm.
- 6.24 This incentive is heightened given the nature of the market in that most of retail LLs are purchased by multi-site customers which often tend to select one retail SP to provide LL services to all of their premises. ComReg

considers that the nature of the demand for retail MI LL services, further enhances Eircom's ability and incentive to leverage its market power in the Zone B MI WDC Markets into the retail MI LL market as Eircom has a strong competitive advantage in terms of its network reach to multi-site retail LL customers' premises when compared to the reach of other SPs' networks. ComReg considers that Eircom is likely to have the ability and incentive to foreclose access to Zone B MI WDC services and leverage its market power into the retail MI LLs markets.

Non-Price Based Vertical Leveraging Behaviour

- 6.25 Non-price based vertical leveraging could be undertaken by Eircom in a number of ways absent regulation in the Zone B MI WDC Markets. Eircom could engage in exclusionary practices such as an outright refusal or constructive refusal to supply, which is outlined in further detail in following section; while noting that refusal to supply is particularly relevant when the SMP operator is vertically integrated which facilitates the SMP operator to gain strategic advantage over rivals in the downstream markets.
- 6.26 Other examples of non-price vertical leveraging, which can be closely related to each other, can amount to constructive rather than outright denial of access, including
- (a) **Delaying tactics:** this relates to issues such as inefficient order management systems or protracted negotiations with respect to the supply of existing or new MI WDC products, services or associated facilities to downstream competitors. Eircom, as the SMP operator, has the ability and incentive to engage in a 'first mover advantage' by offering a retail offering before an equivalent wholesale product is made available to potential Access Seekers or Eircom could offer the wholesale product to a preferred Access Seeker, for example where the preferred Access Seeker is purchasing other services from Eircom, in advance of offering to other Access Seekers. This first mover advantage has the potential to cause delay and raise the Access Seekers' costs relative to the SMP operator and restrict the Access Seekers potential future retail sales.
 - (b) **Quality discrimination:** providing competitors with MI WDC products at a lower quality of service (or inferior information) to that which Eircom provides to its own downstream arm (or to certain other competitors). For example, Eircom could give priority to its own customers when repairing faults or upgrading network assets.

- (c) **Lack of Transparency and Information asymmetries:** where competitors are dependent on Eircom to provide MI WDC and need certain (quality or technical) information in order to effectively compete in the downstream retail and/or wholesale market, a lack of transparency or asymmetry in the provision of relevant information can impede competition. For example, in terms of product offerings, absent regulation, Eircom, as the Undertaking designated with SMP in the Zone B MI WDC Markets, could make MI WDC inputs available to its own retail arm or to a preferred Access Seeker, which other Access Seekers are not aware of and thus not able to offer related retail products. In terms of product implementation, if Access Seekers are not aware of all the features of the wholesale products which are available to Eircom internally, they will not know that they can request these features themselves, and ultimately may find themselves offering an inferior product at the retail level relative to Eircom or the preferred Access Seeker.
- (d) **Disproportionate entry/use criteria:** Eircom may set unreasonable terms and conditions for supply/use of access to MI WDC products (including associated facilities). An example of this behaviour would include an undue requirement to use a particular (more expensive) technology beyond the extent which might be economically or technically justified.
- (e) **Unwarranted withdrawal of access already granted:** Eircom could seek to unreasonably withdraw access to facilities already granted.
- (f) **Unreasonable product bundling/tying:** this could include the bundling/tying of MI WDC products in such a way that it damages the ability of Access Seekers to compete downstream. For example, if Eircom required Access Seekers using MI WDC services to also purchase additional and unnecessary services that raises Access Seekers' costs of providing downstream retail services, this could damage their ability to compete effectively.

Information Asymmetries

6.27 Information asymmetries could include situations where Access Seekers require metrics on order processing, service delivery and fault repair to view the overall performance of Eircom's MI WDC products from a provisioning and service assurance perspective. Failure by Eircom to provide such data to its wholesale customers would likely impair their ability to compare the performance of Eircom's supply of wholesale products. Uncertainty for Access Seekers (and their retail and/or wholesale customers) as to the performance and quality of their purchased MI WDC inputs relative to the services and information made available internally to Eircom's retail arm

could potentially discourage participation in markets dependent upon Eircom's wholesale products (for example, through a lack of visibility of average line-fault repair time between Eircom retail and wholesale customer faults).

- 6.28 Information asymmetries may also apply to future planning by the SMP Undertaking. For example, changes by Eircom to its network topography such as its location of points of interconnection may have significant implications for Access Seekers using MI WDC products. Insufficient notice of network and process changes relevant to the delivery of services in the retail market could significantly impede the ability of MI WDC Access Seekers to launch corresponding retail products and to compete with Eircom on an equivalent basis in downstream markets. A lack of information and the associated uncertainty may discourage Access Seekers from investing in or expanding their network footprint (to avail of MI WDC products)⁴⁹¹ or downstream footprint (since there may be a perceived risk of stranded assets).

6.3 Conclusion on Competition problems in the Zone B MI WDC Markets

- 6.29 Having regard to the analysis set out in paragraphs 6.2 to 6.27 above, absent regulation, Eircom, as the SMP Undertaking in the Zone B MI WDC Markets has the ability and incentive to engage in actions which could negatively impact on competition and customers in related retail and/or wholesale markets, as well as having the potential to reinforce its market power in the Zone B MI WDC Markets over time.
- 6.30 ComReg has presented examples of such potential behaviour and, therefore, considers that it is justified and proportionate to impose obligations on Eircom in the Zone B MI WDC Markets relating to access, transparency, non-discrimination, price control and cost accounting and accounting separation,, in order to ensure that Access Seekers are in the position to compete with Eircom in the Zone B MI WDC Markets and in markets downstream from the Zone B MI WDC Markets. The details of these obligations are discussed in Section 7 below.

⁴⁹¹ Access Seekers' use of MI WDC products depends on the extent of their backhaul network. Investing in backhaul depends on the location of Eircom's Points of Interconnection.

7. Remedies in the Zone B MI WDC Markets

7.1 Introduction

- 7.1 Under Regulation 50(1) of the ECC Regulations, where an undertaking is designated as having SMP in a relevant market as a result of a market analysis carried out in accordance with Regulation 49 of the ECC Regulations, ComReg is required to impose at least one of the obligations set out in Regulations 51-56, 58 and 62 of the ECC Regulations.
- 7.2 According to Regulation 50(5) of the ECC Regulations, the obligation or obligations imposed must:
- (a) be based on the nature of the problem identified;
 - (b) be proportionate and justified in light of the objectives laid down in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 4 of the ECC Regulations;⁴⁹² and
 - (c) only be imposed following public consultation.
- 7.3 As explained in detail below, in light of the competition problems arising or likely to arise in the Zone B MI WDC Markets and related markets, ComReg maintains the full set of remedies (including obligations of access, transparency, non-discrimination, price control and cost accounting and accounting separation) and they are considered in turn below.

7.2 Access Remedies

- 7.4 The 2020 Decision required Eircom to meet reasonable requests for access for the provision of Access to MI Wholesale High Quality Access ('**WHQA**') products, services, facilities and Associated Facilities including in particular access to NGN Ethernet and Wavelength Division Multiplexing ('**WDM**') services, supported by requirements to provide a range of interconnection

⁴⁹² Pursuant to Section 12 of the Communications Regulation Act 2002 (as amended), ComReg's relevant objectives in relation to the provision of electronic communications networks and services are: (i) to promote competition; (ii) to contribute to the development of the internal market; and (iii) to promote the interests of users within the Community. Regulation 4 of the ECC Regulations further specifies ComReg's objectives and sets out a number of obligations in relation to the pursuit of its objectives.

and co-location services. Eircom was also required to comply with additional requirements in order to ensure fairness, reasonableness and timeliness of access, including an obligation to provide Service Level Agreements ('SLAs') and requirements regarding timeliness of product development.

- 7.5 As set out in further detail below, having regard to the statutory requirements and criteria set out in Regulation 55 of the ECC Regulations, taking into account the obligations on Eircom to provide access to its physical infrastructure under Decision D03/24, this Decision maintains – and does not expand – Eircom's obligation to meet reasonable requests for access, which remains limited to active MI WDC products.
- 7.6 This means that Eircom's obligation of access does not encompass access to Dark Fibre, even though Dark Fibre has been included in the WDC Product Market.

7.2.1. Statutory requirements and criteria

- 7.7 Regulation 55(1) of the ECC Regulations provides that ComReg may impose on an operator, obligations to meet reasonable requests for access to, and use of, specific network elements and associated facilities where ComReg considers that the denial of such access, or the imposition on operators of unreasonable terms and conditions having a similar effect, would:
- (a) hinder the emergence of a sustainable competitive retail market;
 - (b) not be in the interests of end-users; or
 - (c) otherwise hinder the objectives set out in Section 12 of the Communications Regulation Act 2002 (as amended) and Regulation 4 of the ECC Regulations.
- 7.8 In determining whether access obligations imposed under Regulation 55 are appropriate and proportionate, ComReg must also have regard to the following:
- (a) the technical and economic viability of using or installing competing facilities, in light of the rate of market development, taking into account the nature and type of interconnection and access involved;
 - (b) the feasibility of providing the access proposed, in relation to the capacity available;
 - (c) the initial investment by the facility owner, bearing in mind the risks involved in making the investment;
 - (d) the need to safeguard competition in the long-term;
 - (e) where appropriate, any relevant intellectual property rights;

- (f) the provision of pan-European services;
- (g) the expected technological evolution affecting network design and management;
- (h) The need to ensure technology neutrality enabling the parties to design and manage their own networks; and
- (i) In respect of the need to safeguard competition in the long term, the requirement to give attention not only to economically efficient infrastructure-based competition but also to innovative business models that support sustainable competition, such as those based on co-investment in networks.

7.9 According to Regulation 55(6) of the ECC Regulations, when imposing obligations of access, ComReg may lay down technical or operational conditions to be met by the provider or the beneficiary of the access where necessary to ensure normal operation of the network. Conditions covering fairness, reasonableness and timeliness may also be attached to obligations of access under Regulation 55(3) of the ECC Regulations.

7.2.2. Obligation to meet reasonable requests for access to MI WDC

7.10 ComReg is of the view that an obligation that Eircom meets reasonable requests for access is necessary given the ubiquity of Eircom's network in the Zone B Markets, which is unparalleled by any other, such that denial of access, or the imposition on operators of unreasonable terms and conditions having a similar effect, would hinder the emergence of a sustainable competitive retail market and would not be in the interests of end-users. In particular, leased lines providers on the retail market would be at a serious competitive disadvantage if they could not obtain from Eircom access to its network in order to serve customers in areas where no other network is present, or there is no wholesale offering; this disadvantage is heightened by the significance of multi-site demand in the retail market and the requirement for retail leased line providers to have access to a ubiquitous wholesale offer.

7.11 In accordance with Regulation 54(1) of the ECC Regulations, ComReg has considered whether Eircom's obligation to provide access to its physical infrastructure under ComReg Decision D03/24 would be sufficient to address the requirement for an obligation of access in the Zone B Markets. ComReg does not believe that this is the case and sets out below the reasons for maintaining Eircom's obligation to meet reasonable requests for access to active dedicated capacity by reference to the statutory criteria:

7.12 First, using or installing competing facilities to provide MI WDC services throughout the Zone B MI WDC Markets is not likely to be economically

feasible within the period of this review. Given that Eircom's network has a reach that is unparalleled in the Zone B markets, there will not always be other facilities readily available for use to meet requirements for dedicated capacity and there are likely many instances where using Eircom's poles and ducts network will not be economically feasible, in particular in areas where demand for dedicated capacity is limited so that economies of scale and scope will not be achievable, or will not be practical and allow an operator to build in time a wholesale offer suitable to meet the requirements of a retail operator responding to multi-site bidding requests throughout the State. In this case, neither access to Eircom's ducts and poles nor access to dark fibre would be sufficient to allow an access seeker to compete in the retail market. As such, continued access to active products on Eircom's network remains necessary to safeguard competition. As dark fibre access is unlikely to meet the requirements of a retail operator to serve end-users needs for dedicated capacity at Zone B MI WDC market sites, it is neither necessary nor proportionate to require Eircom to provide access to dark fibre to other operators. Furthermore, where access to passive elements would meet the requirements of an operator, then Decision D03/24 means that access to ducts and poles will be available from Eircom.

- 7.13 In its Submission, BT requested ComReg to introduce an inter-exchange dark fibre remedy,⁴⁹³ similar to a remedy imposed by Ofcom, to assist operators to compete in Eircom only exchanges.⁴⁹⁴ BT stated that such a remedy would avoid unnecessary equipment costs for entrant operators.⁴⁹⁵
- 7.14 ComReg notes that, under the 2024 PIA Decision, an Access Seeker can request access to Eircom's Physical Infrastructure ('PI') to install its fibre to connect Non-Trunk exchanges and a Trunk Node or an alternative network of their choice. Where access to PIA is not available, Eircom is obliged to provide access to dark fibre where dark fibre is reasonably available. Alternatively, an Access Seeker can purchase regulated active WDC products from Non-Trunk exchanges to one of two designated (regional) Trunk Nodes as nominated by the Access Seeker.
- 7.15 ComReg notes that in the period January 2020 to June 2025, Access Seekers rolled out their network resulting in the number of Trunk Nodes increasing from 93 to 142. As of June 2025, 29 of the 49 Non-Trunk Nodes have one alternative network in close proximity (within 100m) with 20 Non-Trunk Nodes classified as 'Eircom only' exchanges. Based on the evidence

⁴⁹³ Eircom exchange to Eircom exchange connection facility.

⁴⁹⁴ BT Non-confidential Submission, at p.4, p.12 and p.15.

⁴⁹⁵ BT Non-confidential Submission, at p.27.

that Access Seekers are expanding their network rollout, resulting in the level of Trunk Nodes increasing by over 50% since the last market review, ComReg's position is that it is not appropriate to introduce an inter-exchange dark fibre remedy at this time. ComReg will continue to closely monitor developments in the MI WDC Market over the market review period.

- 7.16 ComReg does not believe that any issue arises as regards the requirement that Eircom continues to provide dedicated capacity by way of wholesale active products (as regards the feasibility of providing access in relation to capacity available). ComReg is not aware that there would be any material capacity constraints that would give rise to Eircom facing difficulties in meeting the access obligations in the future. In terms of any expected technological evolution affecting network design and management within the period of this review, ComReg believes that Eircom should have the opportunity to offer, and the obligation to meet reasonable requests for access, to products making available dedicated capacity including using technologies other than those currently used by Eircom. This is entirely consistent with the need to ensure technology neutrality enabling the parties to design and manage their networks.
- 7.17 Any risks taken by Eircom (or its predecessors') in respect of the initial investment in Eircom's network supporting the provision of wholesale dedicated capacity products do not constitute a reason not to impose an obligation of access. ComReg's approach to imposing access remedies is based on principles that, inter alia, allow a reasonable rate of return on adequate capital employed, taking into account the risks involved. When proposing price control remedies ComReg is mindful of facilitating the development of effective and sustainable competition to the benefit of end-users without compromising efficient entry and investment decisions of undertakings over time. ComReg is also mindful of the role of regulatory transparency and consistency in contributing to a more predictable environment conducive to long-run investment decisions being made. Finally, intellectual property rights are not a concern in the context of the provision of MI WDC products, services and facilities and ComReg is satisfied that obligations of access to MI WDC, in the Zone B MI WDC Markets, can facilitate the provision of pan-European services on the basis that ComReg's approach is consistent with the policies of the European Commission and other NRAs. Consistent regulation of WDC across the EU will help to support a seamless provision of pan-European services by allowing Service Providers ('SPs') in other Member States to provide ECS in Ireland, including by using Eircom's MI WDC products, services and facilities potentially combined with other wholesale services, to compete within Ireland.

- 7.18 Accordingly, it is necessary, proportionate and justified to impose on Eircom an obligation of access pursuant to Regulation 55 of the ECC Regulations.

7.2.3. Access to dedicated capacity from a location within a Zone B WPZ up to a Trunk Node

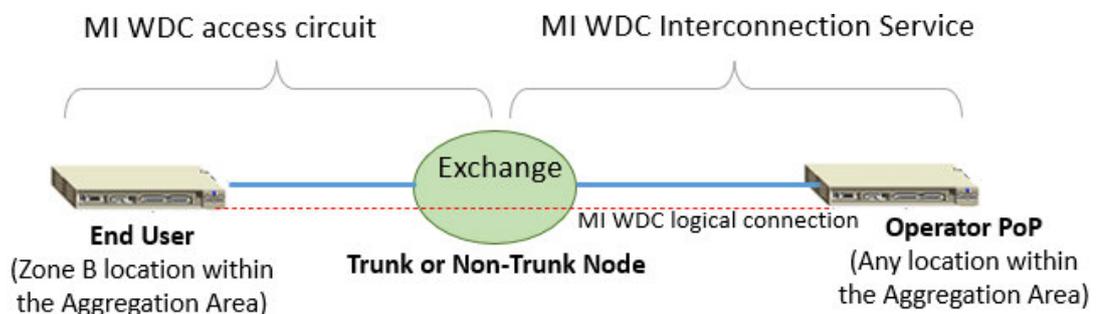
Terminating Segments

- 7.19 Reasonable requests for access to active MI WDC products in the Zone B MI WDC Markets, include access from a location in a Zone B WPZ up to a Trunk Node. In other words, Eircom must provide an access circuit terminating in a Zone B WPZ connecting to an interconnection circuit at an Access Seeker's Point of Handoff ('**PoH**') at the boundary between trunk and terminating segments, that is at a Trunk Node.
- 7.20 As set out in Section 4.5, Trunk Nodes are Eircom exchanges containing Aggregation Nodes that are in close proximity to two or more alternative networks. Of the 191 Eircom exchanges containing Aggregation Nodes in Eircom's network, 142 are Trunk Nodes. For each of the 142 Trunk Nodes, an MI WDC access circuit connected to its serving Trunk Node will be connected to MI WDC interconnection service at the Trunk Node (i.e. at any location within the Aggregation Area). This MI WDC LL is referred to as Same Node Handoff ('**SNH**').
- 7.21 For the Zone B locations served by one of the 49 Non-Trunk Nodes, while SNH will be available to an Access Seeker, the relevant boundary between trunk and terminating segments is at a level higher in the core network, which in practice will be determined by reference to the location of the Provider Edge ('**PE**') Nodes (or equivalent IP Backbone Nodes if and when the PE Nodes are eventually decommissioned) connecting (directly or indirectly) to the Non-Trunk Node. PE Nodes are larger capacity nodes situated higher in the network hierarchy to which Aggregation Nodes are connected. As documented in Eircom's MI WHQA network rollout plan,⁴⁹⁶ each Aggregation Node is connected to a pair of PE Nodes, delineating an Aggregation Area and the Aggregation Areas connected to the same Aggregation Nodes constitute an Aggregation Region. Each of the PE Nodes is located in an Eircom exchange (or equivalent) hosting one or more Aggregation nodes that are Trunk Nodes as they are in close proximity to at least two alternative networks.

⁴⁹⁶ MI-WHQA-Rollout-Plan-V19.5-Final-for-June-2025.xlsx published at <https://dox.openeir.ie/ngn-ethernet/>

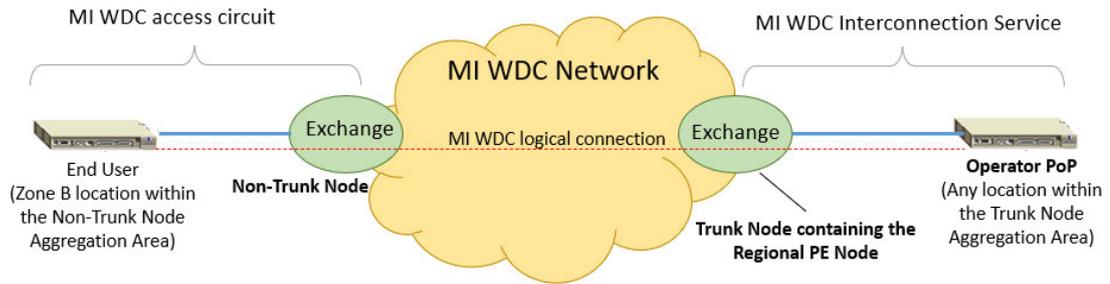
- 7.22 For premises served by any of the 49 Non-Trunk Nodes, the relevant Trunk Node delimiting the boundary for the regulated MI WDC product, is the Eircom exchange which contains a PE Node which is connected (directly or indirectly) to the serving Non-Trunk Node (this is known as Same Region Handoff or '**SRH**'). This mean that in the case of a Non-Trunk Node, the Access Seeker can choose between SRH or SNH where it has (or is planning) a Point of Presence ('**PoP**') at that level in the network.
- 7.23 Figure 19 MI WDC Service Overview (Same Node Handoff or SNH)) and Figure 20 MI WDC Service Overview (Same Region Handoff or SRH)) depict the main elements of an MI WDC service with SNH and SRH respectively, which consist of:
- a MI WDC access circuit, connected to a MI WDC node in the serving exchange and terminating in a Zone B location within the Aggregation Area; ⁴⁹⁷
 - a MI WDC Interconnection Service terminating at any location within the Aggregation Area; and
 - a MI WDC logical connection between the MI WDC access circuit and the MI WDC Interconnection Service.

Figure 19 MI WDC Service Overview (Same Node Handoff or SNH)



⁴⁹⁷ "Aggregation Area" means the geographical area served by an Aggregation Node.

Figure 20 MI WDC Service Overview (Same Region Handoff or SRH)



7.24 The 191 Aggregation Nodes in Eircom’s network are each connected to two PE Nodes delimiting 16 of Eircom’s Aggregation Regions and 12 MI WDC Aggregation Regions (geographic regions, numbered 1-12), as set out in Table 23 below and listed in Schedule 2.1 of the Decision Instrument (Annex: 1). The Trunk Nodes and Non-Trunk Nodes are listed in Schedules 2.2 and 2.3 respectively of the Decision Instrument (Annex: 1 of this Decision).

Table 23: Twelve MI WDC Aggregation Regions

Region Number	Eircom Region Reference	PE Node 1 / IP Backbone Node 1 Location	PE Node 2 / IP Backbone Node 2 Location
1	Urban A	Beggars Bush (BBH)	Priory Park (PRP)
2	Urban B	Blanchardstown (BDT)	Finglas (FNG)
3	Urban C	Belcamp (BLP)	Summerhill (SRL)
4	Urban D	Nangor Road, Clondalkin (CLD)	Dolphins Barn (DBN)
5	Urban E	Churchfield (CHF)	Quaker Road (QKR)
	Provincial J	Churchfield (CHF)	Quaker Road (QKR)
6	Urban F	Limerick (LMK)	Mallow (MLW)
	Provincial K	Limerick (LMK)	Mallow (MLW)
7	Provincial N	Limerick (LMK)	Portlaoise (PGS)
8	Urban G	Mervue (MVW)	Shantalla (SLA)
9	Urban H	Priory Park (PRP)	Waterford (WTD)
	Provincial O	Priory Park (PRP)	Waterford (WTD)
	Provincial P	Priory Park (PRP)	Waterford (WTD)
10	Provincial I	Bridgend (BGE)	Rathedmond, Sligo (RTD)
11	Provincial L	Drogheda (DBC)	Mullingar (MGR)
12	Provincial Z	Roslevin, Athlone (RSL)	Rathedmond, Sligo (RTD)

7.25 For a MI WDC access circuit terminating at a location in a Zone B WPZ served by a Non-Trunk Node, the boundary between trunk and terminating segments is determined by the region to which it belongs, which is set by the geographic location of either of the PE Nodes to which the Non-Trunk Aggregation Node is connected. In other words, Eircom is required to provide access from a location in a Zone B WPZ to any handover point identified by an Access Seeker within the region delimited by the PE Nodes serving the Non-Trunk Aggregation Node. By way of example, in respect of a premise located in a Zone B WPZ served by a Non-Trunk Node in Region 1 (Eircom

Region Urban A), the Access Seeker can choose to have the MI WDC traffic handed-off (on an interconnection service) at any location in the Aggregation Area served by

- (a) a Non-Trunk Node within Region 1 (Eircom Region Urban A) in which the premise is located; or
- (b) Beggars Bush exchange; or
- (c) Priory Park exchange.

7.26 Where there are several PE Nodes in the same location (e.g., Limerick, Priory Park, Waterford), it is the location of the PE Node that matters, as opposed to the Eircom Region delimited by the specific PE Node: in other words the multiple PE Nodes in Priory Park and Waterford, delimit, for the purpose of establishing the boundary between trunk and terminating segments, one region, being Region 9, rather than the three Eircom Regions (Urban H, Provincial O and Provincial P). This is because the demarcation of the regulated product at the Trunk Node is set not by reference to the topology of Eircom's network but by reference to the presence of at least two alternative networks in close proximity to an Eircom exchange containing an Aggregation Node.⁴⁹⁸

7.27 In its Submission, Eircom stated that its migration to an all-IP core network within three years will make PE Nodes entirely redundant and that ComReg is basing its regulatory framework on network elements that will no longer exist during the market review period. Eircom contends that this approach is fundamentally flawed and unsustainable, and that ComReg must explain why it is enforcing outdated definitions that will soon have no relevance in Ireland's telecoms infrastructure.⁴⁹⁹

7.28 ComReg notes that Eircom has installed IP Backbone Nodes at all PE Node locations (listed in Table 23) with the exception of Shantalla.⁵⁰⁰ At twenty Eircom exchanges, a PE Node is connected to an IP Backbone Node. The

⁴⁹⁸ The same principle applies in respect of traffic originating from a location in a Zone B WPZ that is served by a Non-Trunk Node and which terminates at an Edge Node Handover ('**ENH**'). An ENH is handoff at an Aggregation Node installed at a premises which has diverse transmission links to the PE Nodes within the Aggregation Region. For instance, the boundary between trunk and terminating segments for traffic originating from a Zone B location served by a Non-Trunk Node in Region 4 and which terminates at Eircom's Data Centre Handoff ('**DCH**') at Telecity Data Centre Citywest (6CR) is Telecity Data Centre Citywest (6CR) which is located in Region 4.

⁴⁹⁹ Eircom Non-confidential Submission, paragraph 117.

⁵⁰⁰ Eircom presentation "IP and Optical Networks Network Architecture 2019-2025", dated 20 May 2019.

PE Nodes remain connected to Eircom's core network for the medium term until these nodes are decommissioned.

- 7.29 In the Consultation and draft WDC Decision, ComReg used the term "*Provider Edge ('PE') Node(s) or equivalent*", in the definition of "Aggregation Region", to signify that should PE Nodes be decommissioned during the market review period, the definition is sufficiently flexible to cater for this. As outlined in its Submission, Eircom estimates it will take approximately three years before the PE Nodes are redundant.⁵⁰¹
- 7.30 However, it is the location of the PE Node(s) (and equivalent IP Backbone Nodes) which is relevant to SRH of MI WDC traffic originating from a Non-Trunk Node. As such, ComReg's prior approval will be required (see to paragraphs 7.47 to 7.51 below) for Eircom, for example, to replace Shantalla as a PE location with another PE/IP Backbone location or rehome specific Aggregation Node(s) to different PE Node(s)/IP Backbone Node(s).

Associated Facilities and Services, including interconnection and co-location

- 7.31 In order that Access Seekers can avail of MI WDC services at locations within Zone B WPZs, they must be able to collect traffic from Eircom's network at Points of Handover ('**PoH**') – that is, at physical points of interconnection allowing traffic to pass between the networks – at all Trunk Nodes which set the boundary of regulated access (i.e., the boundary between trunk and terminating segments). However, although an Access Seeker is not required to collect traffic at a Non-Trunk Node, where they have a PoP served by the Non-Trunk Node, they can decide to interconnect with Eircom at that location and benefit from their investment deeper into the network. Eircom accordingly will continue to offer interconnection at all locations where it has Trunk and Non-Trunk Nodes including, in the case of NGN Ethernet services, using its Wholesale Ethernet Interconnect Link ('**WEIL**') product set.
- 7.32 In further recognition of the differing degrees of infrastructure deployment by Access Seekers, Eircom remains obliged to facilitate a range of interconnection services, namely:
- (a) **ISH** - the connection between the Exchange and the Access Seeker's nominated PoH in a chamber (including the exchange chamber⁵⁰²) in the vicinity of the Exchange, or equivalent facility;

⁵⁰¹ Eircom Non-confidential Submission, paragraph 117.

⁵⁰² A chamber located, in whole or in part, under an exchange. There may be more than one exchange chamber at an exchange.

- (b) **CSH** - the connection from the Eircom network to the Access Seeker's equipment in the Access Seeker's premises, which includes the installation of an Eircom Network Termination Unit ('**NTU**')⁵⁰³ at the Access Seeker's premises;
- (c) **IBH** - the connection from the Eircom network to the Access Seeker's equipment within an Eircom Exchange, or equivalent facility; and
- (d) **ENH** - the connection from the Eircom network through a dedicated Aggregation Node interface to the Access Seeker's equipment.

7.33 With the view to supporting further network rollout and infrastructure-based competition, Eircom is required to continue to allow the sharing of interconnection facilities between Access Seekers. This means that an Access Seeker availing of a WEIL from Eircom ('**Host Access Seeker**') may share it with another Access Seeker ('**Guest Access Seeker**'), subject to the Host and Guest Access Seekers agreeing terms. Such sharing, in addition to potentially lowering an Access Seeker's costs, also minimises Eircom's burden as regards the provision of builds of interconnection facilities.

7.34 Finally, the ability to interconnect is further facilitated by requiring that Eircom continues to provide access to co-location in all Eircom's Exchanges serving Trunk and Non-Trunk Nodes, to include serviced space and ancillary services (including both Alternating Current ('**AC**') and Direct Current ('**DC**') power, tie cables and air-conditioning⁵⁰⁴) in an Eircom Exchange building or similar facility. The serviced space within an Eircom Exchange is used to accommodate equipment racks which house an Access Seeker's electronic equipment and are the PoH between the Eircom MI WDC IBH service and the Access Seeker's network. As such co-location is essential to Interconnection IBH Handover (i.e. the connection from the Eircom network to the Access Seeker's equipment within the Exchange, or equivalent facility).

7.35 For the same reasons that Access Seekers should be able to share their interconnection resources, Access Seekers availing of IBH-based interconnection should be permitted to share their co-location spaces, their co-location rack and services within or between co-location racks with other Access Seekers (subject to appropriate agreements between them). This should allow an Access Seeker to avoid potentially long lead-times on the

⁵⁰³ The physical interface which provides the service demarcation or Point of Handover of the wholesale service within the customer premises.

⁵⁰⁴ In exchanges where Eircom currently provide air-conditioning.

Co-Location facility installation⁵⁰⁵ and also has the potential to lower the effective cost of Co-Location and thereby lower barriers to entry/expansion in the Zone B MI WDC Markets.

Access to Eircom's Operations Support Systems ('OSS'), technical interfaces, protocols and other key technologies

7.36 In order to ensure the effectiveness of Eircom's provision of MI WDC services, Eircom is obliged to also provide Access to OSS and similar systems, as well as to technical interfaces and protocols, that are used for the purpose of placing orders for MI WDC services and availing of MI WDC services. Access to Eircom's OSS plays an important role in Eircom's provisioning of MI WDC services to Access Seekers and its downstream arm as well as for pre-ordering, ordering, fault and in-service management. Access to OSS is therefore essential to the effectiveness and efficiency of the operational aspects of the supply of the wholesale MI WDC products, services and facilities. Access to standards and other protocols is also necessary to ensure the interconnection and interoperability of networks.

7.2.4. Specified forms of Access

7.37 As part of its obligation to meet reasonable requests for access to MI WDC from a Zone B WPZ location up to the boundary between trunk and terminating segments at a Trunk Node, Eircom is required to continue to provide its current MI WDC offering and associated interconnection and co-location services and facilities, which it may not withdraw without the prior approval of ComReg, namely:

- (a) Eircom's NGN Ethernet product suite, delivered by way of a Wholesale Symmetrical Ethernet Access ('**WSEA**') access connection at a location within a Zone B WPZ, a Wholesale Ethernet Interconnection Link ('**WEIL**') at a serving Trunk or a serving Non-Trunk Node or at an exchange (or equivalent) which contain a PE Node/IP Backbone Node and a Wholesale Ethernet Service ('**WES**') logical connection(s) between the WSEA and WEIL (see Figure 21 and Figure 22 below); and

⁵⁰⁵ Including Co-Location footprint preparation, AC/DC power ordering and installation.

- (b) Eircom's WDM product suite (Wholesale Uncontended Product ('WUP')), comprising a WDM connection at a location within a Zone B WPZ, a WDM interconnection Service and a WDM end-to-end circuit provisioned between the WDM access connection and the WDM interconnection service (see Figure 23 and Figure 24 below).

Figure 21 NGN Ethernet Service Overview (Same Node Handoff or SNH)

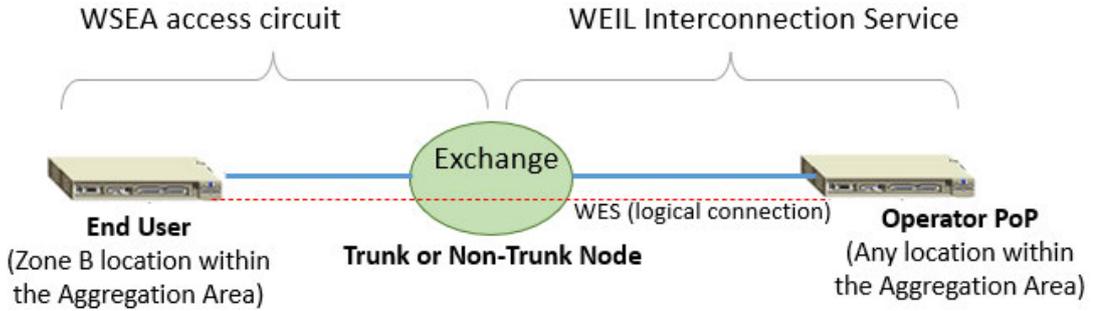


Figure 22 NGN Ethernet Service Overview (Same Region Handoff or SRH)

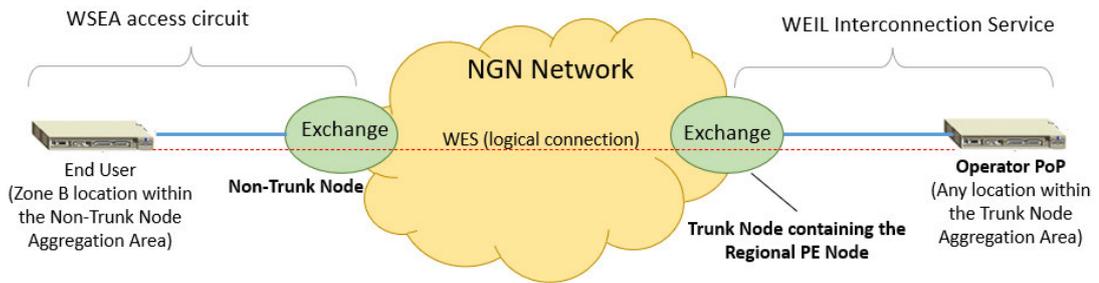


Figure 23 WDM Service Overview (Same Node Handoff or SNH)

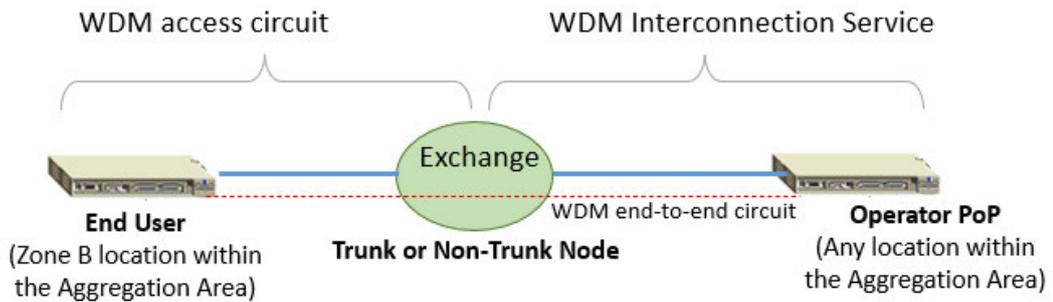
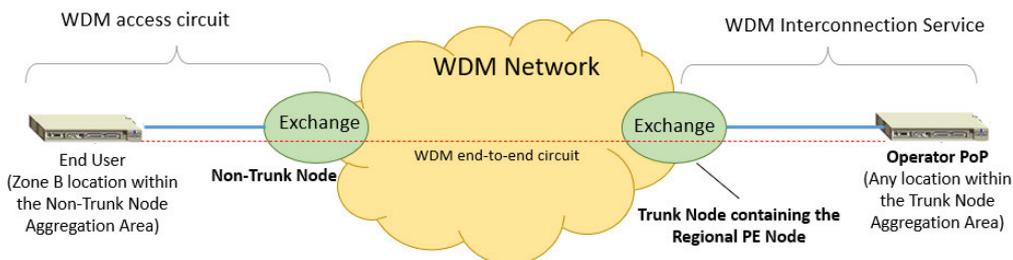


Figure 24 WDM Service Overview (Same Region Handoff or SRH)



7.2.5. Conditions to ensure fairness, reasonableness and timeliness of access

Overview

- 7.38 Regulation 55(3) of the ECC Regulations permits ComReg to attach to obligations and requirements for access, conditions covering fairness, reasonableness and timeliness. In order to ensure fair but effective and timely access to the Zone B MI WDC Markets, ComReg has decided to attach conditions to Eircom's obligations of access so that Eircom:
- (a) Cannot refuse access by way of new product development or amendments to an existing product, unless the request is unreasonable and objective reasons have been provided to the Access Seeker;
 - (b) Can only impose restrictions on access that are intended for the protection of the integrity of the network to the extent that they are justified, reasonable and proportionate;
 - (c) Cannot decline orders for an existing product where the order meets the terms and conditions for the product. Where an order is declined, Eircom must provide specific and clear reason text and codes to the Access Seeker at the closure of the order;
 - (d) Cannot withdraw access to facilities already granted without ComReg's prior written approval;
 - (e) Must negotiate in good faith, be it a request for a new or amended product, service or associated facility, or Service Level Agreements ('SLAs') and adhere to specified processes and timelines as regards the development of new products or amendments to existing products and SLAs; and
 - (f) Must offer meaningful SLAs, that is, legally binding contracts committing Eircom to defined service levels.

This is discussed in further detail below.

Refusal to grant of access for objective reasons

- 7.39 The obligation on Eircom to meet reasonable requests for access means that Eircom may only deny requests that are not reasonable. In practice, ComReg expects that circumstances giving rise to a legitimate denial of access would be exceptional and limited to those situations where objectively, it is not technically feasible to meet the request for access, or there are concerns regarding the protection of the integrity of Eircom's network, which may not be mitigated otherwise than through denying access. This is consistent with the Code which states at Recital 191 that:

“...[access] requests should only be refused on the basis of objective criteria such as technical feasibility or the need to maintain network integrity.”

- 7.40 In this regard, a refusal of access based on Eircom’s commercial strategy or its assessment of Access Seeker needs does not constitute an ‘objective criterion’ as it involves the subjective intentions of Eircom.
- 7.41 ComReg notes that in considering whether requests for access are reasonable, in addition to ascertaining where necessary the technical feasibility of the requests, Eircom may, negotiating in good faith (refer to paragraphs 7.52 to 7.55), set out those terms and conditions that it proposes to attach to the product or features required to meet the access request. Therefore, requests for new forms of access (new products or improvements, variations or other amendments to existing products) may only be refused where Eircom’s reasonable concerns cannot be addressed by way of reasonable terms and conditions.
- 7.42 Once a form of access is reasonable, and a product is made available, there is no basis to decline or refuse orders for access which meet the reasonable terms and conditions associated with the product concerned.

Reasons to be given

- 7.43 In order to ensure clarity as regards the scope of Eircom’s obligation to meet reasonable requests for access, new products, or amendments to existing products, and to limit the possibility of misunderstandings and disputes between Eircom and Access Seekers, the reasons on which Eircom relies in refusing access (whether partial or in full) must be communicated in writing to the Access Seeker concerned at the same time as the refusal, in sufficient detail to allow the Access Seeker to understand the reasoning for the refusal.
- 7.44 Furthermore, with a view to facilitating monitoring by ComReg of compliance by Eircom with its obligation of access, Eircom is required to provide ComReg on a monthly basis with the list of all Access requests by way of new products or amendments to existing products received from any Access Seeker which have been accepted or rejected, refused or otherwise declined within the month, in each case giving the reasons for not meeting the request for access.

No impediments to Access

- 7.45 Eircom is required to ensure that any requirements imposed in terms of accreditation, audits and supervision are justified, reasonable, proportionate and non-discriminatory by reference to the task concerned and the circumstances pertaining to the Access such that they do not result in unjustifiable impediments to the work of, or unwarranted costs for, Access

Seekers. In particular, save where a material risk to national security, public safety or public health presents, or taking into account the nature of the work involved, there is a serious risk to the integrity of Eircom's network, Eircom must ensure that any supervision requirements are applied in such a way that they do not have the effect of delaying or preventing Access Seekers from commencing or continuing work in the absence of an Eircom supervisor.

- 7.46 This need for such a requirement was queried by Eircom in its Submission, on the basis that the Access remedies relate to active services that are installed by Eircom technicians, and not Access Seekers.⁵⁰⁶ ComReg notes however that the provision of active services does not mean that Access Seekers will never require access to Eircom's facilities in particular where they avail of Co-Location (e.g., an Access Seeker requesting supervised and unsupervised access to Eircom exchanges) and it is appropriate and necessary to ensure that any requirements imposed by Eircom in such circumstances are reasonable, proportionate and non-discriminatory.

Withdrawal of access subject to ComReg's prior approval

- 7.47 Given that access to Eircom's MI WDC products, services and facilities, in the Zone B MI WDC Markets, is found to be necessary to address the competition problems arising from Eircom's position of SMP, once granted, access should not be withdrawn. However, ComReg does not believe that it would be proportionate to force Eircom to maintain access to facilities once granted in all cases and regardless of the circumstances. Accordingly, Eircom should be able to seek ComReg's prior approval to withdraw Access which approval ComReg may grant having regard to all circumstances in the case.
- 7.48 More specifically, Eircom is required to notify ComReg, in writing, of any proposal to withdraw access to facilities already granted, giving reasons borne out of a detailed analysis of the proposal for access withdrawal, including the impacts that the withdrawal of access is likely to have on existing Access Seekers and end-users.
- 7.49 Where Eircom proposes to withdraw access, ComReg may consult with relevant parties, prior to making a decision on whether to grant or to withhold its approval to any such request.

⁵⁰⁶ Eircom Non-confidential Submission, paragraph 130.

- 7.50 In its Submission, BT supported the imposition of this remedy but recommended that “ComReg systematically engages with the relevant Access Seeker that the Access Provider seeks to withdraw Access from”.⁵⁰⁷
- 7.51 ComReg notes that there may be scenarios where Eircom proposes to withdraw access to MI WDC products, services and facilities in the Zone B MI WDC Markets and the impact on relevant parties is not significant. In such scenarios, ComReg may not consult with relevant parties, prior to making a decision on whether to grant or to withhold its approval to any such request.

Requirement to negotiate in good faith

- 7.52 With the view to addressing the imbalance between Eircom and Access Seekers, Eircom continues to be required to negotiate in good faith. Negotiating in good faith means that Eircom should not unnecessarily prolong negotiations.
- 7.53 The requirement to negotiate in good faith, given that Eircom has knowledge and expertise of its own network and systems which is not readily available to Access Seekers, also means that Eircom staff ought to provide meaningful guidance to Access Seekers as to how their Access requests could be best formulated, having regard to the purpose which the access would be put to. This obligation seeks to address the technical knowledge imbalances between the respective parties by reducing incentives to unnecessarily prolong product development timelines.
- 7.54 ComReg notes that the obligation to negotiate in good faith encompasses the way in which Eircom conducts the negotiations as well as the positions that it takes in them. In investigating an allegation of a failure to negotiate in good faith, ComReg might draw inferences from Eircom’s behaviour and from the adequacy of the processes and controls it has put in place to assure compliance with this obligation. For example, ComReg might draw adverse inferences from the following:
- (a) a failure on the part of Eircom to behave in the way that a willing seller would behave when negotiating with a willing buyer;
 - (b) a failure by Eircom to respond to proposals made by Access Seekers in a timely and constructive manner;
 - (c) a failure by Eircom to deploy participants in the negotiations who have the appropriate knowledge and authority, so that negotiations could proceed in a timely manner;

⁵⁰⁷ BT Non-confidential Submission, at p.21.

- (d) the absence of effective controls to assure that decision-making processes within Eircom in relation to the negotiations could not be influenced by concerns about the commercial impact on Eircom's downstream business; and
- (e) the presence of incentives for individuals within Eircom who participated in or influenced the negotiations that might lead them to receive greater financial or other benefits if the negotiations were to be delayed, or to result in an outcome other than that which might have been freely negotiated between a willing buyer and a willing seller.

7.55 The precise nature of any investigation and the degree to which inferences might be drawn from behaviour would need to be assessed in the context of the actual circumstances of any particular case.

Product Development

7.56 An efficient functioning product development process⁵⁰⁸ is particularly important for ensuring the development of effective competition in downstream markets and to allow Access Seekers to plan for and provide innovative services to downstream customers, including end-users. Uncertainty regarding the content and timing of product updates creates uncertainty in the market and can potentially lead to increased costs across the industry and to concerns regarding the availability of information to Eircom's downstream arm in advance of competing retail operators. Conversely, increased clarity and certainty with respect to product developments and process changes should enable Access Seekers to plan for such changes more effectively and, where necessary, to implement consequential changes to their own systems and processes. Any resulting improvement in resource allocation across the industry may lead to lower costs and improved speed to market for product innovations, ensuring the development of effective competition to the ultimate benefit of end-users.

7.57 However, in order to ensure that Access Seekers' requests for access are processed in a manner that is fair, reasonable and timely, there should be full clarity as regards key decision gates and development stages, so that Access Seekers may fully exercise their right to make requests for access to Eircom. In turn, the key decision gates and development stages should allow for Access Seekers' active participation.

7.58 In particular, clarity is required as regards the following:

⁵⁰⁸ The Eircom Regulated Access Product ('RAP') Product Development Process is a series of steps undertaken to bring a product idea from conception through to product launch.

- (a) The timeline during which the request will be analysed, developed and launched;
- (b) The stages of the product development process, including the times at which Access Seekers may provide inputs; and
- (c) The making of a request for access: the information that needs to be provided in order for an Access request to be processed by Eircom.

7.59 ComReg notes that ComReg's 2024 WLA Decision, required Eircom to improve its development process for WLA products; for efficiency and ease of implementation and application reasons, it makes sense that requirements imposed on Eircom in terms of the development of MI WDC products align with those applicable to WLA. ComReg accordingly requires that the following requirements apply in respect of the development of new and amended MI WDC products:

- (a) Eircom is required to acknowledge in writing within three (3) working days of receipt, a request for Access, be it for a new product, service, or associated facility or an amendment to an existing product, service, or associated facility, including in both cases requests for SLAs, and provide the requestor with a unique reference to identify the Access request;
- (b) All Access Seekers are required to be informed by Eircom of receipt of a request for Access, as soon as possible and in any event within fifteen (15) working days of the receipt of the request, to include details of the request's allocated unique reference number (to allow tracking of the request), a copy of the request, and a description of the key features and functionality requested;
- (c) Within fifteen (15) working days of the receipt of the request, on a per request basis, Eircom is required to publish an engagement plan outlining:
 - (i) How and when it will consult and seek design input from the requestor and other Access Seekers (for example, workshops, meetings, Eircom's Product Development Workshop ('**PDW**'), etc.);
 - (ii) How and when it will consult and seek views from the requestor and other Access Seekers with regard to SLA requirements;
 - (iii) What timelines will be used for design input and SLA negotiations (in the case an Access request is for a new or amended SLA); and,

- (iv) When it will issue its status update (see below), which must be as soon as possible but no later than eighty-five (85) working days after receipt of the request.
- (d) Eircom is required to publish a status update as soon as practicable and in any event within eighty-five (85) working days of receipt of the request, with the following information:
 - (i) A description of the solution to be provided including any aspects of the proposed solution which do not reflect or are inconsistent with the request, and the objective reasons therefor, including in particular differences in key features, functionality, or any other limitations;
 - (ii) The development timelines including proposed notification, publication and launch dates;
 - (iii) What timelines will be used for SLA negotiations (in the case where an Access request is for a new or amended product, service or Associated Facility); and
 - (iv) The priority level granted to the request and any impact on the priority granted to other Access request, including any input values and calculations used by Eircom in the determination of the prioritisation of the request, and where other Access requests are being reprioritised as a result (whether granting a lower or higher priority), the reasons for same.

7.60 By allowing Eircom to propose the development timelines, ComReg is giving Eircom the flexibility to assess each Access request individually and plan and carry out its delivery in the most efficient and time effective manner. This is balanced by the requirement that once set by Eircom, the product development timelines proposed by Eircom must be adhered to and may only be deviated from with ComReg's consent.

7.61 Moreover, in the case where an Access Seeker believes that Eircom is unduly delaying the development of an Access request, it may seek ComReg's intervention by way of dispute resolution under Regulation 67 of the ECC Regulations. Furthermore, ComReg may independently intervene in the case where Eircom proposes a timeline which is considered by ComReg to be unreasonable or unduly long by directing Eircom to deliver the request within a specific timeline and ensure that the Access request is met in a timely manner.

Service Level Agreements ('SLAs')

- 7.62 SLAs are essential in ensuring Access Seekers' ability to rely on access to Eircom's network in delivering products in downstream markets, including in ensuring Access Seekers' ability to commit to service levels to their own customers. Both sub-standard SLAs and delays in negotiating and agreeing SLAs may have a significant detrimental impact on Access Seekers, in particular those who are trying to enter the market or grow market share and win customers from established SPs such as Eircom. Sub-standard SLAs may manifest, *inter alia*, in inadequate repair times, or service credits at a level which do not incentivise Eircom to meet the service levels committed to. Delays in the development and availability of suitable SLAs can have an adverse impact on competition and on end-users, as the absence of suitable SLAs ultimately lowers certainty regarding the timeliness and quality of Access being provided.
- 7.63 In addition to demanding higher quality and more innovative products and services, end-users expect efficient and timely provision of services, including a high degree of reliability and effective fault management and repair. As such, Access Seekers are reliant on efficient delivery, service quality and after-sales support from Eircom in order to be able to compete effectively in downstream markets. In this regard, ComReg notes that the expected level of service, both at the point of delivery and in-life, are key selling points which can influence an end-user when coming to a decision to purchase a product or service or to switch service providers. This means that the SLAs supporting regulated MI WDC wholesale products are an extremely important component of the wholesale input and are integral to the wholesale offering.
- 7.64 Fit-for-purpose SLAs achieve two main objectives: first, they help, in setting agreed service levels between Eircom and Access Seekers, ensure that Access is provided in a manner that is fair, reasonable, and timely, and second, they ensure that Access Seekers are compensated where service levels are not met. The two go hand in hand. SLAs give Eircom actual and adequate incentives to deliver agreed service levels, allowing Access Seekers to commit to, and compete on, guaranteed levels of service in downstream markets, but only if SLAs provide for the payment by Eircom to Access Seekers of meaningful compensation where agreed service levels are not met.
- 7.65 The nature of an effective, fit-for-purpose SLA will depend on many factors, including the nature of the wholesale services provided by Eircom and the nature of the downstream retail or wholesale services to be provided by Access Seekers. An SLA could be based on a commitment to achieve specified service levels, or on the occurrence of particular events such as

service outages, or indeed other circumstances. It should also be possible for Access Seekers to make a reasonable request for changes to the SLA provided by Eircom. The precise nature of such an Access Seeker requested SLA would be best settled in negotiations between Eircom and Access Seekers (subject to the condition that Eircom and/or Access Seekers may seek ComReg's intervention by way of dispute resolution under Regulation 67 of the ECC Regulations).

- 7.66 In light of the risks highlighted above and having regard to Eircom's incentives in delaying negotiations or only agreeing sub-standard levels of service, ComReg is of the view that it is justified and appropriate to set down detailed requirements as regards the conduct of negotiations and the content of SLAs, as discussed in the following paragraphs.

SLA Negotiation Period and Conclusion in respect of a Request for a new SLA or amended SLA for existing products

- 7.67 Prolonged discussions on the details of the SLA or prolonged deliberation by Eircom only serve to delay the availability of SLAs, and for the reasons set out above, this is not in the best interests of Access Seekers, competition, or end-users. It can also amount to an effective refusal of access.
- 7.68 ComReg therefore sets a maximum period of time of six months for discussions to take place as regards an amendment to an existing SLA or a new SLA (the '**SLA Negotiation Period**') in respect of an existing product, service, or associated facility. During the SLA Negotiation Period, Eircom must discuss and negotiate in a proactive manner, and in good faith, with Access Seekers. The SLA Negotiation Period is to end no later than six months from the request for SLA, either by agreement between the relevant parties or, in the absence of agreement, on the expiry of the six-month period or on any date prior where all parties agree that the negotiations are at an end, with Eircom making its Best and Final Offer ('**BAFO**').
- 7.69 ComReg further requires that the agreed SLA or Eircom's BAFO become effective within three months if the request is for a new or amended SLA that does not result in a new or amended product, service or facility, save where Eircom has applied, setting out reasons therefor, for an extension of the three-month period and ComReg, at its sole discretion, has granted same.
- 7.70 As noted above, during the SLA Negotiation Period Eircom must discuss and negotiate in a proactive manner, and in good faith, with Access Seekers. In this regard, Eircom must use the most appropriate means of negotiating that are suitable for the circumstances relating to the subject matter to be negotiated. ComReg would not for example consider limiting negotiations to written correspondence to be in alignment with the requirement to negotiate in good faith if a more effective means of negotiating would be to meet with

Access Seekers. Similarly, placing an unnecessary requirement for a meeting to take place when the matter would more effectively be addressed in writing would also not be in good faith. Nothing in the requirements with respect to SLAs preclude Eircom from using the most appropriate means of negotiating based on the circumstances involved.

SLA Negotiation Period and Conclusion in respect of new product development or amendment to existing product

- 7.71 Specific issues arise in respect of new product development (to include amendments to existing products) where Eircom may have the incentive to delay SLA negotiation until after the completion of the product development and/or only provide an insufficient or basic SLA which does not meet Access Seeker requirements, thereby undermining the timely and effective use of the products in question. ComReg considers in this regard that SLAs are, in general, an integral part of a product offering. While not all amendments to products, services or associated facilities will require changes to the associated SLA, Access Seekers are likely to have a view as to whether proposed amendments to existing products, services or associated facilities will also require an associated SLA amendment. For these reasons, the 2020 Decision introduced an obligation on Eircom that new or amended SLAs for new or amended products, services or associated facilities be available at time of launch to avoid any restriction or distortion on competition. ComReg's position is that this obligation will continue.
- 7.72 In order to ensure that this is the case, ComReg requires that Eircom notify the SLA at the same time as the notified new or amended product documentation. Eircom must publish dates for the SLA Negotiation period, including the start date, with the status update (no later than 85 days from receipt of the request) to ensure that the SLA can be notified with the new or amended product documentation. This will ensure that the SLA Negotiation Period runs alongside the specific product development timelines published in the status update and ensures that SLA requirements are included and taken into account in the development of the Access request. The SLA Negotiation Period is to end no later than six months from the start date of the SLA Negotiation period, either by agreement between the relevant parties or, in the absence of agreement, on the expiry of the six-month period or on any prior date where all parties agree that the negotiations are at an end, with Eircom making its Best and Final Offer ('**BAFO**'). This should limit the risk of delays caused by requiring the SLA to be ready for the new or amended product launch.

- 7.73 The agreed SLA or Eircom's BAFO become effective following the advance notification timeline requirements,⁵⁰⁹ save where Eircom has made an application setting out its reasons for an extension and ComReg has used its sole discretion to grant the extension.
- 7.74 The alignment of the SLA negotiation process with the existing product development timelines should not add any significant burden on Eircom. This obligation will provide certainty for Eircom and Access Seekers on when new or amended SLAs relating to Access requests for new or amended products, services or associated facilities will be negotiated.

Service Credits

- 7.75 There should be clarity as regards the circumstances where a right to compensation arises, and the methodology used by Eircom to calculate the appropriate amount of compensation due to Access Seekers. Clarity on both aspects is required in order that Access Seekers understand how Eircom arrived at the calculated amount of service credit and based on this knowledge have assurances that Eircom is appropriately incentivised to deliver the agreed level of service.
- 7.76 Meaningful compensation means that Access Seekers recoup through compensation at a minimum the direct costs and any other loss of value arising from Eircom's failure to meet the agreed level of service. Appropriately incentivised means that it should not be less costly for Eircom to pay the SLA service credits than meet the agreed service levels. To that end, Eircom is required to:
- (a) Make available to Access Seekers during the SLA Negotiation Period an explanation of the proposed levels of service credits by reference to the costs to Eircom of deploying resources to meet the committed SLA service levels, and expected direct costs and any other reasonable loss of value likely to be incurred by Access Seekers where service levels are not met, as estimated by Eircom, itemising the relevant elements (such as lost rental cost, work crew redeployment cost, etc.) contributing to each service credit, along with their monetary value; and
 - (b) Make available to Access Seekers during the SLA Negotiation Period worked examples of use cases where SLA payments are triggered and service credits are due, to allow Access Seekers to reconcile service credit payments with the requirements of the SLA and with the service provided by Eircom over the relevant period;

⁵⁰⁹ Outlined in Transparency, section 7.4 below.

- 7.77 SLA service credits should be fair and reasonable. It is reasonable that Access Seekers should not have to bear any administrative burden relating to the payment of service credits as such payments arise from Eircom not meeting committed service levels.
- 7.78 The calculation and justification regarding the value of service credits and how they, firstly, incentivise Eircom to deliver an efficient level of service and secondly, cover costs incurred by operators in the event of metrics not being met, does not impose any significant burden on Eircom. Moreover, appropriate levels of service credits should benefit Access Seekers in providing further assurance that they will not be at a loss due to Eircom failing to meet SLA committed service levels.
- 7.79 It is accordingly important that Eircom provides the methodology for calculating the quantum of service credits within the SLA documentation and justification for same, including how they incentivise Eircom to deliver an efficient level of service and allow Access Seekers to recoup direct costs and other loss of value, along with associated supporting evidence. The SLA documentation should contain an itemised list of direct costs and other losses of value contributing to the service credit and the associated monetary value as well as worked examples of use cases where SLA payments are triggered and service credits are due. Furthermore, Eircom should seek input on all aspects of service credits during the SLA Negotiation period and discuss same with Access Seekers.

Suspension of an SLA

- 7.80 Although there may be circumstances under which an SLA may need to be suspended, suspension of an SLA should be an exceptional occurrence and should not have the effect of neutralising the SLA. In its Submission, Vodafone noted that ComReg must be clear in their decision that action may be required in respect of application of the remedies⁵¹⁰ but that as regards SLAs, ComReg had “*not set out any clear requirements on the circumstances where an SLA needs to be suspended, where the SLA must be reinstated etc. There is no detail on a requirement for industry engagement on SLA suspension, following implementation the proposed requirements*”⁵¹¹ Vodafone, however, did not set out any position as regards when an SLA may be suspended and must be reinstated. ComReg believes in this regard that at this time, it is not possible to set out exhaustively when an SLA may be suspended and must be reinstated. Rather, the circumstances, rules and

⁵¹⁰ Vodafone Non-confidential Submission, at p.9.

⁵¹¹ Vodafone Non-confidential Submission, at p.10.

conditions giving rise to any suspension of an SLA is a matter for Access Seekers and Eircom. However, ComReg is conscious that SLA suspensions, particularly where they are prolonged or unexpected, can have a significant impact on the effectiveness of the underlying levels of Access being provided. It is therefore essential that any suspension of an SLA is based on objective measurable criteria and that Access Seekers have an opportunity to input into the development of these objective criteria.

- 7.81 Accordingly, an SLA may only provide for suspension where suspension is triggered on the basis of objectively defined and measurable parameters and on terms and conditions that are reasonable, transparent, clear and detailed. Furthermore, such terms and conditions including the rules and processes and parameters to govern suspension should be agreed with Access Seekers during the SLA Negotiation Period. The terms and conditions governing the circumstances when the SLA can be suspended, and the process to be applied for the suspension of the SLA (including parameters used to determine whether suspension is appropriate and justified) must be included in the published SLA documentation and Access Seekers informed of each instance of an exclusion from the SLA together with the parameters upon which the exclusion is based.

7.3 Non-discrimination obligations

- 7.82 The 2020 Decision imposed on Eircom an obligation of non-discrimination, as regards both the treatment of Access Seekers by Eircom as between those Access Seekers, so that Eircom must apply equivalent conditions in equivalent circumstances; and as regards the treatment of Access Seekers as between those Access Seekers and Eircom itself (including its subsidiaries, affiliates and partners) on an Equivalence of Outputs ('**EoO**') standard. An obligation of non-discrimination at the EoO standard means that Eircom has the choice of the systems and processes that it uses to provide access on a non-discriminatory basis, by contrast with an obligation of non-discrimination at the Equivalence of Inputs ('**EoI**') standard where Eircom is required to use the same systems and processes that it uses for its own purposes to deliver access.
- 7.83 Regulation 52 of the ECC Regulations provide that ComReg may impose on an SMP operator obligations of non-discrimination in relation to access or interconnection in order to ensure that the SMP operator concerned:
- (a) applies equivalent conditions in equivalent circumstances to other operators providing equivalent services; and

- (b) provides services and information to others under the same conditions and of the same quality as the SMP operator provides for its own services or those of its subsidiaries, affiliates, or partners.

7.84 Regulation 52(3) of the ECC Regulations provides further that ComReg:

“...may impose on an SMP operator obligations to supply access products and services to all undertakings, including to itself, on the same timescales, terms and conditions, including those relating to price and service levels, and by means of the same systems and processes, in order to ensure equivalence of access.”

7.85 As noted in Recital 184 of the Code, the purpose of the principle of non-discrimination is to ensure that operators with SMP do not distort competition, in particular, where they are vertically integrated operators that supply services to operators with whom they compete in downstream markets. Non-discrimination obligations also play an important role in ensuring the effectiveness of other obligations such as those relating to access, transparency, and price control. In turn, obligations of transparency, for example those relating to KPI metrics and performance metrics, support non-discrimination obligations.

7.86 In light of Eircom’s vertical integration, and Eircom’s ability and incentive to discriminate between itself and Access Seekers in relation to pre-ordering, ordering, provisioning, and service assurance of MI WDC, ComReg imposes an obligation of non-discrimination on Eircom, both as regards discrimination between its wholesale customers, and between wholesale customers and its own services and/or partners. An obligation of non-discrimination is intended to ensure that Eircom does not favour itself, or unduly favour any particular Access Seeker in the provision of MI WDC products, services and information, such that it might otherwise restrict or distort competition in any downstream market, ultimately impacting on the development of sustainable retail and/or wholesale competition.

7.87 The European Commission notes in its Non-Discrimination and Cost Methodologies Recommendation⁵¹² that one of the main obstacles to the development of a true level playing field for Access Seekers is the preferential treatment of the downstream businesses of a vertically integrated SMP operator (for example, discrimination regarding quality of service, access to information, delaying tactics, undue requirements and the strategic

⁵¹² Commission Recommendation 2013/466/EU of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment, OJEU [2013] L251/13. ([NDCM recommendation](#))

design of essential product characteristics). The Commission emphasises that:

“..it is particularly difficult to detect and address non-price discriminatory behaviour through the mere application of a general non-discrimination obligation. It is, therefore, important to ensure true equivalence of access by strictly applying non-discrimination obligations and employing effective means to monitor and enforce compliance”.

7.88 Recital 185 of the Code notes that

“..in order to address and prevent non-price related discriminatory behaviour, equivalence of inputs (EoI) is the surest way of achieving effective protection from discrimination. On the other hand, providing regulated wholesale inputs on an EoI basis is likely to trigger higher compliance costs than other forms of non-discrimination obligations...”

7.89 Given Eircom’s vertical integration, it is essential in order to ensure fair competition on the retail market and that the retail market remains competitive, that Access Seekers relying on access to Eircom’s MI WDC benefit from the same terms and conditions and information as Eircom provides to any Access Seeker and to its own downstream arm. In this regard, when Eircom provides Access Seekers with Access to NGN Ethernet products, services and associated facilities in the Zone B MI WDC Markets, including Access to information, Eircom is required to do so in a manner which achieves the same standards in terms of functionality, price, terms and conditions, service and quality levels as Eircom provides to itself for the purposes of providing products, services and facilities in the Zone B MI WDC Markets, albeit potentially using different systems and processes.

7.90 ComReg notes that to date, Eircom has used different systems and processes to supply its retail arm with access to dedicated capacity services. In particular, Eircom’s downstream retail arm does not consume the Eircom wholesale NGN Ethernet service, which is a ‘layer 2’ service comprising of physical (WEIL, WSEA) and logical (WES) circuits. Instead, Eircom’s retail arm is provided with and consumes a Layer 3 NGN Ethernet service and is not required to order the wholesale NGN Ethernet set. However, Eircom is required to make the wholesale inputs for its Layer 3 NGN Ethernet service available to Access Seekers.

7.91 Against this background, ComReg considered in reaching the 2020 Decision, whether Eircom should be required to meet its obligation of non-discrimination at the EoI, rather than the EoO, standard and decided that it

would not be appropriate and proportionate to do so. ComReg in particular noted that requiring Eircom to use the same systems and processes would likely involve significant developments in the OSS used to deliver the NGN Ethernet suite of products and services, in order to upgrade or replace them to meet an EoI standard. In ComReg's view, this would not be justifiable or proportionate as it would likely involve costly systems re-development, the incremental benefits of which would not likely be substantial.⁵¹³

- 7.92 ComReg does not believe that there have been developments in the market that would justify taking a different approach at this time and require Eircom to provide Access by way of its existing NGN Ethernet product suite in the Zone B MI WDC Markets on a non-discriminatory basis at an EoI standard and there was nothing in the Submissions to the Consultation that indicated otherwise. BT stated that Access Seekers should benefit from the same terms and conditions as Eircom's own retail arm to compete or potentially between Access Seeker's themselves.⁵¹⁴ ALTO and SIRO were of the view that greater emphasis on enforcement and transparency on the market was required.^{515,516} Virgin Media noted that EoO is a weaker regulatory remedy than EoI and was of the view that ComReg should continue to monitor Eircom's compliance and stand ready to impose EoI, should EoO prove insufficient to promote the development of competition.⁵¹⁷
- 7.93 Accordingly at this time, there will be no requirement on Eircom to deliver existing MI WDC products on an EoI basis.
- 7.94 However, ComReg does not believe that the proportionality considerations applicable in respect of Eircom's existing MI WDC product suite would apply in respect of the introduction of new forms of MI WDC Access and, cognisant of the EC's Recommendation, Eircom is required to offer any new MI WDC products that do not rely on, or are amendments to, its NGN Ethernet and WDM product suites, on a non-discriminatory basis at an EoI standard.
- 7.95 ComReg will monitor the Zone B MI WDC Markets over the market review period to ensure the effectiveness of the obligations.

⁵¹³ 2020 Decision, paras 10.246 to 10.257, pp. 499 to 502.

⁵¹⁴ BT Non-confidential Submission, at p.22 and p.23.

⁵¹⁵ ALTO Non-confidential Submission, at p.6.

⁵¹⁶ SIRO Non-confidential Submission, at p.22 and p.23.

⁵¹⁷ Virgin Media Non-confidential Submission, paragraph 10.

7.4 Transparency

7.4.1. Overview

- 7.96 The 2020 Decision imposed on Eircom a general obligation of transparency and set out a number of specific transparency requirements including in particular that Eircom must publish a LLRO setting out the terms and conditions applicable to access, including prices, and detailed descriptions of the products and services available from Eircom, and SLAs. Specific timelines apply in respect of the provision of advance notification to Access Seekers and to ComReg of proposed changes to the LLRO, to prices and the introduction or amendment of products, services and facilities.
- 7.97 Other specific transparency requirements include requirements regarding clarity of billing, the publication of Key Performance Indicators ('KPIs') and reporting on actual performance achieved on an aggregate basis compared to the committed service levels contained in relevant SLAs, and the publication of information with respect to the progress of access requests through the Eircom product development process as well as information on that process. Eircom is also required to publish in advance of implementation, information regarding its rollout plans, and information relating to wholesale products, services and facilities.
- 7.98 Regulation 51 of the ECC Regulations provides that ComReg may impose obligations to ensure transparency in relation to access or interconnection. This requires an SMP operator to make public specific information such as accounting information, technical specifications, network characteristics, prices, and terms and conditions for supply and use, including any permissible conditions limiting access to, or use of, services and applications. Regulation 51 makes it clear that the information that an operator may be required to make public includes network characteristics and expected developments.
- 7.99 Transparency of Eircom's supply of MI WDC in the Zone B MI WDC Markets is critical to ensuring fair competition at both wholesale and retail levels, given Eircom's vertical integration and the national scope of the retail market in contrast to the wholesale market which is demarcated in two main zones. Only full transparency in the supply by Eircom of MI WDC services in the Zone B MI WDC Markets will ensure that there is no discrimination between Eircom and Access Seekers, including pricing discrimination by way of cross-subsidisation between Zone A and Zone B MI WDC Markets, and through to the retail market, and that there is fair competition at both wholesale and retail levels, for the benefit of end-users.

- 7.100 As such, it is necessary to maintain Eircom's transparency obligation in order to monitor and ensure the effectiveness of the obligations of access, non-discrimination and price control obligations.
- 7.101 The transparency obligations as they apply under the 2020 Decision are therefore retained, subject to a number of adjustments, as discussed below. The obligations include the following:
- (a) A requirement to publish a Reference Offer setting out the terms and conditions including prices on which MI WDC is available to Access Seekers;
 - (b) A requirement to provide advance notice of price and non-price changes to ComReg and to Access Seekers and to have a change management process for changes to the Leased Lines Reference Offer;
 - (c) A requirement to publish information on product development;
 - (d) A requirement to publish a network rollout plan;
 - (e) A requirement to publish Key Performance Indicators; and
 - (f) A requirement to publish performance with respect to Service Level Agreements.
- 7.102 Each of these categories is considered in further detail below.

7.4.2. Reference Offer

Terms and conditions including prices applicable to Zone B MI WDC circuits

- 7.103 Section 51(5) of the ECC Regulations provides that where an operator is subject to obligations concerning wholesale access to network infrastructure, ComReg is required to ensure the publication of a reference offer takes utmost account of the BEREC guidelines on the minimum criteria for a reference offer issued in accordance with Article 69(4) of the Code. BEREC issued such guidelines⁵¹⁸ on 5 December 2019. The BEREC Guidelines set out four categories of information to be included in a reference offer, as follows:
- (a) Terms and conditions for the provision of network access;
 - (b) Details of operational processes;
 - (c) Service supply and quality conditions; and

⁵¹⁸ BEREC Guidelines on the minimum criteria for a reference offer, BoR (19) 238, 5 December 2019.

(d) General terms and conditions of the agreement.

7.104 In this regard Eircom's obligation to publish a LLRO setting out the products, services and Associated Facilities offered on a regulated basis is maintained. In particular the terms and conditions, including price, under which regulated MI WDC is available must be transparent and clear and set out so in the LLRO. In order to ensure full transparency of the terms and conditions, including prices, applicable to regulated terminating segments, only the terms and conditions including prices that apply to MI WDC circuits terminating in Zone B WPZs are to be set out in the LLRO. This means that Eircom must discontinue its current practice of publishing in addition to prices applicable to Zone B MI WDC circuits, the prices applicable to circuits terminating in Zone A WPZs.

7.105 More generally, clear and unambiguous wording must be used in all material published or to be provided to Access Seekers. In accordance with general principles governing contracts, vague or ambiguous terms will be construed in the favour of Access Seekers.

Terms and conditions for the provision of network access

7.106 A reference offer contains a description of the offer of contract for Access broken down into components according to market needs. ComReg notes that this requirement will be satisfied by the LLRO taking the form of a draft contract setting out a description of the specific contractual terms and conditions, including prices, associated with each of the network access products, services and associated facilities provided in the Zone B MI WDC Markets, as well as the technical characteristics of the products, services and associated facilities offered in terms of MI WDC.

7.107 For the avoidance of doubt this includes each of the specified products and services that Eircom is required to make available as part of its obligation of Access.

7.108 Also required to be published is information on any relevant ancillary, supplementary and advanced services (including interconnection and co-location as well as operational support systems, information systems or databases for pre-ordering, provisioning, ordering, maintenance and repair requests and billing), including their technical usage restrictions and procedures to access those services; the relevant charges, terms of payment and billing procedures; and applicable requirements and processes for operator accreditation and audit.

7.109 As regards billing, Eircom is required to ensure that invoices for MI WDC products, services and associated facilities are sufficiently disaggregated, detailed and clearly presented so that an Access Seeker can reconcile the invoice to Eircom's LLRO and the LLRO Price List. This is to ensure that

Access Seekers may monitor the wholesale charges being levied on them and facilitate an auditable means of detecting any billing anomalies and/or non-compliance with regulatory obligations. Invoices for MI WDC products, services and associated facilities include any associated documents or records provided by Eircom to Access Seekers for the purpose of billing on a recurring basis. For the avoidance of doubt, Eircom must charge the regulated price, and no other price, in respect of any products, services and associated facilities for the provision of MI WDC in the Zone B MI WDC Markets and Eircom may not quote or invoice an Access Seeker on any other basis.

- 7.110 These requirements provide an appropriate means for Access Seekers to review the charges applied to the products, services and associated facilities that they are purchasing from Eircom, and should be sufficient to meet BT's comment in its Submission that billing needs to be provided with sufficient details for Access Seekers to review the charges applied.⁵¹⁹
- 7.111 By default, Eircom must invoice Access Seekers on a monthly basis, one month in advance of the provision of the relevant service, with credit terms set at thirty (30) calendar days. Access Seekers and Eircom may however mutually agree on alternative credit arrangements if they so wish. For the avoidance of doubt, the system and processes that Eircom implements to issue invoices to Access Seekers must not be such that reconciliation is required by it or Access Seekers on an ongoing basis and any use of reconciliation for invoices must only be by exception.

Details of operational processes

- 7.112 Eircom is required to publish details of all relevant operational processes, including in terms of:
- (a) The process and requirements applicable to product development including information requirements; timelines; prioritisation and criteria; and decision making processes;
 - (b) The Product Development Roadmap, namely the list of all proposed, planned and in progress developments for regulated products, services and associated facilities and related information, ensuring that such Roadmap remains up-to-date;
 - (c) Pre-ordering, ordering, provisioning and service assurance;

⁵¹⁹ BT Non-confidential Submission, p.23.

- (d) Information on reason codes for declined orders. Such information must be provided in sufficient detail so as to allow operators clearly understand the reason why an order was declined;
- (e) Rules of allocation of space between the parties when co-location space is limited;
- (f) Repair and maintenance;
- (g) IT systems and changes to such systems to the extent that they impact Access Seekers and publish such changes in sufficient detail to allow Access Seekers to perform independently any development that may be required to adapt to such changes;
- (h) Details of any necessary interoperability tests for service establishment;
- (i) Specification of cables and equipment to be used on the network.

7.113 In its Submission, Eircom disagrees that the specification of cables and equipment to be used on the network is relevant in the context of active services.⁵²⁰ ComReg considers however that such requirements are relevant with respect to any technical characteristics that Access Seekers need to be aware of in order to correctly interface with Eircom's network. This is the case whether this is with respect to forms of access made available by Eircom at the time of this Decision or forms of access Eircom may offer in the future. ComReg also notes that Eircom already makes information with respect to the specification of equipment and physical interfaces available through documents such as the Wholesale NGN Ethernet Products Technical Handbook (e.g. information on NTUs). Access to information on cables and equipment also assists Access Seekers to better support their customers in terms of customer equipment that may interface with Eircom's active equipment.

7.114 Transparency as regards Eircom's product development process and the rules used by Eircom to prioritise product developments and meet Access requests in a fair, timely and reasonable manner is a key aspect of an Access Seekers' ability to rely on access to Eircom's MI WDC. In this regard Eircom is required to publish the process and criteria, including the input values and calculations, used by it for the purpose of prioritisation.

7.115 Access Seekers also need to be able to plan for the introduction of new products, services or associated facilities and therefore need information,

⁵²⁰ Eircom Non-confidential Submission, paragraph 130.

with a reasonable degree of certainty, regarding the characteristics, timing and the availability of developed products, services or associated facilities.

7.116 Therefore, Access Seekers must:

- (a) be provided with sufficient information relating to the contents of proposed product developments;
- (b) be provided with sufficient information to understand the criteria and process used by Eircom for prioritising developments; and
- (c) be made aware of the proposed launch dates of any new products or changes to existing products.

7.117 Eircom is required to publish, and keep updated, on its publicly available wholesale website, a description of its product development process, including a description of all process steps and activities and identifying all key points in Eircom's product development process, to include the points where Eircom decides to advance, delay or terminate the development of a product, service or facility (the '**Product Development Decision Points**') and any key stages in the analysis, design, development and launch, and the date on which the product, service or facility will be made available (together, '**Milestones**') from receipt of a written request for access to the launch of a new or amended wholesale product, service or facility.

7.118 Eircom is also required to publish the list of all proposed, planned and in progress developments for regulated products, services and associated facilities (hereafter, the '**Product Development Roadmap**') on its publicly available wholesale website and keep such Product Development Roadmap up-to-date on an ongoing basis, including the following details for each Access request, which are required to be provided as soon as possible and in any event no later than within 15 working days of receipt of the request:

- (a) the unique reference to identify the Access request; and
- (b) a description of the request and copies of or links to all relevant documentation.

7.119 In addition, the Product Development Roadmap is to be kept up-to-date with the priority given by Eircom to each request.

Service supply and quality conditions

7.120 In line with the BEREC Guidelines, Eircom is required to publish on its wholesale website the SLAs that it negotiates and agrees as part of its obligation of access and the requirement to ensure fair, reasonable and timely access.

General terms and conditions of the agreement

- 7.121 Finally, the draft contract offer published as part of the LLRO must contain all applicable general terms and conditions, including (without limitation):
- (a) Eircom's dispute resolution procedures to be used between it and Access Seekers;
 - (b) Definition and limitation of liability and indemnity;
 - (c) Glossary of terms relevant to wholesale inputs and other items concerned; and
 - (d) Details of duration, renegotiation and causes of termination of agreements.

7.4.3. Publication, notification and advanced publication

Form of publication

- 7.122 The information to be made available by Eircom under the transparency obligations is, by default, to be published on Eircom's publicly available wholesale website.
- 7.123 In exceptional circumstances, in respect of information that is required to be made available under the transparency obligations but is commercially sensitive such that it would not be appropriate to share such information beyond the Access Seekers availing of MI WDC, or with a demonstrable intention to avail of MI WDC from Eircom, Eircom may restrict access to such information. For example, this could be done by requiring a password to access a section of Eircom's wholesale website and/or subject its provision to reasonable terms and conditions such as the requirement to enter into a Non-Disclosure Agreement. ComReg reserves the right to intervene, as appropriate, including to require Eircom to make certain information publicly available where Eircom cannot provide appropriate justification for not doing so.

Changes to the LLRO

- 7.124 Publication or the making available of information by way of the LLRO as described above will only meet the objective of transparency if the published/available documentation remains up-to-date and Access Seekers may easily ascertain what changes have been made. The provision of clear information on what changes are made to the LLRO and when such changes are made also supports compliance monitoring and enforcement of SMP obligations. Accordingly, Eircom is required to:

- (a) Publish and keep updated on its publicly available wholesale website both clean (or unmarked) and tracked changes (or marked) searchable versions of the LLRO and LLRO Price List. The tracked change version must be sufficiently clear to allow Access Seekers to clearly identify all forthcoming amendments from the preceding version of the LLRO /LLRO Price List;
- (b) Publish and keep updated on its publicly available wholesale website an accompanying change matrix which lists all of the amendments incorporated, or to be incorporated, in any amended LLRO/LLRO Price List (the '**LLRO/LLRO Price List Change Matrix**'); and
- (c) Publish and maintain on its publicly available wholesale website, a copy of historic versions of its LLRO, LLRO Price List, LLRO Change Matrix and LLRO Price List Change Matrix.
- (d) Detail effective and historical charges in separate LLRO documents.

7.125 In its Submission, BT considered that there is a need for accurate tracking of changes of documentation.⁵²¹ ComReg considers that the above change control to the LLRO/LLRO Price List provides for appropriate tracking of changes to documentation.

Advance notification timeframes

- 7.126 In order that changes are made transparently and are clear to all, allowing Access Seekers to factor changes into their commercial decision-making activities and make any necessary adjustments or developments to systems or operational processes, changes to the LLRO and associated documentation are subject to prior notice to ComReg and separately, to Access Seekers.
- 7.127 The 2020 Decision imposed on Eircom advance notification requirements with respect to amendments or changes to the LLRO or the LLRO Price List, namely notification to ComReg five working days in advance of the proposed publication of the amendments or changes, with such publication to take place at least three months in advance of the amendments or changes coming into effect (the '5 working day + 3 month notification rule').
- 7.128 These timelines differed from those applicable to other regulated markets including in particular under the 2024 PIA Decision and the 2024 WLA Decision, both of which continued in place, with some amendments, the notification rules and timelines set out in ComReg's 2018 WLA Decision. ComReg does not believe that there is any specific reason at present why

⁵²¹ BT Non-confidential Submission, p.23.

different rules should apply to regulated wholesale leased lines products as compared to WLA or PIA products and believes that it makes good sense to align the notification timelines across the regulated product set (save where there are good reasons to have different rules).

- 7.129 Under the 2024 PIA Decision and 2024 WLA Decision, Eircom is required, by default, to notify ComReg of proposed amendments or changes at least one month in advance of the proposed publication, and that published amendments or changes then come into effect two months after publication. Proposed amendments to the LLRO Price List relating to new or amended products, services or associated facilities to be made available at the same time to Access Seekers and ComReg as the relevant proposed amendments to the LLRO. ComReg has adopted those timelines for the purpose of the LLRO noting that the one month advance notification allows for a more meaningful engagement between ComReg and Eircom.
- 7.130 By default, amendments to existing products, services or associated facilities or the introduction of new products, services or associated facilities (including prices) must be notified to ComReg at least three months in advance of changes coming into effect, and to Access Seekers at least two months in advance. In other words, ComReg is to be notified one month in advance of notification to Access Seekers ('the 1 + 2 advance notification rule'). While this reduces the time currently provided for publication prior to proposed amendments or changes coming into effect it provides an appropriate balance between providing a more meaningful engagement with Eircom during the notification period to ComReg and not unnecessarily extending the publication period prior to such proposed amendments or changes coming into effect.
- 7.131 As an exception to this 1 + 2 advance notification rule, Access Seekers must be provided with an appropriate period of notice with regards to specific changes that would require Access Seekers additional time in order to effectively compete with Eircom in downstream markets using new or amended products, services or associated facilities. The specific exceptions to the 1 + 2 notification rule are with respect to changes to Eircom's IT systems or where an Access Seeker would need to source or purchase any new equipment or update existing equipment without which it would not be possible for Access Seekers to continue to order existing products, services or associated facilities or to be able to order new or amended products, services or associated facilities. In these circumstances, the associated changes to the LLRO and LLRO Price List must be given to ComReg at least seven months in advance of changes coming into effect, and to Access Seekers at least six months in advance. In other words, ComReg is to be notified one month in advance of notification to Access Seekers ('the 1 + 6

advance notification rule'). ComReg considers that such an approach is appropriate and proportionate and provides Access Seekers with the necessary information and notice relating to such changes.

- 7.132 The documentation to be included at notification should include the information relevant to Access Seekers with respect to the proposed IT changes. The introduction of an IT change that can impact Access Seekers, in the manner described above, should only arise in exceptional circumstances. Eircom will therefore be required to set out the objective reasons in this documentation as to why such an IT change is considered necessary.
- 7.133 Insofar as advance notification to ComReg is concerned, such advance notification, before publication, facilitates compliance monitoring by ComReg and allows ComReg to ensure, in advance of publication, that the changes are sufficiently clear and readily understandable to all Access Seekers. However, this is not an approval process and publication accordingly does not imply compliance.
- 7.134 Changes which trigger an obligation to notify and publish include for instance:
- (a) Where changes are made to the terms and conditions, including prices, associated with each of the products, services and associated facilities provided in the Zone B MI WDC Markets, or to their technical characteristics including relevant engineering or technical standards for network access;
 - (b) Where changes are made to the operational processes described in the LLRO (e.g., in the IPM);
 - (c) Where an existing product is amended or a new version introduced;
 - (d) Where a new product, service or associated facility is introduced;
 - (e) Where changes are made to the general terms and conditions offered by Eircom to Access Seekers.
- 7.135 Finally, for the avoidance of doubt, in relation to existing contracts, text changes proposed by Eircom to the general terms and conditions will not be automatically incorporated into existing contracts. Amendments of existing contracts will require agreement of the parties to the contract as changes to Access Seeker contractual obligations. Eircom can negotiate with Access Seekers regarding any such changes. In the absence of agreement, in appropriate cases, one party or both may refer their disagreement for dispute resolution by ComReg under Regulation 67 of the ECC Regulations.

Meaning of advance notification

7.136 While the purpose of the notification to ComReg is to allow ComReg to review the proposed amendments or changes and engage with Eircom, the purpose of advance publication is to put Access Seekers on advance notice of forthcoming amendments or changes, so that they have sufficient time to anticipate or prepare for same, where and if relevant to them. For this reason, published amendments or changes should not be described by Eircom, in its correspondence with Access Seekers or on its website or documentation, as “proposed”, but rather as forthcoming and any variations to those changes or amendments once published, including their withdrawal, requires the explicit approval of ComReg.

Timeline variation with respect to advance notification timelines

7.137 While clear mandatory notification timelines are an essential aspect of transparency and ensuring certainty, it is also important to ensure a degree of flexibility so that the timeline may be amended in appropriate circumstances. It may be, for instance, that there is a case for immediate availability of an amended product, or that a two or six month publication timeline, as appropriate, is insufficient owing to the operational and/or technical adjustments required in order to avail of an amended products or associated with a change of operational processes.

7.138 The approach followed to date, allowing notification timelines to be varied, either on Eircom’s application or on ComReg’s own initiative, where justified and appropriate is therefore maintained.

Advance notification of technical developments and information

7.139 Eircom has been subject to an obligation with respect to making information available regarding the introduction of, changes to, or technical developments relating to, Eircom’s network, infrastructure or new technologies, as well as providing sufficient information which could reasonably be expected to support products, services or associated facilities falling within scope of its access and conditions of access obligations.⁵²²

7.140 Examples of such information include but are not limited to information relating to changes to the topology or architecture of Eircom’s network, the hardware or software upgrade or replacement of equipment or infrastructure that introduce new capabilities and informing Access Seekers of existing capabilities of Eircom’s network, equipment and infrastructure. Where however Eircom is proposing to make changes to the above that would result

⁵²² As set out in Section 17.21 of the 2020 Decision.

in the loss to Access Seekers of access previously granted then a submission would need to be made by Eircom to ComReg to consider such a withdrawal.

- 7.141 ComReg considers that such information continues to be relevant to Access Seekers so as to allow them to put in place business or operational plans and to assist in informing them of what access requests may be relevant to raise regarding new or existing capabilities. Such an obligation does not however preclude Access Seekers from submitting access requests for new capabilities not yet proposed by Eircom. ComReg has therefore maintained this obligation so that such information is made available to Access Seekers at least six months in advance of implementation. The timeline by which such information is to be made available may be varied with agreement with Eircom or at the discretion of ComReg.

7.4.4. Network rollout plans

- 7.142 Eircom is required to provide information to Access Seekers with respect to network roll out plans. This ensures that Access Seekers are provided with up-to-date and accurate information with respect to network rollout allowing them to efficiently and effectively plan for and deliver products and services on a wholesale basis or to end-users.
- 7.143 On a monthly basis, Eircom has been required to provide information with respect to the roll out of MI WDC (NGN Ethernet and WDM). ComReg is of the view that this information continues to be key to Access Seekers planning, execution and timing of Access and/or Interconnection (products, services and associated facilities). It is ComReg's view that the availability of such information is important for the development of competition as it is a key input into Access Seekers business planning.
- 7.144 For example, in the context of an Access Seeker planning to offer services in an area or areas where the Access Seeker has not previously had a presence, then consideration of Access and Interconnection is a key element in the planning process. ComReg therefore considers that in order to ensure competition, it is essential that information sharing with respect to MI WDC availability is provided to a sufficient degree of granularity that allows Access Seekers to plan to offer new services. Such data needs to be made available to Access Seekers in a timely, efficient, transparent and non-discriminatory manner.
- 7.145 Eircom must, in particular, meet the following requirements with respect to the making available of a MI WDC rollout plan (which include NGN Ethernet and WDM):

- (a) publish at least three (3) months in advance (unless otherwise agreed or directed by ComReg) - any forthcoming changes to the MI WDC rollout plan;
- (b) publish the MI WDC rollout plan within the first ten (10) calendar days of each month; and
- (c) publish the WDC rollout plan with sufficient detail to allow Access Seekers to determine:
 - (i) Active MI WDC nodes;
 - (ii) The services offered at each MI WDC node;
 - (iii) Planned MI WDC nodes (including forecast dates); and
 - (iv) The services to be offered at each planned MI WDC node.

7.146 In its Submission, Eircom stated that the requirement that was included in the Draft Decision of the 2024 Consultation for parallel running for a period of 3 months for the WDC Rollout Plan and the D03/20 Rollout Plan is not required given that the contents of these plans are identical.⁵²³ ComReg agrees with Eircom that such parallel running is not required, and the Decision Instrument has accordingly been updated.

7.4.5. Key Performance Indicators

7.147 Key Performance Indicators ('KPIs') can support the monitoring of non-discrimination obligations (outlined in Section 7.3 above) and, in so doing, provide assurance to Access Seekers regarding the levels of service provided by Eircom to its downstream arm relative to that provided to Access Seekers.

7.148 The Revised 2012 BEREC Common Position⁵²⁴ states that

“NRAs should impose a generic requirement on SMP operators to provide Key Performance Indicators (KPIs) as a means to monitor compliance with a non-discrimination obligation and ensure that SMP operators fulfil their SLAs”

7.149 ComReg's view is that Access Seekers should be assured that the quality of upstream inputs provided to Access Seekers for the provision of retail (and other) services are comparable with upstream inputs used in the provision of

⁵²³ Eircom Non-confidential Submission, paragraph 132.

⁵²⁴ Revised BEREC Common Position on best practices in remedies as a consequence of a SMP position in the relevant markets for wholesale leased lines, BoR (12) 126, page 12.

Eircom's own services. For this reason, the publication of KPIs, for both wholesale and equivalent retail services, is necessary in order to facilitate transparency of information on the relative quality of wholesale and retail services and, in turn be supportive of non-discrimination and access obligations.

- 7.150 Eircom is required to continue to publish KPIs. The requirements regarding KPIs were previously specified in the 2011 KPI Decision⁵²⁵ and amended by the 2020 Decision (Section 17 of the Decision Instrument, Annex 8), which specified a range of Metrics for various categories of LLs against which Eircom would report. In that decision, KPIs are defined as a measure(s) of MI WHQA products and services in the Zone B MI WHQA Markets, provided by Eircom to Access Seekers and by Eircom to itself through self-supply.
- 7.151 Eircom has been required to date to publish its Leased Line (WHQA) quarterly KPI report with the following classifications:
- (a) Table 5: Supply of Zone B MI High Quality Access ('**HQA**')/WHQA Access Services KPIs;
 - (b) Table 6: Order Designation of Zone B MI HQA/WHQA Access Services KPIs;
 - (c) Table 7 (7.2, 7.3(i) and 7.3(ii)): Repair of HQA/WHQA services;
 - (d) Table 8: Supply of Retail MI HQA Services versus MI WHQA Interconnection Services KPIs;
 - (e) Table 9: Order Designation of Retail MI HQA Services versus MI WHQA Interconnection Services KPIs.
- 7.152 Eircom is required to continue to publish these KPIs, on a quarterly basis, on its publicly available wholesale website. Having regard to recent updates to the KPI reporting regime in respect of WLA and PIA products, services and Associated Facilities, the reporting of WDC KPI Metrics that Eircom must follow are the same processes and procedures as set out in ComReg Decision D04/22, "*Access Products and Services: Key Performance Indicator (KPI) Metrics*", dated 29 June 2022, including setting out in full the rules (also known as 'business rules') applied to the data to arrive at the KPI metrics and make such business rules available in line with the requirements of D04/22. The relevant KPI Tables referenced above have been updated (Zone A MI WHQA Interconnection services and Zone B MI WHQA Interconnection services combined as MI WDC Interconnection services, repair times in clock

⁵²⁵ "Introduction of Key Performance Indicators for Regulated Markets", Response to Consultation and Decision, ComReg Document No. 11/45, Decision D05/11, 29 June 2011 (the '**2011 KPI Decision**').

hours for MI WDC Interconnection services) and are more particularly set out at Schedule 4 and Schedule 5 of the Decision Instrument at Annex: 1. The terms HQA and WHQA have the same meaning as Dedicated Capacity ('DC') and WDC respectively.

- 7.153 In its Submission, Eircom considers that given the low order volumes within the Zone B MI WDC Markets, there is potential for the metrics required under this Decision to result in misleading statistical relevance.⁵²⁶ ComReg does not agree that order volumes are such that they would result in misleading statistical relevance and notes that Access Seekers will also be aware of their own order volumes when interpreting KPI reports.
- 7.154 Regulation 51(5) of the ECC Regulations provides that where an undertaking has obligations concerning wholesale access to network infrastructure, NRAs should ensure that KPIs are specified where relevant, as well as corresponding service levels, and closely monitor and ensure compliance with them. While for the time being ComReg does not propose to intervene by way of setting applicable service levels and proposes to leave levels of service for negotiation between Eircom and Access Seekers, ComReg does reserve the right to intervene in accordance with the requirements of Regulation 51 of the ECC Regulations where SLAs prove inadequate in ensuring an appropriate level of service.
- 7.155 ComReg also notes the importance of the PIA Market as a means of facilitating Access Seekers in climbing the ladder of investment and improving competition in the MI WDC Markets. ComReg considers that key characteristics of the physical infrastructure products that Eircom makes available in the PIA Market, and which have important implications for downstream markets, is firstly that Access Seekers are unhindered from both provisioning and restoring service to their customers so that they may do so in as short a time period as possible and secondly the timeframes by which physical infrastructure is repaired. In this context, ComReg will monitor whether the products offered by Eircom in the PIA Market provide appropriate performance in relation to these characteristics and reserves its right to intervene, if appropriate, to specify requirements with respect to provisioning, service restoration and repair of physical infrastructure.
- 7.156 Eircom is also required to publish, on a quarterly basis, a Performance Metric Report setting out, by reference to the service levels the subject of SLAs, the actual service levels achieved in each of the three previous months in respect

⁵²⁶ Eircom Non-confidential Submission, paragraph 134.

of all operators on an aggregate basis. This Performance Metric Report should include at a minimum the following parameters:

- (a) the name and relevant identifiers of the service metrics that will allow Access Seekers to identify the specific activities and processes, along with associated process times, for the products being reported on; and
- (b) the performance targets and actual performance achieved for each activity.

7.157 The report must detail the methodology and the source data used to determine the actual performance achieved. It must also describe how the source data was processed by Eircom and include worked examples as to how the processed source data relates to the actual performance achieved.

7.5 Price control and cost accounting obligations

7.158 In this section ComReg outlines the price control and cost accounting obligations which applies to Eircom for MI WDC products, services and associated facilities in Zone B MI WDC Markets in order to address the competition problems identified in Section 6.

7.159 The pricing concepts and terms used in this section of the Decision are defined in Annex: 14.

7.5.1. Existing pricing remedies

7.160 The 2020 Decision imposed an obligation of cost orientation on Eircom in relation to the provision of access to MI WHQA products, services and associated facilities in the then Zone B MI WHQA Markets and on Eircom's LB TI WHQA products, services and associated facilities.

7.161 In addition, the 2020 Decision further specified that the prices for the MI WHQA products, services and associated facilities in Zone B should be determined by Eircom based on a bottom-up long run average incremental costs plus a contribution to common costs ('**BU-LRAIC+**') methodology⁵²⁷, calculated with reference to the Revised Copper Access Model ('**Revised CAM**')⁵²⁸ and the Next Generation Network ('**NGN**') Core Model⁵²⁹.

7.162 The 2020 Decision also removed the obligation not to cause a margin squeeze on the basis that the pricing freedom given to Eircom in Zone A of

⁵²⁷ Reusable Assets (like duct and poles) are based on Top Down Historic Cost Accounts (TD HCA).

⁵²⁸ comreg.ie/csv/downloads/ComReg_1639.pdf

⁵²⁹ [ComReg-1895.pdf](https://comreg.ie/csv/downloads/ComReg-1895.pdf).

the MI WHQA Market in the absence of regulatory obligations – in particular no price control or non-discrimination obligations – was likely to undermine the effectiveness of a margin squeeze test and so a margin squeeze obligation was not considered appropriate.⁵³⁰

- 7.163 The existing prices charged by Eircom for access to its regulated WHQA services are published on Eircom’s website in its LLRO.

7.5.2. Pricing remedies

- 7.164 As discussed in Section 6, absent regulation, and where Eircom has SMP in relation to MI products, services and associated facilities in Zone B of the MI WDC Markets, Eircom has the potential to engage in exploitative behaviours, such as excessive pricing or practices leading to inefficiency and/or inertia, to the detriment of both competition and consumers. Alternatively, and in the absence of regulation, Eircom could foreclose competition by lowering prices in certain areas of Zone B where alternative infrastructure providers have built their own networks.
- 7.165 Eircom charging excessive prices would raise the input costs to those operators that purchase Eircom’s MI WDC products and services, which may be passed on by operators to their retail customers by way of higher prices and/or wholesale customers which could in turn pass on the higher prices to downstream customers. This could be a deterrent to entry and/or lead to the exclusion of competitors from the downstream retail and/or wholesale markets and ultimately hinder effective competition in downstream retail and/or wholesale markets.
- 7.166 Eircom, as a vertically integrated operator with SMP in Zone B of MI WDC Markets, may have the incentive to charge lower prices in certain parts of Zone B for a period of time, with the intention of deterring market entry or pushing alternative network providers out of the market. This would enable Eircom to further increase its market power and subsequently raise prices. While consumers may benefit in the short run from lower prices, consumer welfare is reduced in the long run due to the elimination of competition and consumer choice in the market. A consequence of excessively low prices is that it can prevent efficient competing alternative networks, in particular networks that may only be present at specific locations, from competing profitably using their own MI WDC products/services. As a result, the entry/expansion barriers in the Zone B MI WDC Markets and related markets

⁵³⁰ See paragraph 10.397 of the 2020 Decision.

are reinforced which can foreclose entry or investment by other efficient alternative network providers.

- 7.167 Having regard to the competition problems outlined above, the purpose of a price control obligation is to ensure:
- (a) Appropriate build-or-buy incentives are provided to Eircom and other operators for efficient network investment;
 - (c) Eircom and other operators are given price certainty and predictability;
 - (d) Eircom cannot price excessively nor foreclose other alternative operators who either have invested or who may be considering investing; and
 - (e) Eircom can recover no more than its efficient costs together with a reasonable rate of return.
- 7.168 ComReg's regulatory objectives, in line with Section 12 of the Communications Regulation Act 2002, include the promotion of competition, to encourage efficient investment and innovation, to contribute to the development of the internal market and to promote the interests of users by encouraging access to the internet at a reasonable cost to end-users.
- 7.169 Regulation 4 of the ECC also provides for the promotion of competition, the desirability of technological neutrality, the development of the internal market and the application of objective, transparent, non-discriminatory and proportionate regulatory principles. Regulation 4 also provides for regulatory predictability, efficient investment, and due consideration for the variety of conditions relating to competition and consumers that exist in various geographic areas.
- 7.170 ComReg must also take into consideration the requirements of Regulation 56 of the ECC Regulations, when imposing a price control obligation, as follows:
- (a) Regulation 56(2) provides that ComReg shall take into account the investment made by the operator and allow the operator a reasonable rate of return on adequate capital employed.
 - (b) Regulation 56(4) provides that ComReg shall take account of the benefits of predictable and stable wholesale prices in ensuring efficient market entry and sufficient incentives for all undertakings to deploy new and enhanced networks.
 - (c) Regulation 56(5) provides that ComReg shall ensure that any cost recovery mechanism or pricing methodology that it imposes under this Regulation serves to promote efficiency and sustainable competition and maximise consumer benefits.

- 7.171 In light of the designation of Eircom with SMP in Zone B of the MI WDC Markets, and the potential competition problems described in Section 6, in particular excessive pricing and/or lowering of prices by Eircom, ComReg considers that forbearance as regards a price control is not an appropriate option in Zone B MI WDC Markets, except for those premises in the Intervention Area ('IA').
- 7.172 In the rest of this section ComReg discusses in the first instance the requirement for differentiated remedies for those premises in the IA in Zone B of the MI WDC Markets to reflect the fact that NBI's presence is likely to constrain Eircom's behaviour. Second, ComReg discusses the price control obligation (and the implementation of it) for the remaining premises in the Zone B MI WDC Markets. The remainder of the discussion in this section then looks at the pricing approach for associated facilities and the obligations of cost accounting and accounting separation.

No price control in the IA in the Zone B MI WDC Markets

- 7.173 Arising from NBI's presence in the IA in Zone B of the MI WDC Markets, it is appropriate to differentiate the remedies applicable to Eircom so that Eircom is not subject to a price control obligation in the IA and hence has pricing freedom in this area.
- 7.174 In its Submission, Enet considered that a differentiated pricing remedy should only apply in the IA once NBI has completed its network build. SIRO also recommended holding-off on lifting the price control in the IA until NBI achieves significant scale and competitive presence. In SIRO's view NBI's competitive presence is limited, and with its pricing benchmarked against Eircom's regulated rates, NBI's pricing has a dependency on Eircom's pricing structure, effectively neutralising NBI's ability to act as a strong competitive constraint.⁵³¹
- 7.175 In its Submission, Vodafone considered that available evidence suggests that NBI is likely to impose only a weak competitive constraint on Eircom in the IA, and that there is a "material possibility" that Eircom does not face a larger competitive constraint in the IA compared to the remaining parts of Zone B of the MI WDC Markets. Vodafone claimed that if NBI's presence does not result in Eircom facing effective competition in the IA then removal of the price control gives Eircom the ability and incentive to set excessive prices.⁵³²

⁵³¹ SIRO Submission, page 24.

⁵³² Vodafone's Submission, pages 10-12.

- 7.176 To clarify, firstly, there is only a small subset of CPs in the IA in Zone B of the MI WDC Markets i.e., 10% of premises in Zone B or c. 465 premises, which can be served by either Eircom or NBI, and in respect of which a differentiated price control (of no price control) applies.
- 7.177 In addition, and as discussed in Section 6, NBI has an obligation as part of its NBP contract with the Irish State to provide leased lines services in the IA using its subsidised network, with NBI's network rollout due to be completed by the end of 2026 i.e., within 12 months of this Decision. Furthermore, the NBP contract specifies that the price that NBI charges its customers for leased lines services must not exceed the benchmark reference price which is set based on Eircom's equivalent regulated price.⁵³³ Hence, NBI's prices are maximum prices and NBI has the flexibility to lower them in order to compete against Eircom in the IA.
- 7.178 As a result, ComReg considers that going forward Eircom may face greater pricing constraints at those premises falling within the NBP IA (and for which there is demand for MI WDC) given NBI's benchmarked price in this area. This means Eircom would potentially face a greater degree of pricing constraint at the IA premises and so it is less likely to set excessive prices in the IA in Zone B to the detriment of downstream competition and consumers.
- 7.179 Hence, ComReg is of the view that it is proportionate and justified to differentiate the price control remedies applicable to Eircom where NBI is present and is likely to place a greater constraint on Eircom's pricing behaviour going forward, in the IA in Zone B of the MI WDC Markets.
- 7.180 Therefore, ComReg has decided that the price control obligation of cost orientation does not apply to Eircom in the IA in Zone B of the MI WDC Markets. This means that Eircom has pricing freedom in this area. The premises to which the price control obligation would not apply are those premises in Zone B of the MI WDC Markets that are in the IA, and which can be identified by the associated Eircodes in the Amber Areas on the NBP Map⁵³⁴ set out and updated by DCCS.
- 7.181 ComReg considers that other forms of price control are not appropriate in the IA. A price control obligation of cost orientation (similar to the one set out below for the remaining areas of the Zone B MI WDC Markets) might not be proportionate or justified on the basis that there is a reduced risk of excessive

⁵³³ It should be noted that NBI's product offering and pricing structure is not directly comparable to Eircom's Ethernet offering.

⁵³⁴ [National Broadband Plan Map](#)

pricing by Eircom in the IA for the reasons discussed above. The option of a price floor mitigates the risk to competing networks of excessively low prices by Eircom. However, ComReg considers that the presence of NBI, in addition to Eircom, has the potential to reduce the likelihood of an alternative (third) network operator being present at those IA premises in Zone B of the MI WDC Markets (although it cannot be ruled out). In addition, these premises represent a small proportion of the overall premises in Zone B for which the cost to serve is expected to be higher than in the rest of Zone B. As a result, ComReg considers that the option of imposing a price floor in respect of those premises in the IA would be disproportionate.

- 7.182 Hence, ComReg has decided not to subject Eircom to a price control obligation regarding the premises in the IA in Zone B of the MI WDC Markets.
- 7.183 Notwithstanding the above, ComReg notes the very small volume of MI WDC services currently being sold by NBI and the relatively high level of prices for these services on NBI's network. There is consequently a residual concern that removal of all regulatory constraints on Eircom's MI WDC pricing in the IA might lead to competitive distortions if for example Eircom were able to self-supply MI WDC services at more favourable prices than available to other operators. For this reason, ComReg has decided not to differentiate the remedies further and in particular Eircom's obligations of access, non-discrimination and transparency continue to apply across the IA premises in the Zone B MI WDC Markets in the same way as they do outside the IA.
- 7.184 In particular, this means, in line with Eircom's obligation of non-discrimination, that Eircom should charge the same price to all operators accessing its MI WDC products and services in the IA in the Zone B MI WDC Markets including Eircom itself.
- 7.185 In its Submission, Eircom claimed that this results in imposing on Eircom a price control, although indirectly, in the IA of the Zone B MI WDC Markets, by requiring Eircom to charge the same price to all operators. Eircom also stated that despite ComReg's rejection of benchmarking as an appropriate remedy, requiring Eircom to charge the same price to all operators in the IA in Zone B essentially sets a price benchmark by mandating uniform pricing across operators, according to Eircom.⁵³⁵
- 7.186 To clarify, Eircom is allowed the freedom to differentiate its MI WDC prices in the IA premises in Zone B of the MI WDC Markets if it chooses to do so. In such case, Eircom must charge the same price to all Access Seekers at the IA premises in Zone B MI WDC Markets in order to ensure equal

⁵³⁵ Eircom Submission, paragraphs 137-141, pages 45-48.

treatment of those accessing its MI WDC services, consistent with the obligation of non-discrimination. This would help ensure, in conjunction with the potential to avail of NBI services, sufficient competition for those who bid for MI WDC services in the IA.

- 7.187 This also means that Eircom must notify any price changes for its MI WDC products and services in the IA in Zone B of the MI WDC Markets in line with its transparency obligations, discussed earlier in this section. ComReg considers that the transparency obligation also provides a means of observing that discrimination is not occurring.
- 7.188 In its Submission, Eircom stated that it would have to implement systems and processes for pricing at the IA premises in Zone B of the MI WDC Markets, stating that these prices "*...may differ from eir pricing in IA areas in Zone A, as well as in non-IA Zone B areas.*" and that this will drive specific and additional costs for Eircom which they will need to recover.⁵³⁶ Eircom also claimed that ComReg had failed to assess if such a remedy is justifiable at the cost and operational level."⁵³⁷
- 7.189 ComReg understands Eircom's Submission to suggest that if it were to differentiate the price in the IA in Zone B of the MI WDC Markets then it would have to apply the same price that it currently charges in the IA in Zone A MI WDC Markets and that this would cause internal billing or network systems issues associated with implementing different prices in different zones. which ComReg considers is up to Eircom to resolve, if it decides to avail of the opportunity of pricing freedom in the IA. In addition, Eircom's point appears at odds with Eircom's submission that Eircom already applies a different price in the IA in Zone A MI WDC Markets (to the price in the IA in Zone B MI WDC Markets), today.
- 7.190 In fact, since the 2020 Decision (D03/20) Eircom has had pricing freedom in the Zone A MI WDC Markets, as this area is deregulated, and so there is nothing new regarding the pricing approach being adopted now in the IA in Zone B of the MI WDC Markets.
- 7.191 ComReg considers that if Eircom were to implement differentiated prices in the IA in Zone B of the MI WDC Markets, any such justified additional systems costs associated with it can be recovered through the IA rental prices.

⁵³⁶ Eircom's Submission, paragraph 144, page 48.

⁵³⁷ Eircom Submission, paragraph 145, page 48.

Price control obligation in the rest of Zone B MI WDC Markets

- 7.192 This section outlines the price control obligation that applies to the rest of the Zone B MI WDC Markets i.e., outside the IA of the Zone B MI WDC Markets.
- 7.193 In addressing the pricing related competition problems outlined earlier in relation to Zone B MI WDC Markets, a range of price control options are available to ComReg⁵³⁸, including:
- (a) Benchmarking⁵³⁹;
 - (b) Retail minus;
 - (c) Margin squeeze test; and
 - (d) Cost orientation.
- 7.194 In determining the appropriate price control to adopt for MI WDC products, services and associated facilities, including WDM services, outside the IA of the Zone B MI WDC Markets, ComReg needs to strike the right balance between:
- (a) setting the correct build-or-buy price signal to help inform efficient investment decisions by alternative operators who may wish to rollout their own network;
 - (b) providing protection to those operators purchasing (or buying) WDC services from Eircom; and
 - (c) allowing Eircom to recover no more than its efficient investment costs and a reasonable rate of return.
- 7.195 For the reasons set out below, ComReg is of the view that only an obligation of cost orientation addresses the competition problems identified in Section 6 and summarised at paragraphs 7.164 - 7.166. In particular, the cost orientation obligation addresses concerns of excessive pricing by Eircom in relation to MI WDC products, services and associated facilities, including WDM services, outside the IA of the Zone B MI WDC Markets.
- 7.196 Hence, ComReg has decided to maintain the obligation of cost orientation for MI WDC products, services and associated facilities, including for WDM and interconnection services, outside the IA of the Zone B MI WDC Markets.
- 7.197 A cost orientation obligation should ensure that operators (using Eircom's WDC services) and consumers are not at risk of facing excessive prices. When the appropriate cost methodology or pricing approach is applied, it can

⁵³⁸ See Annex: 10, Table 1 for a description of the various price controls.

⁵³⁹ Benchmarking is provided for in Regulation 56(5) of the ECC Regulations.

also provide the correct investment and build-or-buy signals to Eircom and other alternative operators. Setting wholesale prices by way of a cost orientation obligation helps to ensure greater predictability and regulatory certainty regarding the level of access prices for Access Seekers, thereby allowing them to make investment decisions and develop business plans with a greater degree of confidence.

- 7.198 One of ComReg's objectives in setting the prices for Eircom's MI WDC services outside the IA in Zone B MI WDC Markets, is to provide alternative operators with appropriate build-or-buy investment signals so as to encourage the rollout of their own infrastructure consistent with Regulation 56(4) of the ECC Regulations. Business consumers are best served over the medium to long term where competition is present by way of other alternative operators providing WDC services over their own infrastructure. Control over their own infrastructure means that competing operators can more easily make their own service portfolios, compared to relying on the SMP operator's wholesale product portfolio. This leads to greater differentiation in services and products in downstream markets to the benefit of end-users.
- 7.199 In addition, cost orientation should ensure that the SMP operator (Eircom) can recover no more than its efficient investment costs plus a reasonable rate of return, consistent with Regulation 56(2) of the ECC, in order to address the competition concern of excessive pricing. The absence of a cost orientation obligation may allow Eircom to set excessive wholesale charges which would raise the input costs for those operators that purchase Eircom's WDC services. Hence, the cost orientation obligation should prevent Eircom charging excessive prices and causing harm to competition.
- 7.200 Cost orientation also provides Eircom with certainty of recovering its efficient costs plus a rate of return over the long-term, and so it encourages continued investment by the SMP operator in its regulated services.
- 7.201 Maintaining the obligation of cost orientation is also in line with the costing approach adopted in the 2020 Decision and it ensures regulatory consistency and predictability across market review periods, which can benefit ongoing investment by alternative operators in line with ComReg's strategic objectives. Furthermore, the fact that ComReg is maintaining the same form of price control obligation means that the incremental burden to Eircom is unlikely to be significant while providing Eircom with price certainty allowing informed investment decisions.
- 7.202 ComReg considers that the other forms of price control, including benchmarking, retail minus or margin squeeze tests, are not sufficient to ensure that prices for MI WDC products, services and associated facilities outside the IA in Zone B MI WDC Markets are not excessive and are set in a

way that supports efficient investment incentives. This is consistent with ComReg's position taken in the 2020 Decision.

- 7.203 Benchmarking is not considered appropriate given the complexity to establish a like-for-like benchmarked price for WDC services. There can be differences in price due to underlying differences in local access and transmission networks' technologies (e.g. Ethernet, XGS PON), demand density and geographical distances across the leased lines network, as well as differences that arise due to the choices made regarding the adopted pricing models. Furthermore, the fact that Eircom offers a large suite of MI WDC products and services also makes it difficult to establish and maintain with a reasonable degree of predictability a price benchmark for all MI WDC products and services.
- 7.204 Retail minus price control is not deemed appropriate for MI WDC services because of the difficulty in identifying the retail price associated with a particular regulated wholesale service i.e., the one-to-one relationship between a retail and wholesale WDC service. WDC services are often bundled with other unregulated services, including MI WDC services provided in Zone A (unregulated area) and it is also often the case that retail bundles include regulated and unregulated services offered on a bespoke bid basis. Hence, it is not always possible to determine the retail and wholesale WDC service prices and so a retail minus approach is not considered appropriate.
- 7.205 ComReg notes BT's Submission advocating for a net revenue test and examination by ComReg of actual pricing (not price lists) to better inform itself how the market works today. BT claimed that given multi-site customers there should be a remedy imposed on Eircom to prevent the incentive where prices in Zone A MI WDC Markets could be used to enhance the ability of Eircom to effectively subsidise Zone B MI WDC Markets pricing within a multi-site bid.⁵⁴⁰
- 7.206 However, for similar reasons to those outlined above at paragraph 7.204 for the retail minus price control, ComReg considers that a margin squeeze obligation is not deemed appropriate at this time. In addition, the pricing freedom allowed to Eircom in the Zone A MI WDC Markets in the absence of regulatory obligations – in particular no price control or non-discrimination obligations – is likely to undermine the effectiveness of a margin squeeze test as leased lines (WDC services) are often provided as part of multi-site

⁵⁴⁰ BT Submission, page 27.

contracts,⁵⁴¹ comprising of sites located in both Zone A and Zone B of the MI WDC Markets. Therefore, a margin squeeze obligation is not deemed appropriate at this time and this is consistent with the conclusion reached in the 2020 Decision (see paragraph 7.162). However, ComReg will monitor market developments closely and if necessary, rely on its competition law powers.

- 7.207 For the reasons outlined above, ComReg has decided to maintain the price control obligation of cost orientation for MI WDC products, services and associated facilities, including WDM services, outside the IA in the Zone B MI WDC Markets.

7.5.3. Implementing the cost orientation obligation

- 7.208 In this section ComReg sets out how the cost orientation obligation is implemented in order to determine the rental prices for Eircom's MI WDC products, services and associated facilities outside the IA in Zone B MI WDC Markets. ComReg in this regard agrees with Eircom's Submission that the objectives of cost orientation can only be determined by the way cost orientation is defined and by providing the key details of how it is implemented.⁵⁴²

- 7.209 As discussed in section 7.5.2, ComReg's objectives in deriving the regulated MI WDC prices includes setting the correct build-or-buy price signal to help inform efficient investment decisions by alternative operators, providing protection to those operators purchasing MI WDC services from Eircom and allowing Eircom to recover no more than its efficient costs and a reasonable rate of return.

Implementation options

- 7.210 To implement the cost orientation obligation, ComReg considered a number of options:
- (a) Pricing continuity approach;
 - (b) Updated BU-LRAIC+⁵⁴³ prices set by reference to a ComReg model;
 - (c) Updated BU-LRAIC+ prices set by reference to an Eircom model.
- 7.211 Pricing continuity means Eircom continues to charge its existing MI WDC rental prices, including WDM and interconnection rental prices, as fixed price

⁵⁴¹ Which also may be bundled with other services.

⁵⁴² Eircom's Submission, paragraphs 146 & 148, page 50.

⁵⁴³ This term is described at Annex: 10, Table 2.

points. In other words, Eircom charges the rental prices for MI WDC products, and services, including WDM services, outside the IA in Zone B MI WDC Markets, according to the current Zone B rental prices listed in Eircom's published LLRO price list. For the associated interconnection services, Eircom charges the current rental prices in its published LLRO price list. This means that, outside the IA in Zone B MI WDC Markets, the current maximum prices determined by way of the 2020 Decision become fixed price points going forward, and so Eircom cannot charge above or below the fixed prices.

- 7.212 In its Submission, Vodafone claimed that price stability and predictability are unlikely to drive material additional efficient investment. According to Vodafone, this is because market conditions in the Zone B MI WDC Markets, mean that the scope for such investment is limited, while prices "significantly above" efficient costs have the likely adverse effect of dampening retail competition. Vodafone also stated that the data presented in ComReg's consultation suggested that Eircom's MI WDC lines in Zone B MI WDC Markets represent approximately 50% of Eircom total WDC lines; it would follow that for Eircom's current returns in Zone B MI WDC Markets to be in line with the WACC, its returns in Zone A MI WDC Markets would have to be approximately 85%, which Vodafone considers unlikely, unless it is the case that Eircom actually holds a position of SMP in this area.⁵⁴⁴
- 7.213 Vodafone submitted further that even if current prices are reflective of costs today, pricing continuity would be expected to result in prices above cost over the price control period. Reasons included expected efficiency gains by Eircom over time and expected growth in demand for higher bandwidth services, meaning that the mix of Eircom's MI WDC services would likely shift towards high bandwidth MI WDC services with higher prices with a negligible impact on unit cost.⁵⁴⁵
- 7.214 For the reasons set out below, ComReg considers that pricing continuity is appropriate to determine the relevant wholesale rental prices for Eircom's regulated MI WDC services, including the associated Eircom interconnection services, while meeting ComReg's regulatory objectives outlined above.
- 7.215 Eircom supports the price continuity approach, stating in its Submission that it *"...agrees with the need for a period of pricing continuity in the WDC market...and agrees with ComReg's reasoning regarding the need to safeguard the investments of current network operators who have recently*

⁵⁴⁴ Vodafone's Submission, page 15.

⁵⁴⁵ Vodafone's Submission, pages 15/16.

*deployed or are about to deploy infrastructure. eir agrees in principle that it is appropriate to charge the current rental prices in Zone B.*⁵⁴⁶

- 7.216 ComReg considers that given the competition concern of market foreclosure by Eircom and ComReg's objective to encourage investment by alternative operators, that a fixed price point provides an additional safeguard to those alternative operators investing in WDC networks. This is because Eircom does not have the flexibility to lower wholesale rental prices for MI WDC services outside the IA in Zone B MI WDC Markets when the price is fixed and so it protects alternative operators' investments in WDC networks.⁵⁴⁷ In other words, the fixed price point acts as a price floor⁵⁴⁸ when Eircom and another WDC provider are competing outside the IA in Zone B MI WDC Markets.
- 7.217 Safeguarding alternative operators' investments could also be achieved by establishing the economic space between MI WDC services (leased lines) and the wholesale inputs provided by Eircom upstream from leased lines (e.g. PIA), which would be less limiting on Eircom's pricing flexibility. However, designing an economic replicability test brings practical implementation difficulties including the need for a cost modelling exercise to determine the wholesale and network inputs. This would also increase the monitoring burden on Eircom and could undermine pricing certainty. ComReg considers that this option is not proportionate or appropriate at this time.
- 7.218 A key benefit of the pricing continuity approach is the fact that it avoids changes to existing prices and so it provides price stability and predictability in the market, consistent with Regulation 56(4) of the ECC. This is particularly relevant in the case of alternative operators investing or considering investing in WDC networks, as price instability can be a deterrent to alternative operator investments and competition in general. For business consumers, greater wholesale pricing certainty should also help facilitate stable retail prices.
- 7.219 It is also the case that a pricing continuity approach maintains the same level of protection to existing operators purchasing regulated WDC services from Eircom outside the IA in Zone B MI WDC Markets, including limiting the risk of dampening of retail competition. In the case of prices for terminating ends of Ethernet-based leased lines, i.e., Eircom's WSEA Physical services,

⁵⁴⁶ Eircom's Submission, page 51, paragraph 150.

⁵⁴⁷ By in large, Eircom has not reduced its MI WDC prices in Zone B since the 2020 Decision.

⁵⁴⁸ This term is described at Annex: 10, Table 1.

Eircom removed the geographically differentiated prices subsequent to the 2020 Decision, and so continuing with the current prices allows for the status quo and the benefits of national pricing to continue.

- 7.220 For Eircom, the pricing continuity approach should not undermine its ability to recover its efficient investment costs. While it is possible that services provided in Zone B have higher costs than those provided in Zone A (competitive area) due to lower economies of scale and density,⁵⁴⁹ a price continuity approach aligns with Eircom's decision to remove the geographically differentiated prices for terminating segments, as noted above, where such economies can be more prevalent.
- 7.221 Furthermore, based on the returns reported in Eircom's HCAs,⁵⁵⁰ there is no evidence to suggest that at the existing price levels Eircom's ability to recover its costs in Zone B has eroded since the last market review. Based on the Additional Financial Information ('AFI') submitted by Eircom to ComReg, since 2020 Eircom's Ethernet revenues have increased. As a result, Eircom's total revenues (for TI and MI WDC services) published in the WHQA Income Statement in Eircom's HCAs for the financial year 2024 is c.€101.1m, with a profit/return of c.€67.3m and a return on capital employed of 42% on capital of c.€159.9m.⁵⁵¹ ComReg considers that given Eircom's reported results and the fact the current inflationary environment in Ireland has stabilised,⁵⁵² there is no need to apply a price index.
- 7.222 While the level of returns shows that the profits earned by Eircom in providing these services is above the current regulated WACC of 4.82%,⁵⁵³ the majority of the MI WDC lines are in the unregulated area (Zone A) of the MI WDC market where Eircom has complete pricing flexibility.
- 7.223 In addition, the price control adopted in the 2020 Decision is predominantly based on a BU-LRAIC+ costing methodology, with assets valued at their

⁵⁴⁹ By way of illustration, the percentage of Zone A connected premises in the IA is circa 5%, while in Zone B it is 10%.

⁵⁵⁰ The returns reported by Eircom for the existing WHQA Market as part of its published HCA Separated Accounts includes both regulated and unregulated Traditional and Modern Interface leased lines services.

⁵⁵¹ [HCA-title-page-FY24.pdf](#)

⁵⁵² [Press Statement Flash Estimate for the Harmonised Index of Consumer Prices August 2025 - CSO - Central Statistics Office](#)

⁵⁵³ ComReg Information Notice 25/35, "Weighted Average Cost of Capital ("WACC") Annual update – 2025", 12 June 2025.

current replacement cost,⁵⁵⁴ to reflect the objective of encouraging efficient investment by alternative network operators, and not at their historic cost, which is the approach adopted in Eircom's HCAs. It is also the case that these differences can be accentuated when the invested capital is not maintained and Eircom sweat their assets.

- 7.224 The alternative two options of updating the BU-LRAIC+ prices for MI WDC products and services outside the IA in Zone B, using either a model derived by ComReg (i.e. the approach taken in the 2020 Decision) or Eircom, are not deemed appropriate or justified at this point in time.
- 7.225 Vodafone, in its Submission, recommended that ComReg update the cost models to identify the price levels consistent with the level of costs, which could avoid the negative effect of excessive prices in the market. Vodafone stated that at a minimum a model would allow ComReg to test if current prices are out of line with costs in Zone B MI WDC Markets, which they consider is critical in determining if pricing continuity is appropriate. Vodafone also claimed that cost modelling does not represent a material burden as updated costs and demand could be gathered through the AFIs.⁵⁵⁵
- 7.226 To clarify, while ComReg recognises that updating the BU-LRAIC+ prices for MI WDC services may in principle better reflect current efficient costs, any changes to prices may affect price stability and predictability, which is not consistent with Regulation 56(4) of the ECC Regulations. Updating the prices to reflect current BU-LRAIC+ costs may lead to uncertainty for market players who are investing or considering investing over the market review period, and so this could impact the investment decisions of alternative operators who may want to build their own network (or rely on Eircom's regulated PIA) and compete with Eircom.
- 7.227 Furthermore, there is the added complexity and burden of modelling the cost of fibre based leased lines for a subset of regulated WDC lines in the area outside the IA in Zone B MI WDC Markets, which seems disproportionate at this time. For example, the data requirements of a BU-LRAIC+ cost model go well beyond the data obtained by ComReg by way of Eircom's AFI submissions. Adding to this, to the extent that MI WDC services are provided over the same (PON) network that is being deployed to provide FTTH services, it will face the same demand and cost uncertainties arising from the

⁵⁵⁴ Except for PIA (ducts and poles), which are considered reusable assets, are valued based on historic costs.

⁵⁵⁵ Vodafone Submission, page 16.

transition from copper to fibre based access services. Hence, updating a cost model is not as straightforward as Vodafone suggests.

- 7.228 Nevertheless, ComReg has developed an FTTP cost model⁵⁵⁶ which could be used to assess the costs of WDC services. However, ComReg maintains the view, in line with its regulatory objectives set out earlier, that price stability and predictability are of utmost importance in order to provide stable build-or-buy investment signals to those alternative operators investing or considering investing in WDC networks over the market review period. Hence, a pricing continuity approach continues to be the preferred approach.
- 7.229 Regarding Eircom's request, in its Submission, that ComReg clarify how it expects Eircom to comply with a pricing continuity obligation while providing for the possibility to direct Eircom at some future point, to justify its prices on the basis of a yet to be completed fibre cost model or some form of BU LRAIC+ principles,⁵⁵⁷ ComReg sees no significant issue or difficulty. Eircom contends that it is "*entirely irrational for ComReg to state in a legally binding instrument that current prices are cost-oriented whilst also proposing in the body of the text a mechanism for Eir to justify those prices using a completely different pricing methodology.*"⁵⁵⁸ However, this is not so. The obligation on Eircom is one of cost-orientation, which, under the Decision, will be deemed to be met by the pricing continuity approach during the market review period, unless Regulation 56(6) of the ECC Regulations is initiated.
- 7.230 ComReg is of the view that the pricing continuity approach i.e., to continue with the existing rental prices in Eircom's LLRO price list, is the appropriate measure to determine the relevant rental prices for Eircom's MI WDC products and services, including WDM services, outside the IA in Zone B MI WDC Markets, and the existing rental prices in Eircom's LLRO price list for the associated Eircom interconnection services, over the market review period. Notwithstanding the above, it is the case that the ECC Regulations stipulate, in Regulation 56(6), that the burden of proof that charges are derived from costs, including a reasonable rate of return on investment lies with the undertaking concerned (Eircom), and the regulator (ComReg) may issue a direction requiring an undertaking to provide full justification for its prices and may where appropriate require prices to be adjusted. Regulation 56(6) also provides that the regulator may use cost accounting methods

⁵⁵⁶ ComReg's FTTP Cost Model, , which had the assistance of external advisers Axon Partners, is a BU-LRAIC+ network cost model assessing the costs of a FTTP passed premises network, as outlined in ComReg Document 24/07.

⁵⁵⁷ Eircom's Submission, paragraph 151, page 51.

⁵⁵⁸ Eircom Submission, paragraph 154, page 52.

independent of the undertaking concerned. Hence, the provisions in Regulation 56(6) are part of the European regulatory framework which an operator designated with SMP must comply with.

- 7.231 Regulation 56(6) of the EEC Regulations applies to any regulated services subject to a cost orientation obligation, which is also referenced in the 2024 PIA Decision (paragraph 7.362) and in the 2024 WLA Decision (paragraph 9.872).
- 7.232 Consistent with the obligation of cost orientation imposed on Eircom in the context of MI WDC services, if Eircom were to propose revised WDC prices to ComReg or ComReg were to request Eircom to justify its WDC prices, in any such costing assessment, ComReg will rely on BU-LRAIC+ costing principles. In this regard, ComReg could rely on the FTTP cost model, referred to at paragraph 7.228, in order to assess the relevant MI WDC costs.
- 7.233 Eircom stated that a shift from the proposed pricing continuity approach back to cost-based pricing through a ComReg direction would undermine the incentives for telecom providers to build new networks.⁵⁵⁹ ComReg does not agree. ComReg notes that the European Commission's Gigabit Recommendation advocates the use of BU-LRAIC+ principles as a means to providing operators with the appropriate investment signals in order to encourage alternative operators to invest (or build) new networks. In fact, the pricing continuity approach is not a complete departure from BU LRAIC+ principles, given that the existing WDC prices, which Eircom will continue to charge, were set on the basis of a BU-LRAIC+ methodology in the 2020 Decision.
- 7.234 In summary, and notwithstanding the above, pricing continuity is deemed proportionate and justified over the five year market review period, in light of ComReg's continued objective of encouraging alternative network investment in MI WDC services in the Zone B MI WDC Markets, for the reasons outlined above.
- 7.235 In addition, ComReg acknowledges that for existing active circuits terminating at a premises situated in a Zone A WPZ under the 2020 Decision that is now a Zone B WPZ under the present Decision, a period of time should be given to Eircom to update the price charged for such circuits in order to comply with the price control. ComReg believes that a three month 'sunrise' period starting from the date of the Decision will give Eircom and the Access Seekers concerned sufficient time to adjust prices to the LLRO Zone B rental prices, allowing Eircom to update its systems and operators impacted under

⁵⁵⁹ Eircom Submission, paragraph 155, page 52.

existing contracts to make any necessary arrangements for the changes in regulation.

7.5.4. Pricing of Associated Facilities

- 7.236 As part of the access obligations detailed in Section 7, Eircom is required to provide a range of ancillary services and facilities to operators, including co-location services and interconnection services associated with the WDC services in Zone B of the MI WDC Markets. All of these associated facilities are required to support the development of infrastructure competition and continue to be essential to investments, to enable and support provision of WDC services and to allow other operators to provide and differentiate their services as well as promoting effective downstream competition.
- 7.237 The price control for ancillary services and facilities in the 2020 Decision was in the form of a cost orientation obligation where Eircom could recover no more than its efficient costs plus a reasonable rate of return for co-location services and connection fees while interconnection services were set based on BU-LRAIC+ methodology.
- 7.238 ComReg's objective is that these services are not priced in an excessive and/or discriminatory manner, and that the charges set for these services enable a level playing field for efficient operators to compete. Hence, for the reasons outlined above, ComReg considers that the existing cost orientation obligation should be maintained for these services.
- 7.239 In this section ComReg further specifies the appropriate costing/pricing approach for co-location services and the upfront (non-recurring) connection fees associated with WDC services, as the pricing of Eircom's interconnection services has been addressed earlier in section 7.5.3.
- 7.240 There are two main costing options available to ComReg for determining the prices for ancillary related charges, including:
- (a) BU-LRAIC+ methodology; or
 - (b) Top down historic cost accounting ('**TD HCA**')⁵⁶⁰ methodology.
- 7.241 For the reasons set out below, ComReg has decided that the TD HCA methodology is appropriate for determining the charges for co-location services and for upfront (non-recurring) connection fees.
- 7.242 TD HCA is an appropriate methodology to adopt where ComReg's objective is to address concerns of excessive pricing by Eircom while at the same time

⁵⁶⁰ This term is described in Annex: 10, Table 2.

ensuring Eircom recovers no more than its actual efficiently incurred costs plus a reasonable rate of return consistent with Regulation 56(2) of the ECC.

- 7.243 Co-location services and connections are generally one-off activities caused by the operator (or access seeker) and so the objective is to ensure that Eircom can recover the efficient costs they incur in carrying out the related activity, plus a reasonable rate of return.
- 7.244 Hence, the TD HCA approach ensures cost recovery for Eircom while other network operators are not subject to excessive costs and have a level playing field to compete. A TD HCA approach is also consistent with the methodology specified for co-location services and connection charges in the WLA Market.
- 7.245 In its Submission BT suggested that ComReg needs to establish safeguards to ensure other non-essential components are not included in the price and to determine whether Eircom's HCA costs are efficient so that Access Seekers are not paying for inflated internal upstream facilities.⁵⁶¹
- 7.246 Regulation 56(6) of the ECC Regulations states that where prices are subject to a cost orientation price control, the burden of proof that charges are derived from costs, including a reasonable rate of return lies with the undertaking concerned i.e., Eircom. ComReg recognises that the charges associated with ancillary services and facilities may be outdated. Therefore, ComReg may issue a direction requiring Eircom to justify its charges for co-location services and the upfront/non-recurring connection fees associated with WDC services and where appropriate require prices to be adjusted.
- 7.247 Alternatively, the BU-LRAIC+ approach is an option where ComReg's objective is to address concerns of excessive pricing by the SMP operator while also providing alternative operators with the appropriate build-or-buy investment incentives. In other words, the BU-LRAIC+ methodology promotes efficient infrastructure investment by alternative operators who may wish to replicate the assets in question. Given the nature of co-location services and connection charges, ComReg's objective is to ensure the recovery of Eircom's efficient costs (which preserves its investment incentives), which is best achieved by a TD HCA methodology. Hence, it is appropriate that the TD HCA methodology apply to the charges for co-location services and to upfront connection fees.

⁵⁶¹ BT Submission, page 29.

7.5.5. Cost accounting obligation

- 7.248 To ensure the effectiveness of the price control obligations, ComReg considers that it is necessary to have a clear and comprehensive understanding of the costs of Eircom's provision of WDC services. Obligations to maintain appropriate cost accounting systems generally support obligations of price control and accounting separation and can also help ComReg in monitoring the obligation of non-discrimination.
- 7.249 Eircom, in its Submission, claimed that the obligation of cost accounting was unjustified and unnecessary, stating that the HCA framework does not align with a pricing continuity approach or a BU-LRAIC+ approach and creates inconsistencies in cost allocation and regulatory enforcement.⁵⁶²
- 7.250 ComReg does not agree that this is the case. The purpose of imposing an obligation to implement or maintain a cost accounting system is to ensure that fair, objective and transparent criteria are followed by the SMP operator in allocating their costs to services in situations where they are subject to price control obligations, in particular a cost orientation remedy.
- 7.251 In addition, where a cost orientation obligation is imposed, Regulation 56(6) of the ECC Regulations provides that the burden of proof rests with the SMP operator to justify that its prices/charges are derived from costs. Furthermore, Regulation 56(6) of the ECC Regulations provides that ComReg may use cost accounting methods independent of those used by the SMP operator in the market and it may issue a direction requiring the SMP operator to provide full justification for its prices, and may, where appropriate, require prices to be adjusted.
- 7.252 Having regard to the need to support the effectiveness of the price control obligations above and to enable monitoring of Eircom's compliance with its price control obligation, accounting separation obligation and non-discrimination obligation, ComReg considers that the continued imposition of cost accounting obligations on Eircom for MI Wholesale Dedicated Capacity services is justified and proportionate.
- 7.253 In particular, ComReg requires Eircom to maintain appropriate cost accounting systems to justify its costs (and prices) for MI WDC products, services, and associated facilities, in particular in Zone B of the MI WDC Markets. As a result, Eircom must ensure that its cost accounting systems are capable of providing the level of granularity and transparency necessary to demonstrate compliance with its obligations arising from a finding of SMP

⁵⁶² Eircom Submission, paragraph 171, pages 57/58.

for MI WDC products, services and associated facilities in the Zone B MI WDC Markets, including its price control and accounting separation obligations and in particular ComReg Decision D08/10⁵⁶³ ('**2010 Accounting Separation Decision**')⁵⁶⁴.

7.6 Accounting separation obligation

7.6.1. Existing accounting separation obligation

- 7.254 The 2020 Decision imposed an obligation of accounting separation on Eircom with respect to Zone B MI WHQA products, services and associated facilities. Pursuant to the 2020 Decision, Eircom publishes a consolidated Income Statement and a consolidated Statement of Mean Capital Employed for the WHQA market annually. ComReg recognised in the 2020 Decision that although part of the WHQA market i.e., Zone A, was no longer subject to regulation, Eircom should be required to provide the consolidated financial results for the WHQA market.⁵⁶⁵
- 7.255 In addition, and as part of Eircom's Additional Financial Information (AFI) statements, Eircom is currently required to provide a Wholesale Leased Lines Income Statement and, if and when required by ComReg, a statement outlining the total annual revenues and volumes realised from terminating segments in the Zone B MI WHQA Markets, pursuant to the 2020 Decision.⁵⁶⁶

7.6.2. Accounting separation obligation:

- 7.256 The purpose of an accounting separation obligation is to provide a greater level of detail of information from that of the statutory financial statements of the SMP operator. The objective is to reflect, as closely as possible, the performance of those parts of the operator's business, if they were to operate on a standalone basis. In the case of vertically integrated undertakings, it can also support non-discrimination obligations, prevent unfair cross-subsidies to other services, and help monitor compliance with pricing and other obligations. Having such detailed information enables ComReg to

⁵⁶³ As per the ComReg annual action plan, a consultation on Accounting Separation is planned for Q4 2024. Any proposals in this Consultation regarding the accounting separation obligation for WDC will also be taken into account in the separate accounting separation consultation.

⁵⁶⁴ Response to Consultation, and Final Decision: Accounting Separation and Cost Accounting Review of Eircom Limited, ComReg Document 10/67, dated 31 August 2010.

⁵⁶⁵ Paragraphs 10.453-10.455 of the 2020 Decision.

⁵⁶⁶ Paragraphs 10.453-10.455 of the 2020 Decision.

understand the information related to the costs, volumes and associated revenues of products, services and facilities offered by Eircom.

- 7.257 Allocating costs to the appropriate and relevant products and services of an SMP operator is an important factor to consider when regulating multiple products and services carried over the same network. This is particularly true for Eircom, where its fixed access network and core network are common infrastructures that are used to provide a range of retail and wholesale services, some of which are subject to regulation. Therefore, when setting price controls for WDC products, services and facilities (and in ensuring compliance with pricing and other obligations) in the Zone B MI WDC Markets, information is required about the costs and revenues associated with Eircom's provision of its regulated WDC products and services, with such costs and revenues distinct from the costs and revenues associated with other services provided over Eircom's network.
- 7.258 In Section 6, ComReg identified that Eircom has the ability and incentive to engage in a range of anti-competitive pricing behaviours in the Zone B MI WDC Markets, absent regulation. As discussed above, the competition problems identified by ComReg include the risk of Eircom charging excessive prices for its MI WDC services in Zone B. Furthermore, in the case where Eircom has SMP in the Zone B MI WDC Markets, the imposition of an accounting separation obligation should ensure that sufficient and robust information is provided to help ComReg monitor regulation of those markets where Eircom has been found to have SMP.
- 7.259 According to Eircom's Submission, ComReg's analysis lacks adequate empirical evidence regarding the justification and proportionality of the accounting obligations and does not demonstrate the extent to which the existing obligations have addressed inefficiencies or unfair pricing in the market, rather than relying on hypothetical scenarios in particular, when ComReg has itself admitted to the disconnect between the HCAs and the extant pricing remedy.⁵⁶⁷
- 7.260 ComReg considers that, in particular, the accounting separation obligation should assist ComReg in assessing the level of returns that Eircom is earning on a regulated wholesale market given the obligation of cost orientation on MI WDC services in the Zone B MI WDC Markets. In other words, publication of the HCA separated accounts is intended to provide stakeholders, including ComReg with some assurance that Eircom is complying with its SMP obligations, and that Eircom is recovering its efficient costs. The HCAs can

⁵⁶⁷ Eircom Submission, paragraph 174, page 59.

provide a useful means of understanding the level of returns being made by Eircom and if there are concerns about recovery of costs, the HCAs can be used as a means to support any assessment to be carried out.

- 7.261 Eircom, in its Submission, also stated that “*ComReg’s geographic analysis introduces a significant mismatch between the boundaries of WPZs and Eircom’s exchange footprint...*”. This inconsistency would create substantial challenges for accurately assigning costs and revenues across Zone A and Zone B markets which Eircom claims creates an additional issue for the regulatory Auditor’s ability to sign-off the accounts.⁵⁶⁸
- 7.262 To clarify, Eircom must retain the current process from the 2020 Decision whereby Eircom publishes a national consolidated Income Statement and a consolidated Statement of Mean Capital Employed reflecting costs and revenues for all MI WDC services across the MI WDC Markets, not by specific Zones.
- 7.263 For MI WDC services, Eircom provides these services across the entire market i.e. in Zone A and Zone B. While Eircom is not subject to regulation in Zone A MI WDC Markets, there is a need for ongoing price regulation of MI WDC products, services and associated facilities in Zone B MI WDC Markets. The consolidated HCAs allows a reasonable degree of transparency for all stakeholders. ComReg considers that there should be no incremental burden to Eircom, given that it currently provides the WDC financial information at a consolidated level in its existing HCA separated accounts.
- 7.264 In addition, having an accounting separation obligation in conjunction with a cost accounting obligation means that ComReg can place greater reliance on any cost accounting information it receives from Eircom in respect of MI WDC services, including in respect of shared network costs or common cost attributions or between leased line services which are regulated and those which are not. This is because under the accounting separation obligations set out in the 2010 Accounting Separation Decision Eircom is required to publish HCA separated accounts with a high level audit opinion⁵⁶⁹ provided by an external party, with the assurance that costs are allocated in a fair, transparent and objective way.
- 7.265 ComReg considers that it is no longer justified or proportionate to require Eircom to report on TI WDC services as part of its HCA statements, as all TI WDC services are no longer subject to regulation and in any event the

⁵⁶⁸ Eircom Submission, paragraph 163, pages 55/56.

⁵⁶⁹ “*Fairly presents in accordance with*” or FPIA audit opinion.

demand for these services is in decline. However, reporting should extend to dark fibre services. While Eircom expressed the view that there is no basis for including dark fibre in the WDC accounting obligation,⁵⁷⁰ in fact this follows from the inclusion of dark fibre in the relevant WDC product market, in addition to Ethernet and WDM services. Eircom's consolidated HCA statements for the MI WDC Market accordingly should report on those revenues and costs.

- 7.266 For the reasons outlined, ComReg considers that the continued imposition of an accounting separation obligation on Eircom for MI WDC services seems justified and proportionate, in addition to the imposition of the price control obligation of cost orientation and the obligation of cost accounting.

7.6.3. Implementation of accounting separation obligation

- 7.267 The detailed nature of the accounting separation obligations currently imposed on Eircom is specified in the 2010 Accounting Decision. However, ComReg has decided to update some of the reporting requirements regarding the accounting separation obligation to reflect changes in the services that are regulated. These changes are discussed further below.

Historic Cost Accounting ('HCA') statements:

- 7.268 As discussed above, ComReg has decided that Eircom should continue to be required to publish in its HCA Statements a consolidated Income Statement and consolidated Statement of Mean Capital Employed for the provision of MI WDC products and services (excluding TI WDC services and including dark fibre services). These obligations are consistent with the 2010 Accounting Decision.
- 7.269 In addition, and pursuant to Regulation 53 of the ECC Regulations, ComReg can, inter alia, require a vertically-integrated SMP operator, to make its wholesale prices transparent and its internal transfer prices transparent, so as, for example, to ensure compliance with any non-discrimination obligation or, where necessary, to prevent unfair cross-subsidy. In this regard, ComReg has already specified in the PIA Decision (D03/24) at paragraph 7.484 that "*...all duct and pole costs should be allocated to the PIA market statement, with Eircom's internal use of ducts and poles captured by cost-based (or an appropriate) transfer to the other downstream markets in Eircom's HCAs.*" Hence, Eircom must ensure that the PIA transfer charges are reflected in the WDC statements in the HCAs going forward.

⁵⁷⁰ Eircom Submission, paragraph 161, page 55.

7.270 ComReg may consider further necessary enhancements to the HCA separated accounts, as part of the annual engagement with Eircom, as set out in the 2010 Accounting Decision.

Additional Financial Information:

7.271 Additional financial information ('AFI') can contain both profit and loss accounts and volumes, fixed asset investments, and further breakdown of cost information. AFIs are not subject to external audit.

7.272 On an annual basis, ComReg discusses the AFI requirements with Eircom. ComReg will continue with this annual review, thereby ensuring that the number and format of the AFI reports continue to be relevant, and that the production of such reports does not amount to an undue burden on Eircom.

7.273 In terms of the current AFI statements provided by Eircom on WDC, ComReg considers that it is no longer proportionate to require Eircom to report separately on TI services. As discussed above, TI services will no longer be subject to regulation and so TI services should be excluded from the AFI WDC statements. Given that the relevant MI WDC product market should now include dark fibre, Eircom should report dark fibre in its WDC AFI statements. Hence, the AFI WDC "Income Statement"⁵⁷¹ should be split according to "Modern Interface Rentals", "Modern Interface Connections", "Dark Fibre Rentals" and "Dark Fibre Connections". The same split of services should also be applied in the AFI "Statement of Average Cost and Revenues".⁵⁷²

7.274 In addition, Eircom should provide an additional AFI statement which provides a split of the MI WDC revenues by Zone A and Zone B. In other words, WDC revenues are to be provided split by "External", "Internal – Inter", "Internal – Intra", for Zone A and for Zone B regions.

7.275 As regards Eircom's submission that the mismatch between "*...the boundaries of WPZs and Eircom's exchange footprint...*" creates complexities in the allocation of revenues between Zone A and Zone B circuits, and that Eircode data is missing for 40% of its wholesale customers,⁵⁷³ Eircom should have the relevant information to enable it to determine its WDC revenues split by Zone A and Zone B regions, as already

⁵⁷¹ In the 2020 Decision, ComReg decided to include the Income Statement within the AFI Statements instead of the Additional Financial Statements (see Section 8.10, paragraph 8.285).

⁵⁷² From the point of view of transparency, Eircom should ensure that the HCA and AFI statements are renamed in accordance with the newly defined market i.e., Wholesale Dedicated Capacity market (rather than Wholesale High Quality Access market).

⁵⁷³ Eircom's Submission, paragraph 164, pages 56.

addressed at paragraphs 7.189-7.191. ComReg is available to engage with Eircom to provide any necessary guidance in this regard, as part of the annual HCA review provided for under the 2010 Accounting Decision, to ensure the proportionality of this requirement.

- 7.276 It is also the case that Eircom's cost accounting and billing (or network) systems should have the capability to determine the split between Zone A and Zone B given that a similar demarcation in the two regions has been in place since the 2020 Decision. This is despite Eircom's claim in its Submission that the fact five years has passed since ComReg's previous market analysis decision is irrelevant to those complexities.⁵⁷⁴ In particular since 2020 the onus has been on Eircom to ensure its internal network and billing systems have the capability to differentiate between the pricing of circuits in Zone A MI WDC Markets (deregulated area where Eircom has pricing flexibility) and Zone B MI WDC Markets (where Eircom is subject to price regulation) and so those issues should already have been addressed by Eircom.
- 7.277 Eircom also stated that looking at Eircom's revenues between Zone A MI WDC Markets and Zone B MI WDC Markets in isolation provides no meaningful indicators as to the competitiveness of either Zone A or Zone B.⁵⁷⁵
- 7.278 ComReg is not requesting a split of Zone A and Zone B revenues to assess competitiveness of the zones, rather this information should assist ComReg in understanding the profile of Eircom's revenues between services provided in Zone B MI WDC Markets (regulated) compared with services provided in Zone A MI WDC Markets (not regulated). As noted, ComReg expects that these changes, and any other necessary changes, can be progressed further as part of the annual engagement with Eircom, as set out in the 2010 Accounting Decision.

7.7 Regulatory Governance

7.7.1. Requirement for effective regulatory governance

- 7.279 A key objective of ComReg in selecting appropriate remedies to prevent potential anti-competitive behaviours arising from Eircom's SMP in regulated markets to date, has been to ensure that Access Seekers have the option to choose what level of access they want depending on the scale of their

⁵⁷⁴ Eircom's Submission, paragraph 164, pages 56.

⁵⁷⁵ Eircom's Submission, paragraphs 164, pages 56.

operation, while encouraging efficient infrastructure-based competition (including through price control obligations). Further to Eircom's obligations of non-discrimination and transparency in particular, a critical aspect in the effectiveness of WDC products in facilitating effective competition is the regulatory governance arrangements that are or need to be in place for the purpose of ensuring, and giving confidence to Access Seekers, that Eircom provides access to its network in accordance with its regulatory obligations (including compliance where obligations can differ across geographic zones). This includes in particular the management of matters such as order provisioning and service assurance; the development of the WDC products and services; the manner in which Eircom investment decisions are made, by whom and the criteria used; and the management of confidential regulated information.

- 7.280 Eircom's regulatory governance arrangements are currently overseen by ComReg in two principal ways.
- 7.281 First, Eircom is required under the 2020 Decision, and the 2024 WLA Decision and the 2024 PIA Decision, to prepare and provide to ComReg, Statements of Compliance ('SoC') which detail and explain Eircom's risk assessment and control procedures. The function of the SoC is to require Eircom to demonstrate how it ensures compliance with SMP obligations, more particularly by reference to the regulatory governance measures and arrangements put in place in order to identify and manage risks of non-compliance. Eircom uses its Regulatory Governance Model ('RGM') to develop and provide SoCs to ComReg. The RGM in turn relies on Eircom's expertise and knowledge of its processes, systems and procedures to identify, manage and control the risks of non-compliance with its regulatory obligations.
- 7.282 Second, on 10 December 2018, ComReg and Eircom entered into a settlement of a number of High Court proceedings ('Settlement Agreement'). As part of this Settlement Agreement, Eircom agreed to a set of commitments which, when fully implemented, was to result in the establishment and operation of an enhanced RGM in Eircom.
- 7.283 A key aspect in assessing Eircom's regulatory governance arrangements and whether additional measures are required in this respect, is to understand in the presence of WDC products available to Access Seekers, whether they are effective in terms of facilitating effective competition and establishing that there is a level playing field for all users, including how Eircom supplies itself and other Access Seekers with WDC products.
- 7.284 In light of the above, ComReg is of the view that Eircom should be required to ensure that it has in place effective regulatory governance arrangements

ensuring compliance with its obligations of access, non-discrimination, transparency, accounting separation, cost accounting and price control. ComReg further proposes that this obligation be further specified for the time being by reference to a requirement to prepare and provide to ComReg, a SoC, as further described below. ComReg is of the view that this is the least intrusive measure which ComReg may impose on Eircom at this point in time. However, Eircom's obligations may be respecified or complemented by further requirements, including non-standard remedies where and if justified, depending on the outcome of ComReg's review of the effectiveness of Eircom's RGM as referred to in the Electronic Communications Strategy Statement. This will include consideration of the effectiveness of Eircom's WDC products in terms of facilitating effective competition and how competition has developed to date.

7.7.2. Statement of Compliance

- 7.285 Eircom is required to provide, and keep up to date, a Statement of Compliance that details and explains Eircom's risk assessment and control and governance measures.
- 7.286 The function of the SoC is to require Eircom to demonstrate how it ensures compliance with the regulatory obligations imposed on it in the Zone B MI WDC Markets. The SoC obligation requires Eircom to explain the regulatory governance measures and arrangements that it has put in place in order to identify and manage risks of non-compliance with its SMP obligations, thereby providing reasonable assurances to ComReg that Eircom effectively manages risks of non-compliance in the Zone B MI WDC Markets. This includes the scenario where products from Zone B MI WDC are bundled with unregulated products, in particular Zone A MI WDC.

Information to be provided in the SoC

- 7.287 The implementation of effective regulatory governance structures and arrangements by Eircom requires the identification and management of risks of non-compliance with Eircom's regulatory obligations in the Zone B MI WDC Markets, and in turn transparency as regards Eircom's approach to risk identification and the development of controls including an explanation of the scope and output of the risk review, the processes reviewed, the material considered and how Eircom employed subject matter experts in the risk analysis and control development processes.
- 7.288 This requires assessments to be carried out by Eircom of, inter alia, systems, processes and activities that have relevance for Eircom's compliance in order to determine where and how regulatory risk might arise. For example, the business processes and associated systems that underpin the development of WDC products and services or service assurance may give rise to

regulatory risk. A structured and systematic approach to the assessment of risk is required in order to identify potential risks of non-compliance. A similar approach is necessary for the effective design and operation of controls in order to manage the identified risks of non-compliance.

- 7.289 It also requires that the output of the risk analysis is documented adequately, including a description of the potential regulatory issues which could give rise to regulatory risk, together with an outline of the consideration given to potential regulatory issues and the reasons why the conclusion that issues identified do or do not give rise to regulatory risk as the case may be.
- 7.290 Eircom's risk analysis process, which it currently applies in the existing WHQA (now WDC), WLA and PIA Markets is structured such that it produces the information outlined above and that the output from each risk assessment is stored by Eircom. Therefore, ComReg considers that to continue the existing requirement, with respect to the Zone B MI WDC Markets, will not result in an undue additional burden on Eircom. Furthermore, the provision of this information to ComReg has the potential to increase confidence in the scope and comprehensiveness of Eircom's regulatory governance and oversight in the Zone B MI WDC Markets.
- 7.291 This information is required in order for ComReg to understand Eircom's approach to risk management and the extent to which it has fully evaluated risks and has developed, and is operating, controls. This information demonstrates the extent to which identified risks of non-compliance with obligations are being managed by Eircom in a manner that provides reasonable assurances to ComReg with respect to Eircom's compliance with its regulatory obligations in the Zone B MI WDC Markets. It also provides information which supports the Directors' confirmation that, in their opinion, the governance arrangements in place provide reasonable assurance that Eircom is in compliance with its regulatory obligations in the WDC Market.

Activities particularly relevant to the WDC Market

- 7.292 ComReg has identified categories of activities which it considers are particularly relevant to the delivery and availability of regulated wholesale products and services in the WDC Market. ComReg considers that non-compliance by Eircom with regulatory obligations associated with these activities has the potential to have a significant impact on Access Seekers. Effective regulatory governance in general, including with respect to these activities, will assist Eircom to be compliant with its regulatory obligations resulting in benefits to competition and, ultimately, end users.
- 7.293 For the avoidance of doubt, ComReg is not stating that these are the only categories or areas where the SoC obligation requires Eircom to provide information on the implementation and operation of regulatory governance.

It is reasonable to expect that appropriate and effective governance and oversight of the management of Confidential Regulated Information as required by Eircom's regulatory obligations in the Zone B MI WDC Markets will apply throughout the Eircom organisation.

- 7.294 The SoC obligation is required with respect to all of Eircom's activities and processes i.e., all areas where Eircom's regulatory obligations apply in the Zone B MI WDC Markets. ComReg expects that Eircom has the knowledge and expertise to make a determination as to the scope, extent and potential impact of its activities on its compliance with its regulatory obligations in the WDC Market and should address the requirements of the SoC obligation accordingly and in a comprehensive manner.
- 7.295 ComReg notes that many of Eircom's activities and processes are consistent across products and markets. To that end, and to avoid undue regulatory burden to Eircom, the existing SoC obligations for the PIA and WLA markets⁵⁷⁶ are extended to also include the Zone B MI WDC Markets.
- 7.296 However, in this Decision, due to their significance and relevance, the consideration given to the management of regulatory risk arising from Eircom's activities, processes and systems associated with these categories should be explicitly included in the SoC:
- (a) Development of WDC Products and Services;
 - (b) Provisioning and Service Assurance
 - (c) Eircom's investment decisions; and
 - (d) Management of Confidential Regulated Information.
- 7.297 The obligation imposed requires that the SoC be signed by a person of appropriate authority within Eircom such that assurances can be provided to ComReg that regulatory governance and oversight is afforded the necessary oversight and attention by Eircom.
- 7.298 Furthermore, ComReg considers that the signatory needs to be a person within Eircom who is sufficiently independent from day-to-day operational activity and decision-making, in relation to the development, and supply of wholesale regulated products and services, in order to be able to objectively confirm Eircom's compliance with its regulatory obligations.
- 7.299 ComReg considers that the SoC must be signed by a Director or Directors of Eircom on behalf of the Board of Directors, of Eircom Limited and must include a statement acknowledging the Directors' responsibility in ensuring

⁵⁷⁶ ComReg Decisions D03/24 and D05/24, both published 23 January 2024.

Eircom's compliance with its regulatory obligations and confirmation that the governance arrangements in place provide reasonable assurance that Eircom has taken all necessary steps to ensure compliance with its regulatory obligations in the Zone B MI WDC Markets. This requirement emphasises the importance of the SoC and reinforces the need for, and increases the likelihood of the establishment, by Eircom, of appropriately robust oversight and governance measures relating to the implementation and operation of regulatory governance in Eircom.

- 7.300 ComReg also notes that, under Section 225 of the Companies Act 2014, Company Directors have specific obligations with which they must comply with relating to securing compliance with relevant obligations under that Act, as follows:

“... (2) The directors of a company to which this section applies shall also include in their report under section 325 a statement—

(a) acknowledging that they are responsible for securing the company's compliance with its relevant obligations; and

(b) with respect to each of the things specified in subsection (3), confirming that the thing has been done or, if it has not been done, specifying the reasons why it has not been done.

(3) The things mentioned in subsection (2)(b) are—

(a) the drawing up of a statement (to be known, and in this Act referred to as, a “compliance policy statement”) setting out the company's policies (that, in the directors' opinion, are appropriate to the company) respecting compliance by the company with its relevant obligations;

(b) the putting in place of appropriate arrangements or structures that are, in the directors' opinion, designed to secure material compliance with the company's relevant obligations; and

(c) the conducting of a review, during the financial year to which the report referred to in subsection (2) relates, of any arrangements or structures referred to in paragraph (b) that have been put in place.”

- 7.301 While the obligations referred to above in respect of the Companies Act 2014 do not include regulatory obligations, in ComReg's view it is relevant and instructive that the Companies Act 2014 requires Directors to prepare a statement that, inter alia, confirms that, in their opinion, arrangements are designed and put in place that secure material compliance with the company's relevant obligations.

- 7.302 ComReg's view is that, in order to ensure that the signatory has the required independence and authority, the signatory must be a Director authorised to

represent the Board of Directors (defined in the Companies Act 2014) of Eircom.

- 7.303 ComReg is aware from SoCs previously received from Eircom that there are various certification processes in place as part of the RGM which Eircom has implemented in order to govern compliance with its regulatory obligations generally. ComReg understands that these include self-certification processes by Eircom Managers certifying, for example, the operation of the governance processes in their areas of responsibility.
- 7.304 The SoC describes both the processes followed and the information relied upon by the signatory to the SoC who are required to certify the correct operation of the governance process. Similarly, ComReg requires that the SoC includes a description and explanation of the governance measures implemented in Business Areas and activities which have relevance to Eircom's compliance with its regulatory obligations. ComReg requires the SoC to include a description and explanation of the processes followed by Eircom's management, in particular Senior Managers in relevant Business Areas, in order to assess the operation and effectiveness of the processes used to identify, prevent and mitigate risks of non-compliance.
- 7.305 As some form of verification process must currently be carried out by the SoC Signatory and the staff who provide certification, ComReg considers that it is reasonable that it should understand and review the verification process followed by the SoC Signatory and Eircom Management in order for ComReg to reasonably satisfy itself that Eircom has adequate governance and oversight arrangements in order to ensure compliance with its regulatory obligations. ComReg considers that providing this information should not be an additional undue burden and is reasonable and proportionate.
- 7.306 A key element of Eircom's RGM is the analysis, development, management and documentation of the risk and control framework. This includes the production of data and information, some of which can be used when preparing a SoC. A significant portion of the information required for the SoC is generated as an output from the risk assessment processes executed as part of the implementation of Eircom's RGM. ComReg requires Eircom to produce information on the output generated from the risk analysis and control development process. ComReg considers that the requirement to provide such information, relating to the execution of its risk analysis process, will not result in an additional burden being placed on Eircom as this information is currently being generated by Eircom as it operates its RGM.

7.7.3. Timeframe for Provision of the SoC to ComReg

- 7.307 Eircom is required to provide a SoC for the WDC Market within three (3) months from the Effective Date of this Decision where there is no offer of a new WDC product or change to an existing WDC product.
- 7.308 ComReg considers that it would be appropriate that the SoC is provided to ComReg in the case of any offer of a new MI WDC product, service or facility, or a change to an existing MI WDC product, service or facility, three (3) months in advance of it being made available to industry (one month in advance of publication of the SoC), or as otherwise may be required by ComReg, as part of the product notification process (including amendment(s)). In this regard the notification will only be considered to be complete if it includes the updated SoC.
- 7.309 ComReg notes that the timeframes specified above are aligned to Eircom's transparency obligations set out in this Decision with respect to advance notification timeframes for proposed changes/amendments by Eircom to its LLRO and LLRO Price List.
- 7.310 In all cases, the SoC and associated updates should include version control information including a revision history in order to allow the reader of the SoC to easily identify changes and when they were made.

7.7.4. Publication of the Statement of Compliance

- 7.311 ComReg has considered whether the SoC should be published and available to Access Seekers and is of the view that it should be. The SoC is primarily concerned with the degree of governance Eircom applies to meeting its regulatory obligations in the Zone B MI WDC Markets.
- 7.312 ComReg's position is that the provision of the SoC to Access Seekers gives greater visibility to Access Seekers of the processes Eircom has put in place to ensure it complies with its regulatory obligations in the Zone B MI WDC Markets and improves Access Seekers confidence that they are receiving the same wholesale product or service that, for example, Eircom is supplying to its own downstream arm and is beneficial to providing regulatory certainty, facilitating competition and ultimately greater choice to end users.
- 7.313 However, ComReg recognises that some information to be published as part of a SoC may be considered confidential by Eircom. In these circumstances, where a request is made by Eircom to ComReg not to publish aspects of the SoC then ComReg will apply its rules relating to the publication of confidential information when assessing any such request.

- 7.314 Eircom must make the SoC available on its publicly available wholesale website one month after provision of the SoC to ComReg, unless otherwise agreed by ComReg.
- 7.315 ComReg also does not consider that the additional step of providing the SoC to Access Seekers to be unduly burdensome as the SoC is required to be provided to ComReg.

Chapter 8

8. Withdrawal of obligations

8.1 Introduction

8.1 In this Section, ComReg addresses the following:

- (a) The withdrawal of obligations in the LB TI WDC Market, and
- (b) The withdrawal of obligations for WPZs moving from what was the Zone B MI WDC Markets under the 2020 Decision to the Zone A MI WDC Markets now defined in this Decision (these WPZs are listed in Annex: 13 (Table A: WPZs Moving from Zone B to Zone A)).

8.2 Withdrawal of obligations in the LB TI WDC Market

8.2 A number of Respondents commented on the six-month sunset period for the withdrawal of existing obligations for LB TI WDC services.

8.3 In its Submission, SIRO agreed that a six-month sunset period provides sufficient time for Eircom's wholesale customers to transition their LB TI WDC services to alternative modern infrastructure.⁵⁷⁷ In its Submission, ALTO partially agreed with ComReg's proposal advising that ComReg, post deregulation, will need to actively monitor the LB TI WDC Market.⁵⁷⁸

8.4 In their Submissions, Enet and Vodafone stated that a six-month sunset period is too short for wholesale customers to transition their LB TI WDC services to alternative modern infrastructure, with Vodafone proposing that a minimum 12-month sunset period should apply to enable impact assessment and planning with end customers if required.^{579 580}

8.5 In its Submission, BT expressed concern that some Critical Network Infrastructure ('CNI') customers may be unable to migrate to MI WDC services within the next 1 to 2 years.⁵⁸¹

⁵⁷⁷ SIRO Non-confidential Submission, at p.38.

⁵⁷⁸ ALTO Non-confidential Submission, at p.10.

⁵⁷⁹ Enet Non-confidential Submission, at p.23.

⁵⁸⁰ Vodafone Non-confidential Submission, at p.18.

⁵⁸¹ BT Non-confidential Submission, at p.8 and p.29.

- 8.6 ComReg notes, in the period 1 January 2021 to 30 June 2024, the number of wholesale merchant market LB TI WDC circuits reduced by ~65% (from 1,157 to c.400 wholesale LB TI WDC services) which is evidence that Access Seekers have significant experience in finding alternative arrangements for the supply of LB TI WDC services.
- 8.7 ComReg notes that an Access Seeker providing LB TI WDC services to a specific CNI can seek to negotiate a commercial agreement with Eircom to maintain access to existing LB TI WDC services for a defined period after the sunset period.
- 8.8 To allow Eircom's wholesale customers sufficient time to seek out alternative arrangements for the supply of LB TI WDC services (should they decide to change supplier), ComReg's position is that a sunset period of six months is appropriate. During this sunset period:
- (a) Eircom is required to maintain access at existing prices;
 - (b) Eircom is not required to provide access to new orders for LB TI WDC services, although it is free to do so on a commercial basis; and
 - (c) Eircom is not required, from the effective date of the Decision, to meet other obligations (for example, in relation to transparency, non-discrimination, etc.).

8.3 Withdrawal of obligations in WPZs transferring from the Zone B MI WDC Markets (under the 2020 Decision) to the Zone A MI WDC Markets (defined in this Decision)

- 8.9 A number of Respondents commented on the nine-month sunset period, proposed by ComReg for the removal of obligations with respect to WPZs transferring from the Zone B MI WDC Markets under the 2020 Decision to the Zone A MI WDC Markets now defined in this Decision.
- 8.10 In its Submission, SIRO suggested a longer sunset period (e.g., nine months) would provide stakeholders with additional time to adjust and avoid service disruptions and that ComReg should monitor market dynamics in deregulated WPZs, ensuring that alternative operators can sustain competition without ex-ante remedies.⁵⁸²

⁵⁸² SIRO Non-confidential Submission, at p.39. The nine months suggested by SIRO is consistent with the time period suggested by ComReg.

- 8.11 In its Submission, ALTO partially agreed with ComReg's proposal advising that deregulated WPZs should be actively monitored by ComReg.⁵⁸³
- 8.12 In their Submissions, Enet and Vodafone stated that a nine-month sunset period is too short for wholesale customers to transition their MI WDC services from the Zone B MI WDC Markets to the Zone A MI WDC Markets, with Vodafone proposing that a minimum 12-month sunset period should apply to enable impact assessment and planning with end customers if required.^{584 585}
- 8.13 ComReg notes that, under the 2020 Decision, 3,708 CPs falling in the then Zone A MI WHQA Markets were effectively deregulated and Access Seekers who chose to migrate impacted MI WDC services to alternative operators required time to develop the necessary processes to plan and implement the migrations.
- 8.14 2,684 connected premises are transferring from the Zone B MI WDC Markets under the 2020 Decision to the Zone A MI WDC Markets under this Decision. As Access Seekers already have experience with respect to such migrations and given the lower number of CPs impacted, a nine-month sunset period is appropriate.
- 8.15 ComReg also notes that Eircom offers commercial MI WDC services in Zone A MI WDC Markets, as outlined in the Open eir Leased Line Reference Offer (LLRO) Network Price List (V.16.0, dated 31 January 2025) therefore service disruption after the sunset period may not necessarily arise.
- 8.16 To allow Eircom's wholesale customers sufficient time to seek out alternative arrangements for the supply of MI WDC products (should they decide to change supplier), whilst maintaining service continuity, thus ultimately minimising any impact of the de-regulation of certain WPZs on SPs and ultimately end-users, ComReg's position is that a sunset period of nine months is appropriate.
- 8.17 During the sunset period Eircom is required to maintain access at existing prices.
- 8.18 During the first three months of this sunset period, Eircom is required to provide access to new orders, at prices as set by regulation at the

⁵⁸³ ALTO Non-confidential Submission, at p.10.

⁵⁸⁴ Enet Non-confidential Submission, at p.23.

⁵⁸⁵ Vodafone Non-confidential Submission, at p.18.

commencement of the sunset period, for MI WDC LLs given the need to protect currently ongoing tendering processes.

- 8.19 However, Eircom is not required, from the effective date of this Decision, to meet other obligations (for example, in relation to transparency, non-discrimination, etc.).

Annex: 1 Decision Instrument

1. STATUTORY POWERS GIVING RISE TO THIS DECISION INSTRUMENT

1.1 This Decision Instrument (“Decision Instrument”) is made by the Commission for Communications Regulation (“ComReg”):

- (i) Pursuant to and having had regard to Sections 10 and 12 of the Communications Regulation Act 2002 (as amended); Regulation 4 and Regulation 42 of the ECC Regulations;
- (ii) Having, where applicable, pursuant to Section 13 of the Communications Regulation Act 2002 (as amended) complied with Ministerial Policy Directions;
- (iii) Having taken the utmost account of the 2020 Recommendation, the SMP Guidelines and Explanatory Note, the 2013 Recommendation and where applicable, the Gigabit Connectivity Recommendation;
- (iv) Noting that the 2020 Recommendation identifies as a market susceptible for ex ante regulation the market for wholesale dedicated capacity;
- (v) Having taken account of the submissions received in response to ComReg Document No. 24/92 as part of the public consultation held pursuant to Regulation 101 of the ECC Regulations;
- (vi) Having consulted with the Competition and Consumer Protection Commission, further to Regulation 49 of the ECC Regulations;
- (vii) Having notified the draft measure and the reasoning on which the measure is based to the European Commission, BEREC and the national regulatory authorities in other EU Member States pursuant to Article 32 of the Code/Regulation 17 of the ECC Regulations and having taken utmost account of any comments made by them;
- (viii) Having regard to the provisions of the Agreement entered between the Minister for Communications and NBI on 19 November 2019 in respect of the rollout of a network in the Intervention Area as part of the National Broadband Plan;
- (ix) Having regard to ComReg Decision D10/20;
- (x) Pursuant to Regulations 45, 46, 49, 50, 51, 52, 53, 55 and 56 of the ECC Regulations;
- (xi) Pursuant to Regulation 104 of the ECC Regulations;

- (xii) Pursuant to Regulation 99 of the ECC Regulations; and
 - (xiii) Having regard to the analysis and reasoning set out in ComReg YY/NN [*the Decision and Response to Consultation document*].
- 1.2. This Decision Instrument shall where appropriate be construed consistently with ComReg YY/NN [*the Response to Consultation and Final Decision document*]. For the avoidance of doubt, to the extent that there is any conflict between a decision instrument dated prior to the Effective Date (as defined in Section 2.1 of this Decision Instrument) and this Decision Instrument, this Decision Instrument shall prevail.

PART I – GENERAL PROVISIONS

2. DEFINITIONS

2.1 In this Decision Instrument, unless the context otherwise suggests:

“**Access**” has the same meaning as under Regulation 2 of the ECC Regulations;

“**Access Path**” means the connection from the NTU in the End User’s premises to the serving Aggregation Node;

“**Access Seeker**” means an Undertaking other than Eircom;

“**Aggregation Area**” means the geographical area served by an Aggregation Node;

“**Aggregation Node**” or “**Agg Node**” means a network concentration point for Access Paths that is located in an Eircom Exchange;

“**Aggregation Region**” means a group of Aggregation Areas where each Aggregation Node is connected to the same pair of Eircom Exchanges containing Provider Edge (‘PE’) Node(s) or equivalent IP Backbone Node(s);

“**Associated Facilities**” has the same meaning as under Regulation 2 of the ECC Regulations;

“**BAFO**” stands for Best and Final Offer;

“**BEREC**” means the Body of European Regulators for Electronic Communications, as established pursuant to Regulation (EU) 2018/1971 of the European Parliament and of the Council of 11 December 2018 amending Regulation (EU) 2015/2120 and repealing Regulation (EC) No. 1211/2009;

“**BU-LRAIC+**” stands for Bottom-Up Long Run Average Incremental Cost Plus, the methodology used to estimate average efficiently incurred directly

attributable variable and fixed costs including an appropriate apportionment of joint and common costs;

“Code” means Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code;

“Communications Regulation Act 2002” means the Communications Regulation Act 2002 (No. 20 of 2002), as amended;

“Competition and Consumer Protection Commission” means the body established under section 9 of the Competition and Consumer Protection Act 2014;

“ComReg” means the Commission for Communications Regulation, established under Section 6 of the Communications Regulation Act 2002;

“ComReg Document 24/92” means the document entitled “Market Review – Wholesale Dedicated Capacity (WDC) Market; Consultation and Draft Decision, dated 27 November 2024;

“ComReg Decision D08/10” means ComReg Document No. 10/67, entitled “Response to Consultation Document and Final Direction and Decision, Response to Consultation Document No. 09/75 and Final Direction and Decision: Accounting Separation and Cost Accounting Review of Eircom Limited”, dated 31 August 2010;

“ComReg Decision D03/20” or **“the 2020 WHQA Decision”** means ComReg Document No. 20/06, entitled “Market Review – Wholesale High Quality Access at a Fixed Location: Response to 2018 Further Consultation and Decision”, dated 24 January 2020;

“ComReg Decision D10/20” means ComReg Document No. 20/96, entitled “Review of Weighted Average Cost of Capital (WACC) – Response to Consultation and Final Decision; Mobile Telecommunications, Fixed Line Telecommunications, Broadcasting Transmission”, dated 14 October 2020;

“ComReg Decision D04/22” means ComReg Document No. 22/49, entitled “Access Products and Services; Key Performance Indicator (KPI) Metrics”, dated 29 June 2022;

“ComReg Decision DNN/YY” means ComReg Document No. YY/NN, entitled “Market Review – Wholesale Dedicated Capacity (WDC) Market; Response to Consultation and Final Decision, dated DD/MM/YYYY;

“Decision Instrument” means this decision instrument;

“**Dark Fibre**” means an Eircom optical fibre that is installed but not in use;

“**Director**” has the same meaning as under Section 2 of the Companies Act 2014;

“**Effective Date**” means the date set out in Section 20 of this Decision Instrument;

“**Eircom**” means Eircom Limited, a company incorporated in Jersey (Number 116389), registered as a Branch in Ireland (Number 907674), with an Irish registered Branch Office at 2, Heuston South Quarter, St Johns Road West, Dublin 8, D08 Y42N;

“**Electronic Communications Network**” or “**ECN**” has the same meaning as under Regulation 2 of the ECC Regulations;

“**Electronic Communications Service**” or “**ECS**” has the same meaning as under Regulation 2 of the ECC Regulations;

“**End User**” has the same meaning as under Regulation 2 of the ECC Regulations;

“**ECC Regulations**” means the European Union (Electronic Communications Code) Regulations 2022, Statutory Instrument No. 444 of 2022;

“**Ethernet**” means a technology that supports data transfer between network Nodes at Layer 2 of the OSI reference model;

“**Exchange**” means an Eircom network premises or equivalent facility used to house network and associated equipment;

“**Explanatory Note**” means the European Commission 2020 Recommendation – Staff Working Document/Explanatory Note SWD (2020) 337 final, dated 18 December 2020;

“**Gigabit Connectivity Recommendation**” means Commission Recommendation (EU) 2024/539 of 6 February 2024 on the regulatory promotion of gigabit connectivity;

“**Intervention Area**” or “**IA**” means the geographic areas for State intervention for the National Broadband Plan comprising the premises and delivery points in respect of which NBI has contracted with the Minister to deliver high-speed broadband services;

“**Interconnection**” has the same meaning as under Regulation 2 of the ECC Regulations;

“Key Performance Indicator(s)” or “KPI(s)” means a measure(s) of the standard(s) of product, service or facility provided by Eircom to an Undertaking and by Eircom to itself;

“KPI DI” means the decision instrument set out in Appendix 1 of ComReg Decision D04/22;

“LLRO Price List” means the document published by Eircom setting out the prices and charges applicable to the products and services it is required to provide under the within Decision or, for the purpose of Section 14 of this Decision Instrument, Decision D03/20;

“Low Bandwidth TI WHQA” means wholesale Leased Lines provided over wired infrastructure over a Time Division Multiplexing (TDM) interface at bandwidths less than or equal to 2Mb/s;

“Metropolitan Point of Presence” or “MPoP” means the point of inter-connection between the access and core networks of an Undertaking;

“MI WDC” means wholesale dedicated capacity, of any bandwidth, provided over wired infrastructure over modern interfaces including Ethernet, xWDM and other such interfaces;

“Ministerial Policy Directions” means the policy directions made by Dermot Ahern TD, then Minister for Communications, Marine and Natural Resources, dated 21 February 2003 and 26 March 2004;

“Milestones” means the key points in Eircom’s product development process that would be reasonably relied upon by Undertakings to track the progress of an Access request in that process, including, *inter alia*, Product Development Decision Points and points of transition associated with analysis, design, development and launch stages for meeting the Access request and the date on which the product, service, facility or Associated Facility will be made available for Undertakings;

“NBP” stands for National Broadband Plan;

“NBI” means the Authorised Undertaking NBI Infrastructure Designated Activity Company, a company registered in Ireland with number 631656 whose registered office at the date of this Decision instrument is at 3009, Lake Drive, Citywest Business Campus, Citywest, Dublin 24, D24H6RR, Ireland;

“Network Termination Unit” or “NTU” means the physical interface which provides the service demarcation or Point of Handover of the wholesale service within the customer premises;

“Node” means any location or concentration point in the access network (excluding termination points at End Users’ premises) which houses equipment;

“Non-Trunk Node” means an Eircom Exchange that is not a Trunk Node Exchange so listed in Schedule 2;

“Non-Disclosure Agreement” means an agreement for protecting the disclosure of commercially sensitive, competition sensitive or confidential information and governing its use or reliance;

“OSS” stands for Operational Support Systems;

“Point of Handover” means the physical point at which an Access Seeker’s network interconnects with Eircom’s to allow traffic to pass;

“Product Development Decision Point” means a point during the development process at which Eircom takes or is due to take a decision to advance, park, or terminate the development of a product, service, facility or Associated Facility;

“Product Development Roadmap” means a document containing a list of all proposed, planned and in progress developments for regulated products, services, facilities and Associated Facilities, and related information, as required from Eircom in accordance with Section 9.6 of this Decision Instrument;

“Service Credit(s)” means the amount of money owed by Eircom to an Access Seeker in circumstances where Eircom has failed to meet the service levels which Eircom commits to in its SLA, or on the occurrence of specified events or the application of criteria specified in the SLA;

“Service Level Agreement(s)” or **“SLA(s)”** means a legally binding contract between Eircom and an Access Seeker in relation to the service levels which Eircom commits to from time-to-time;

“SLA Negotiation Period” means the duration of time required by Eircom to close negotiations with Access Seekers and make a BAFO in respect of an amended or new SLA;

“SMP Guidelines” means the European Commission guidelines of 7 May 2018 on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (2018/C 159/01) (OJ C 159, 7.5.2018, p.1);

“Trunk Node” means one of the 191 Eircom Exchanges passed within 100 metres by at least two alternative networks as listed in Schedule 2;

“Undertaking” has the same meaning as under Regulation 2 of the ECC Regulations;

“WDM” or **“xWDM”** means Wavelength-Division Multiplexing, a technology which multiplexes multiple optical carrier signals onto a single optical fibre by using different wavelengths;

“WDC” or **“Wholesale Dedicated Capacity”** means a service that involves the supply of dedicated transmission capacity between fixed locations;

“Workplace Zone” means any of the 7,219 geographic areas delimited by the Central Statistics Office (CSO) by reference to daytime population which includes anyone commonly present in that area during daytime for any reason including work or study;

“WPZ” stands for Workplace Zone;

“2013 Recommendation” means the Commission Recommendation of 11 September 2013 on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment (2013/466/EU);

“2020 Recommendation” means the European Commission Recommendation of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (C (2020) 8750).

3. SCOPE AND APPLICATION

- 3.1 This Decision is concerned with the provision between Undertakings of symmetric, dedicated, high quality connectivity over any ECN including Dark Fibre; it withdraws subject to conditions the decision instrument appended to ComReg Decision D03/20 and amends the decision instrument appended to ComReg Decision D04/22.
- 3.2 This Decision Instrument is binding upon Eircom and applies to Eircom and its subsidiaries and any related companies, and any Undertaking which owns or controls Eircom, and its successors, affiliates and assigns and all shall comply with it in all respects.

PART II – RELEVANT MARKET AND SMP OBLIGATIONS

4. MARKET DEFINITION

4.1 The following markets are relevant markets for the purpose of this Decision Instrument:

4.1.1 The market for the provision of low bandwidth traditional interface high quality access (“the LB TI WHQA Market”) as defined in ComReg Decision D03/20; and

4.1.2 The following four markets for the provision of Modern Interface Wholesale Dedicated Capacity between a location in a Workplace Zone and a Point of Handover within the relevant Aggregation Region located at any Non-Trunk Node Exchange up to and including the serving Trunk Node Exchanges (the “MI WDC Markets”):

4.1.2.1 MI WDC Market 1, comprising locations within the 2,888 Workplace Zones listed in Schedule 1;

4.1.2.2 MI WDC Market 2, comprising locations within the 2,261 Workplace Zones listed in Schedule 1;

4.1.2.3 MI WDC Market 3, comprising locations within the 1,095 Workplace Zones listed in Schedule 1;

4.1.2.4 MI WDC Market 4, comprising locations within the 975 Workplace Zones listed in Schedule 1.

4.2 For the purpose of this Decision Instrument, MI WDC Market 1 and MI WDC Market 3 are referred to together as the **Zone A MI WDC Markets**, and MI WDC Market 2 and MI WDC Market 4 are referred to together as the **Zone B MI WDC Markets** and the Aggregation Regions are as set out in Schedule 2.

5. COMPETITION ASSESSMENT AND SMP DESIGNATION

5.1 ComReg hereby finds that Eircom no longer holds SMP in the LB TI WHQA Market and Eircom’s designation with SMP in the LB TI WHQA Market, pursuant to ComReg Decision D03/20, is hereby withdrawn.

5.2 ComReg hereby finds that, on a forward-looking basis, the Zone A MI WDC Markets are effectively competitive, and no undertaking has SMP in those markets.

5.3 ComReg hereby finds that, on a forward-looking basis, the Zone B MI WDC Markets are not effectively competitive and designates Eircom as having SMP in those markets.

6. REQUIREMENT FOR SMP OBLIGATIONS

- 6.1 In light of the competition issues arising in connection with Eircom's SMP in the Zone B MI WDC Markets, and subject to Section 6.2, ComReg finds that it is necessary to impose on Eircom in respect of the Zone B MI WDC Markets, obligations of access, non-discrimination, transparency, cost-orientation, cost accounting and accounting separation as set out in, and further specified as the case may be, in Sections 7 to 15.

Geographic differentiation

- 6.2. The obligation of cost-orientation shall not apply to Eircom's provision of Access required under this Decision at premises in the Zone B MI WDC Markets that are in the Intervention Area, as identified by the associated Eircodes in the Amber Areas in the National Broadband Plan Map as published and updated by the Department of Culture, Communications and Sport on its website from time to time.
- 6.3 For the avoidance of doubt, all other obligations as set out in this Part II apply in respect of the provision of Access at any premises in the Zone B MI WDC Markets including premises in the Intervention Area and for the further avoidance of doubt, this includes in particular obligations of transparency and non-discrimination requirements as regards prices applicable to the provision of Access to premises in the Zone B MI WDC Markets that are in the Intervention Area.

7. ACCESS

Reasonable requests for Access to terminating segments

- 7.1 Eircom shall meet all reasonable requests for active products and services providing Access to Wholesale Dedicated Capacity between a fixed location in a Zone B WPZ and any Point of Handover located within the Aggregation Area and, in the case of a Non-Trunk Node, up to any Point of Handover located within the Aggregation Area of any of the two Trunk Nodes (as set out in Schedule 2) within that Aggregation Region, and shall make available any interconnection services and Associated Facilities required to avail of the Access. For the avoidance of doubt, Eircom is not required to meet requests for Access to Dark Fibre.
- 7.2 For the purpose of Section 7.1, and in accordance with Section 7.4, all requests for Access including Associated Facilities shall be deemed reasonable, subject always to reasonable terms and conditions, and a request for Access may only be rejected, refused or otherwise denied for objective reasons such as where Access, as per the request, is not technically feasible or threatens network integrity and concerns in this respect may not be

objectively mitigated satisfactorily by way of suitable terms and conditions, which reasons shall be communicated without delay to the Access Seeker concerned.

- 7.3 Within one calendar month following the Effective Date, and monthly thereafter, Eircom shall provide ComReg with a list of all requests for Access to products, services and Associated Facilities in the Zone B MI WDC Markets, whether by way of requests for the development of new products, services or Associated Facilities or amendments to existing products, services or Associated Facilities (including for the avoidance of doubt, SLAs) which have been accepted or refused/declined within the month, together where applicable, with the reasons for refusing/declining to meet an Access request.

Conditions for Access

- 7.4 Eircom shall at all times grant Access in a fair, reasonable, timely, transparent and non-discriminatory manner, as may be further specified by ComReg from time to time.
- 7.5 Without prejudice to the generality of Section 7.4, Eircom shall ensure that requirements imposed in respect of accreditation, audits and supervision are reasonable, proportionate and non-discriminatory by reference to the task concerned and the circumstances pertaining to the Access such that they do not result in unjustifiable impediments to the work of, or unwarranted costs for, Access Seekers. In particular, save where a material risk to national security, public safety or public health presents, or taking into account the nature of the work involved, there is a serious risk to the integrity of Eircom's network, Eircom shall ensure that any supervision requirements are applied in such a way that they do not have the effect of delaying or preventing Access Seekers from commencing or continuing work in the absence of an Eircom supervisor.
- 7.6 Eircom shall:-
- 7.6.1 negotiate in good faith with Undertakings requesting Access;
 - 7.6.2 not withdraw Access to facilities already granted without the prior approval of ComReg and in accordance with terms and conditions as may be determined by ComReg;
 - 7.6.3 grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of products, services, facilities or Associated Facilities,
 - 7.6.4 provide Access to OSS or similar software systems necessary to ensure fair competition in the provision of services (including those products, services and facilities described in this Section 7).

Specified forms of Access including Associated Facilities

- 7.7 Without prejudice to the generality of Section 7.1, and subject to Section 7.6.2 and Section 9.9, Eircom shall continue to make available Wholesale Dedicated Capacity using its existing Modern Interface leased lines products and Associated Facilities, comprising, for the avoidance of doubt, the following:

NGN Ethernet

- 7.7.1 Wholesale Dedicated Capacity over NGN Ethernet comprising Wholesale Symmetric Ethernet Access (“WSEA”) Access Paths and Wholesale Ethernet Service (“WES”) logical connections; and

- 7.7.2 Wholesale Ethernet Interconnect Links (“WEILs”) including variants for:

7.7.2.1 Handover within the Exchange (“In-Building Handover” (“IBH”));

7.7.2.2 Handover at an Access Seeker’s nominated Point of Handover (“In-Span Handover” (“ISH”));

7.7.2.3 Handover at a premises nominated by the Access Seeker (“Customer-Sited Handover” (“CSH”);

7.7.2.4 Handover through a dedicated Aggregation Node (installed at the Access Seeker’s MPoP) (“Edge-Node Handover” (“ENH”)), and

in each case allowing Interconnection Sharing whereby two or more Access Seekers agree to have access to the same WEIL.

Wavelength-Division Multiplexing (WDM)

- 7.7.3 WDM access circuits; and

- 7.7.4 WDM Interconnection Services, including variants for handover within the Exchange (IBH) and for handover at a premises nominated by the Access Seeker (CSH).

Co-Location

- 7.7.5 Access to any Eircom Exchange and their resources including space and power for the purpose of housing and connecting Access Seeker’s equipment, to include without limitation—:

7.7.5.1 Access to space and power;

7.7.5.2 Co-location Resource Sharing allowing an Access Seeker to share the resources (including space, power and co-location racks) allocated to it with another Access Seeker;

7.7.5.3 Co-Location Rack Interconnection allowing connection between two or more co-location equipment racks belonging to two or more separate Access Seekers at an Eircom Exchange;

7.7.5.4 Permission for Access Seekers to use shared services within or between co-location racks.

8. NON-DISCRIMINATION

8.1. Eircom shall, as regards the provision of Access required in Section 7 of this Decision Instrument, ensure that it does not discriminate between Access Seekers, and between Access Seekers and itself, its subsidiaries, affiliates or partners, and to that effect shall more particularly:

8.1.1 apply equivalent conditions in equivalent circumstances to other Undertakings requesting, or being provided with Access (or requesting or being provided with information in relation to such Access); and

8.1.2 provide Access and information in relation to such Access to all other Undertakings under the same conditions and of the same quality as Eircom provides to itself or to its subsidiaries, affiliates or partners, as further specified in Section 8.2.

8.2. For the purpose of Section 8.1, Eircom shall provide Access and information to all Undertakings including itself, its subsidiaries, affiliates or partners on the same timescales, terms and conditions including prices and service levels using the same systems and processes, with the following exceptions:—

8.2.1 Eircom may continue to provide the existing products and services specified in Section 7.7 using different systems and processes for Access Seekers from those it uses for itself provided always that Access offered to Access Seekers has the same functionality, price, terms and conditions, service and quality levels as it provides to itself, that is at an Equivalence of Outputs standard of non-discrimination;

8.2.2 Eircom has shown to ComReg's satisfaction that the use of the same systems and processes would be disproportionate in the circumstances and ComReg has provided its prior approval that different systems and processes may be used.

9. TRANSPARENCY

9.1 Eircom shall ensure transparency in its provision of Access required under this Decision Instrument.

Publication

- 9.2 Subject to Section 9.3, and save where otherwise specified by ComReg, a requirement to publish in this Decision Instrument shall be met where Eircom has made the information that it is required to publish, available on its publicly available wholesale website.
- 9.3 Where the information which Eircom is required to publish under this Decision Instrument is of a confidential and/or commercially/competition sensitive nature, Eircom shall restrict access to Access Seekers directly or indirectly availing of WDC Access from Eircom or those who have a demonstrable intention to do so and shall restrict access to such information using appropriate means, such as publication on a password-protected or restricted section of its website and subject to such reasonable terms and conditions as may be required in light of the nature of the information concerned, including a requirement to enter into a Non-Disclosure Agreement, and in accordance with any directions which ComReg may make.

LLRO and other information to be published

- 9.4 Without prejudice to the generality of Section 9.1, Eircom shall continue to publish and keep updated on its publicly available wholesale website, a LLRO which shall include the following:
- 9.4.1 a description of the offer of contract for Access broken down into components according to market needs including without limitation relevant charges, terms of payment and billing procedures;
- 9.4.2 a description of any associated contractual or other terms and conditions for supply of Access and use including a description of each product offered (“Product Description”) and an “LLRO Price List” setting out applicable prices, for each of the products, services and Associated Facilities provided further to Section 7;
- 9.4.3 subject to Section 9.3 as the case may be, a description of technical characteristics and engineering or technical standards for network Access, including any technical usage restrictions and other security issues, to include accreditation and audit requirements, that are relevant to Access to products, services or Associated Facilities in the Zone B MI WDC Markets;
- 9.4.4 SLAs;
- 9.4.5 detailed description of operational processes, including in particular:
- (a) pre-ordering, ordering, provisioning and service assurances processes;
 - (b) reason codes and their descriptions for declined orders;

- (c) rules for the allocation of space when co-location space is limited;
- (d) repair and maintenance processes;
- (e) IT systems in such detail that Access Seekers may independently perform any development that they require to avail of Access;
- (f) interoperability tests, and
- (g) specification of cables and equipment to be used on the network.

9.5 Eircom shall ensure that invoices for products in the Zone B MI WDC Markets including Associated Facilities that Eircom is required to provide under this Decision Instrument are sufficiently disaggregated, detailed and clearly presented and in particular,

9.5.1 where an invoice includes products other than products that Eircom is required to provide under this Decision Instrument, that the products that Eircom is required to provide under this Decision Instrument including Associated Facilities are clearly identifiable as such and that the charges invoiced are the applicable charges under Section 14;

9.5.2 that the prices charged for products that Eircom is required to provide under this Decision Instrument are readily reconcilable to the LLRO and LLRO Price Lists, and

9.5.3 that absent agreement with the Access Seeker concerned on alternative billing arrangements, are issued monthly, one month in advance of the provision of the relevant service, with credit terms set at thirty (30) calendar days.

9.6 Without prejudice to the generality of Section 9.1 and by way of further specification, Eircom shall publish and thereafter keep up to date, subject to Section 9.3 as the case may be, the following information:

9.6.1 A full, true and accurate description of the product development process (the "Product Development Process") relied upon by Eircom to meet Access requests including a description of all process steps and activities to include the points where Eircom decides to advance, delay or terminate the development of a product, service or Associated Facility (the "Product Development Decision Points") and any key stages in the analysis, design, development and launch, and the date on which the product, service or Associated Facility will be made

available (together, “Milestones”) from receipt of a written request for Access to launch;

9.6.2 The list of all proposed, planned and in progress developments, along with associated Milestone timelines and the priority level granted in respect of each Access request identified by their unique reference, a summary and a link to relevant documentation (hereafter, the “Product Development Roadmap”), which Eircom shall keep up to date on an ongoing basis;

9.6.3 The prioritisation process and the criteria used by Eircom in reaching decisions with respect to the prioritisation of product developments relative to each other (“Prioritisation information”).

Amendments, Notification and publication timelines/Change control

9.7 Subject to Section 9.3 and Section 9.9, or where applicable, Section 9.10, Eircom shall keep the LLRO, LLRO Price List, Product Development Process, Product Development Roadmap and Prioritisation information up to date on its publicly available website.

9.8 Eircom shall ensure that the following, in searchable format, is available on its publicly available website:—

9.8.1 A current, unmarked, version of the LLRO and LLRO Price List;

9.8.2 A marked version of the LLRO and LLRO Price List tracking changes as against the previous version such that all changes are readily identifiable;

9.8.3 A LLRO Change Matrix listing all of the amendments made to the LLRO over time, including dates at which amendments were made;

9.8.4 A LLRO Price List Change Matrix listing all of the amendments made to the LLRO Price List including dates at which amendments were made; and

9.8.5 A copy of historic versions of its LLRO, LLRO Price List, LLRO Change Matrix and LLRO Price List Change Matrix.

9.9 Subject also to Section 9.10, or save as otherwise agreed in writing with or directed by ComReg, Eircom shall not introduce new products, services or Associated Facilities or make amendments to existing products, services or Associated Facilities without first amending accordingly the documents that it is required to publish under this Decision Instrument including without limitation, the LLRO, LLRO Price List, Product Development Process, Product Development Roadmap and the Prioritisation information, as relevant, and

publishing at least two (2) months in advance of coming into effect, any proposed amendments or changes, following notification to ComReg in writing of the information to be published (together with a pricing Statement of Compliance where changes concern prices) at least one (1) month in advance of any such publication taking place.

9.10 By way of exception to the requirements set out in Section 9.9, the minimum two (2) month advance publication requirement shall be extended to at least six (6) months, save as otherwise agreed in writing with or directed by ComReg, where:-

9.10.1 Availing of the new or amended product, service or Associated Facility to deliver dedicated capacity services necessitates an Access Seeker to deploy or update equipment including End User equipment not previously required in respect of any form of Access offered by Eircom in the Zone B MI WDC Markets; or

9.10.2 Availing of the new or amended product, service or Associated Facility or continuing to avail of WDC Access from Eircom on a like for like basis requires an Access Seeker to carry out development work to their own IT systems as a result of changes to Eircom's IT systems;

Eircom having provided ComReg in writing, one month in advance of publication, together with the information to be published, a justification for the changes necessitating Access Seekers to carry out development work to their own IT systems where applicable or to deploy or update their equipment.

9.11 In respect of the advance publication requirements set out in Sections 9.9 and 9.10, following publication of the documentation and notification to Access Seekers, Eircom shall not further amend or withdraw such documentation without the prior agreement of ComReg.

9.12 Eircom shall make available, and keep updated, on its publicly available wholesale website at least six (6) months in advance of implementation, or as otherwise agreed with or directed by ComReg, information regarding the introduction of, or changes to, or technical developments relating to, Eircom's network, infrastructure or new technologies, as well as sufficient information regarding products, services, or Associated Facilities which could reasonably be expected to support such products, services, or Associated Facilities that Eircom is required to provide under this Decision Instrument.

WDC Rollout Plan

9.13 Without prejudice to the generality of Section 9.1, and subject to Section 9.3, Eircom shall make information regarding the rollout of Zone B MI WDC

products and services (“WDC Rollout Plan”) available on its publicly available wholesale website. Eircom shall, unless otherwise agreed with ComReg:

9.13.1 publish, on its publicly available wholesale website, at least three (3) months in advance, any proposed changes to the WDC (including NGN Ethernet and WDM) Rollout Plan;

9.13.2 publish, on its publicly available wholesale website, the WDC Rollout Plan within the first ten (10) calendar days of each month; and

9.13.3 publish the WDC Rollout Plan with sufficient detail to allow Access Seekers to determine:

- (a) the Nodes where WDC products and services are available,
- (b) the WDC products and services offered at each of those Nodes,
- (c) the Nodes where Eircom plans to make WDC products and services available (including forecast dates), and
- (d) the WDC products and services to be offered at each of those planned Nodes.

10. PRODUCT DEVELOPMENT PROCESS REQUIREMENTS

10.1 Eircom shall make available a clear, non-discriminatory and transparent process for the development of new forms of Access in the Zone B MI WDC Markets required under this Decision Instrument, including new products, services or Associated Facilities including SLAs and amendments to existing products, services and Associated Facilities including SLAs and such process shall apply, for the avoidance of doubt, to requests for SLAs or amendments to SLAs made independently of a request for a new or amended product, service or Associated Facility.

10.2 For the purposes of Section 10.1 and in respect of any developments requested by an Access Seeker, or by Eircom, its subsidiaries or partners, Eircom shall make available a product development process which meets the following requirements:

10.2.1 Access requests are made in writing;

10.2.2 Information is exchanged as soon as practicable and at appropriate times, with the Undertaking that has made the written request (“the requestor”) and other Undertakings including at the minimum in all cases:

- (a) An acknowledgement to the requester of receipt of the request providing a unique reference number identifying the request;

- (b) Provision of a copy of the request to Access Seekers with the allocated reference number of the request and a description of the key features and functionality requested;
- (c) A description of the matter or matters in respect of SLAs that require negotiations and the timelines governing the negotiations (the “SLA Negotiation Period”);
- (d) A status update including:
 - I. An outline of the product, service or Associated Facility proposed in response to the Access request including, as the case may be, any aspects which do not fully meet the requestor’s requirements and the objective reasons therefor;
 - II. The product development timelines including expected notification, publication and launch dates, and where Eircom anticipates at that stage that IT developments or equipment deployment or updates on the part of Access Seekers may be required, the objective reasons therefor;
 - III. The priority level granted to the request with detail of the input values and calculations used by Eircom for the prioritisation of the request, any impact on the development timelines for other Access requests and where other Access requests are reprioritised as a result, the objective reasons therefor;
- (e) A timetable for engagement and negotiations (“the engagement timetable”) as regards the Access request noting as follows:
 - I. Where the Access request is for a new or amended product, service or Associated Facility, the engagement timetable shall indicate the manner and times in which Eircom will consult and seek inputs from the requestor and other Undertakings on the product requirements;
 - II. Where the Access request is for a new or amended SLA, the engagement timetable shall define the SLA Negotiation Period and indicate times at which the requestor and other Undertakings are required to provide requirements, information, clarifications or comments regarding the Access request, subject always that the SLA Negotiation Period is deemed to commence on the day the Access request is received.

10.2.3 In respect of the matters described in Section 10.2.2 (a) to (e), save where otherwise agreed with, or directed by ComReg, Eircom shall ensure the information is provided as soon as practicable and in any event within the timelines below:

- (a) An Access request is acknowledged, and a unique reference provided, within no more than three (3) working days from receipt of the Access request;
- (b) The information set out in Section 10.2.2 (b), 10.2.2 (c) (where the Access request is for a new or amended SLA), and 10.2.2 (e) are provided within no more than fifteen (15) working days of receipt of the Access request;
- (c) The information set out in Section 10.2.2 (c) (where the Access request is for a new or amended product, service or Associated Facility) and the status update referred to in Section 10.2.2 (d) is provided within no more than eighty five (85) working days of receipt of the Access request;
- (d) The product development timelines notified by Eircom under Section 10.2.2(d)(II) shall be adhered to and may only be deviated from with ComReg's consent;
- (e) In the absence of agreement between the negotiating parties, the SLA Negotiation Period shall last for no more than six months from the start of the SLA Negotiation Period (which is the receipt of the Access request where the request is for a new or amended SLA or as per Eircom's SLA Negotiation Period in the case of a request for a new or amended product, service or Associated Facility) and ends with Eircom making a Best and Final Offer ("BAFO"); and,
- (f) The agreed SLA or BAFO shall enter into force on the date the new or amended product, service or Associated Facility is launched.

11. SERVICE LEVEL AGREEMENTS

11.1 Without prejudice to the generality of, and for the purpose of further specifying the requirements of the obligation at Section 7.4, Eircom shall ensure that a legally binding, fit-for-purpose, SLA which encourages an efficient level of performance on the part of Eircom is attached to each product, service and Associated Facility made available in accordance with this Decision Instrument from the time that the product, service and Associated Facility is available and subsequently kept up to date and fit for purpose.

- 11.2 In meeting its obligation under Section 11.1, Eircom shall:
- 11.2.1 Negotiate proactively, in good faith, with Undertakings, on their requirements be it in respect of a new SLA or an amendment to an existing SLA and to that purpose meet the further requirements set out in Section 11.3 as may be amended or further specified by ComReg from time to time;
- 11.2.2 Ensure that SLAs are sufficiently detailed and include, without limitation, the following provisions:
- (a) An obligation on Eircom to compensate failure to meet agreed service levels by way of payment of Service Credits such that the Service Credits cover, at a minimum, the direct costs and any other reasonable loss of value incurred by the Access Seeker concerned and provide Eircom with sufficient and adequate incentives to meet agreed service levels;
 - (b) Details of the specific circumstances upon which Service Credits must be paid by Eircom and the methodology used to calculate the amount of Service Credits owed, including an itemised list of the direct costs and other losses contributing to the Service Credit calculation, supported by clear examples demonstrating the practical application of Service Credits;
 - (c) An obligation on Eircom to apply Service Credits, where payable, automatically and in a timely manner;
- 11.2.3 Ensure, where provision is made in an SLA for its suspension, that suspension may only be triggered on the basis of objectively defined and measurable parameters, that full details are set out as to the specific circumstances which may trigger such suspension, all the terms and conditions governing the suspension, and the procedural requirements to be followed for suspension including that Eircom shall be required where suspension occurs, to report to the Access Seekers on the basis for each such suspension and the parameters relied upon.
- 11.3 Eircom shall ensure that negotiations for the conclusion or amendment of an SLA as the case may be, are conducted in a fair, reasonable and timely manner and that the matters of Service Credits and SLA suspension are the subject of negotiations during the SLA Negotiation Period.
- 11.4 Where no agreement is reached, the SLA Negotiation Period shall conclude with Eircom making available to the requestor or Undertakings involved in the negotiation its best and final offer (“BAFO”) within the timelines set out in Section 10.2.3(b) or Section 10.2.3(c) as the case may be, and the BAFO or

the agreed SLA shall enter into force and replace as the case may be any SLA it amends, within three (3) months of its notification to ComReg in accordance with Section 9.9, or within seven (7) months of its notification to ComReg in accordance with Section 9.10 as the case may be, save where Eircom has applied, setting out reasons therefor, for an extension and ComReg, at its sole discretion, has granted same, or in the case of an SLA or an amendment to an SLA for a new product or an amendment to a product, on the date the new or amended product, service or Associated Facility is launched.

11.5 Further to its obligation of transparency set in Section 9, Eircom shall:

11.5.1 Publish concluded SLAs or when no SLA is formally agreed, the SLA reflecting the BAFO required under Section 11.4;

11.5.2 Within two (2) months of the end of each Quarter, publish a report setting out the actual performance achieved in each of the three (3) previous months in respect of all Access Seekers compared to the committed service levels contained in the relevant SLA for the products, services and Associated Facilities required under this Decision Instrument (the “performance metric report”) to include at a minimum:

11.5.2.1 Details of the service metrics allowing Access Seekers identify the specific activities and processes, along with associated process times, for the products, services and Associated Facilities being reported on; and

11.5.2.2 The performance targets and actual performance achieved for each activity.

11.5.3 Having regard to Section 11.5.2, publish and maintain on its publicly available website a performance metric report detailing the methodology applied, the source data used and explanations on how the source data was processed by Eircom including worked examples as to how the processed source data relates to the actual performance achieved.

12. KEY PERFORMANCE INDICATORS

12.1 Further to Eircom’s obligations under Sections 7, 8, 9, 10 and 11, Eircom shall publish Key Performance Indicators (“KPI”) on its publicly available wholesale website in respect of its provision of WDC products, services and Associated Facilities in the Zone B MI WDC Markets, as may be further specified by ComReg.

12.2 For the purpose of complying with Section 12.1, and by way of further specification, Eircom shall comply with the requirements set out in ComReg Decision D04/22, as amended, and to that purpose:

12.2.1 References in the KPI DI to ComReg Decision D10/18 shall be construed as including a reference to this Decision and Decision Instrument;

12.2.2 Section 4.2 of the KPI DI shall not apply; and

12.2.2 References to the Effective Date and Implementation Date in the KPI DI shall be understood as a reference to the Effective Date of this Decision Instrument, and the timeline set out in the second line of Section 4.3 of the KPI DI, set aside.

Amendments to ComReg Decision D04/22

12.3 Schedule 1 of the KPI DI is hereby amended by adding at paragraph 2, the following definitions inserted in alphabetical order:

“Interconnection Services” means the Associated Facilities and Services which enable or facilitate the handover of the MI WDC products and services which Eircom is required to provide under Decision DXX/YY [*the Final Decision*] and includes in particular WEILs and Retail Equivalents;

“Non-Standard Order” means in respect of a WDC Order, that there are impediments (documented in Eircom’s SLA) to Eircom delivering the order;

“Project Order” means in respect of a WDC Order, an order accepted by Eircom as part of an agreed project and Eircom assigns a project manager to implement the project;

“Standard Order” in respect of a WDC Order, means there are no impediments to Eircom delivering the order;

“WDC Order” means an order for an MI WDC product or service which Eircom is required to provide under ComReg Decision DXX/YY [*the Final Decision*] and includes WDM, WSEA, WES and Retail Equivalents;

“WDM” or **“xWDM”** means Wavelength-Division Multiplexing, a technology which multiplexes multiple optical carrier signals onto a single optical fibre by using different wavelengths;

“WEIL” means Wholesale Ethernet Interconnect Links;

“WES” means Wholesale Ethernet Service;

“WSEA” means Wholesale Symmetric Ethernet Access.

- 12.4 Schedule 3 of the KPI DI is hereby amended by adding the paragraphs set out in Schedule 4 of this Decision Instrument.
- 12.5 Schedule 4 of the KPI DI is hereby amended by adding the tables set out in Schedule 5 of this Decision Instrument.

13. ACCOUNTING SEPARATION

- 13.1 Eircom shall maintain separated accounts in respect of its provision of Modern Interface Wholesale Dedicated Capacity.
- 13.2 For the purpose of Section 13.1 and by way of further specification, Eircom shall comply with the requirements set out in ComReg Decision D08/10 (as may be amended or replaced from time to time).

14. PRICE CONTROL AND COST ACCOUNTING

Cost Accounting

- 14.1 Eircom shall maintain appropriate cost accounting systems in respect of its provision of Modern Interface Wholesale Dedicated Capacity.

Cost orientation

- 14.2 Subject to Section 6.2, the Eircom prices for Access to, or use of, the products, services, facilities or Associated Facilities which Eircom is required to provide under Section 7 shall be cost orientated, as may be further specified by ComReg from time to time.
- 14.3 For the purpose of Section 14.2, and by way of further specification of Eircom's obligation of cost orientation:-
- 14.3.1 Eircom shall continue to recover the costs of its NGN Ethernet and WDM wholesale dedicated capacity product suites as specified in Sections 7.7.1 to 7.7.4 by way of an annual rental charge and a connection fee, and no other or additional charges may be levied without ComReg's prior approval;
- 14.3.2 The annual rental charges applicable to the NGN Ethernet and WDM wholesale dedicated capacity product suites as set out in the LLRO Price List on the Effective Date shall be deemed to be cost-oriented and allow Eircom to recover the cost of efficient provision of services and Eircom shall apply no more and no less than the published annual rental charges save where Eircom demonstrates to ComReg's satisfaction that adjustments are necessary in order to allow Eircom to recover its efficient costs calculated on a BU-LRAIC+ standard

including a reasonable return on investment and ComReg directs such adjustments;

14.3.3 Charges for Access to Associated Facilities under Section 7, including Interconnection Services and co-location services, shall be set as follows:—

14.3.3.1 The annual rental charges for Interconnection Services as set out in the LLRO Price List on the Effective Date shall be deemed to be cost-oriented and allow Eircom to recover the cost of efficient provision of services and Eircom shall apply no more and no less than such published annual charges subject that ComReg may allow adjustments to such charges where Eircom demonstrates to ComReg's satisfaction that such adjustments are necessary in order to allow Eircom to recover its efficient costs calculated on a BU-LRAIC+ standard including a reasonable return on investment and ComReg directs such adjustments.

14.3.3.2 Eircom shall ensure that connection fees associated with Interconnection Services and charges for other Associated Facilities services, including co-location, recover no more than the actual costs incurred (adjusted for efficiencies) allowing a reasonable rate of return and ComReg may at its discretion and in accordance with Regulation 56(6) of the ECC Regulations, require full justification for any fees or charges and direct, where appropriate, adjustments.

15. REGULATORY GOVERNANCE

15.1 Eircom shall have in place transparent regulatory governance arrangements, which facilitate effective and non-discriminatory provision of Access by Eircom to the products, services or Associated Facilities in the Zone B MI WDC Markets in accordance with the requirements of this Decision Instrument.

15.2 Without prejudice to the generality of Section 15.1, within three (3) months of the Effective Date, subject to any requirement to submit earlier, for example, due to a change to an existing or new WDC product, service or Associated Facility, Eircom shall submit to ComReg a full written statement of compliance ("Statement of Compliance") signed by a Director or Directors of Eircom authorised to provide such statements on behalf of the Board of Directors of Eircom, which includes the following:

- 15.2.1 A statement:
- (a) That the Directors acknowledge that they are responsible for Eircom securing compliance with its regulatory obligations;
 - (b) Confirming that, in their opinion, arrangements, structures and internal controls are in place that provide reasonable assurance that Eircom is compliant with its obligations as set out in this Decision Instrument;
 - (c) Explaining the basis upon which the confirmation in subparagraph (b) above is made, including a description of the information relied upon, and the process followed, by the Directors for that purpose;
- 15.2.2 A description and explanation of the governance measures implemented by Eircom to ensure that it is, and remains, in compliance with the obligations set out in this Decision Instrument;
- 15.2.3 A description of the methodology followed to identify risks of noncompliance with the obligations imposed in Sections 7 to 14 (the “regulatory risks”) and to develop the controls required to manage the regulatory risks including in particular by reference to identifying, employing and relying on adequate expertise, material and information.
- 15.2.4 A detailed description of the regulatory risks identified utilising the methodology described in Section 15.2.3 above for all WDC products, services and Associated Facilities in the Zone B MI WDC Markets, including without limitation, in respect of the following activities:
- (a) Pre-provisioning, provisioning and service assurance;
 - (b) Product development including product enhancements, and pre-product development screening of Access requests;
 - (c) Product prioritisation and investment decisions;
 - (d) Access to shared resources including IT and product development resources, and
 - (e) The management of confidential information, in conformance with regulatory requirements.
- 15.2.5 A detailed description of the controls developed to manage the regulatory risks, including:

- (a) A description of the relationship of each control to the underlying regulatory risk;
- (b) A description of the process used to assess the adequacy and effectiveness of the controls;
- (c) A description of the operation of controls including the method employed by Eircom to record and store the data produced when controls are operated;
- (d) The identification and description of the repository in which the data from the operation of each control is recorded and stored.

15.2.6 For each of the products, services and Associated Facilities reviewed for the purpose of Section 15.2.1 and 15.2.5, a description of the risk analysis and control development process carried out (the "Process"), to include the following:

- (a) The scope of the Process, including in particular:
 - I. A description of the expertise relied upon to identify the regulatory risk and develop the controls required to manage the regulatory risks, by reference to the description of the expertise of the Eircom personnel engaged in the Process, and
 - II. A list of all the material used to identify the regulatory risks and develop the controls required to manage the regulatory risks including without limitation, relevant product documentation, internal process information, risk analysis documentation.
- (b) The outcome of the Process in respect of the identification of regulatory risks, and the justification for the outcome;
- (c) The outcome of the Process in respect of the development of the controls required to address the regulatory risks identified, and the justification for the outcome, to include:
 - I. A description of the operation of the control, including the frequency of its operation, and
 - II. A description of the directory / path details for repository for control evidence.

15.3 The documentation referred to in this Section 15 shall be of sufficient clarity and detail to enable ComReg to assess whether Eircom's risk assessment and

control and governance measures provide reasonable assurance as to Eircom's compliance with the obligations set out in this Decision Instrument.

15.4 Eircom shall keep the Statement of Compliance up to date. In particular, and without prejudice to the generality of this obligation, Eircom shall update, and submit to ComReg, an updated Statement of Compliance, duly dated and signed and meeting the requirements of Section 15.2.1 above, in the following circumstances:

15.4.1 Where a material change or material changes are made to any of the documentation and information detailed in this Section 15, within three (3) months of such change or changes being made;

15.4.2 Where a new WDC product, service or Associated Facility, or an amendment to an existing WDC product, service or Associated Facility which falls within the scope of the Zone B MI WDC Markets is introduced, having regard in particular to the requirements in Sections 15.2.4, 15.2.5 and 15.2.6, and in accordance with the timeline set out in, and as part of the documentation required for the purpose of Section 9.9, or as otherwise may be required or agreed by ComReg.

15.5 Eircom shall ensure that updates or changes to the Statement of Compliance are easily identifiable. For that purpose, Eircom shall operate a standardised regime for the management of changes to the documents contained in, and including, the Statement of Compliance whereby:

15.5.1 Different versions of the Statement of Compliance are identified by a number, letter or code, associated with a date and timestamp; and

15.5.2 A record of all changes made to versions of the Statement of Compliance is maintained and incorporated in a dedicated and indexed section in each Statement of Compliance.

15.6 Eircom shall publish the Statement of Compliance, and updates to the Statement of Compliance, within one (1) month of providing it to ComReg, unless otherwise agreed with ComReg.

PART III - OPERATION AND EFFECTIVE DATE

16. STATUTORY POWERS NOT AFFECTED

16.1 Nothing in this Decision Instrument shall operate to limit ComReg in the exercise and performance of its statutory powers or duties conferred on it under any primary or secondary legislation (in force prior to or after the Effective Date of this Decision Instrument).

17. WITHDRAWAL OF SMP OBLIGATIONS

- 17.1 Without prejudice to Section 18, ComReg Decision D03/20 shall be withdrawn on the Effective Date.

18. SUNSET PROVISIONS

LB TI WHQA Market

- 18.1 Eircom shall not withdraw Access to connected premises by way of LB TI WHQA products, services and facilities where orders for Access were placed prior to the Effective Date, or amend the terms and conditions of such Access, for a period of six (6) months from the Effective Date.

Workplace Zones ('WPZ') transferring from Zone B to Zone A

- 18.2 In respect of those WPZs included in a Zone B MI WHQA Market pursuant to ComReg Decision D03/20 and included in a Zone A MI WDC Market under this Decision, as set out in Table A of Schedule 3, Eircom shall:-

18.2.1 not withdraw Access availed of under Decision D03/20 where orders for Access were placed prior to the Effective Date, or amend the terms and conditions of such Access, for a period of nine (9) months from the Effective Date;

18.2.2 meet new orders for Access for MI WDC products, services and facilities where placed within a period of three (3) months from the Effective Date.

19. MAINTENANCE OF OBLIGATIONS

- 19.1 Unless expressly stated otherwise in this Decision Instrument, all obligations and requirements contained in Decision Notices and Directions made by ComReg, applying to Eircom, and in force immediately prior to the Effective Date of this Decision Instrument, continue in force and Eircom shall comply with the same.
- 19.2 For the avoidance of doubt, to the extent that there is any conflict between a Decision Instrument dated prior to the Effective Date and Eircom's obligations set out herein, it is the latter which shall prevail.
- 19.3 If any Section(s), clause(s), or provision(s), or portion(s) thereof, contained in this Decision Instrument is(are) found to be invalid or prohibited by the Constitution, by any other law or judged by a court to be unlawful, void or unenforceable, that(those) Section(s), clause(s), or provision(s), or portion(s) thereof shall, to the extent required, be severed from this Decision Instrument

SCHEDULES

SCHEDULE 1

WDC MARKETS WORKPLACE ZONES

1.1 MI WDC MARKET 1

MI WDC Market 1 WPZ's							
CC0002	CK0366	DC0511	DC1020	FL0302	KY0056	MH0073	SO0039
CC0009	CK0368	DC0513	DC1021	FL0303	KY0059	MH0074	SO0040
CC0011	CK0397	DC0516	DC1023	FL0304	KY0061	MH0076	SO0041
CC0012	CK0398	DC0519	DC1026	FL0305	KY0062	MH0083	SO0042
CC0013	CK0410	DC0522	DC1027	FL0306	KY0064	MH0084	SO0043
CC0014	CK0411	DC0523	DC1029	FL0308	KY0065	MH0085	SO0044
CC0015	CK0416	DC0526	DC1030	FL0309	KY0067	MH0090	SO0045
CC0016	CK0424	DC0527	DC1032	FL0310	KY0070	MH0099	SO0047
CC0017	CK0428	DC0528	DC1034	FL0311	KY0145	MH0102	SO0048
CC0018	CK0454	DC0537	DL0001	FL0312	KY0147	MH0127	SO0049
CC0019	CK0470	DC0538	DL0002	FL0313	KY0148	MH0136	SO0075
CC0020	CK0471	DC0539	DL0003	FL0314	KY0150	MH0150	TY0001
CC0022	CK0476	DC0540	DL0004	FL0317	KY0208	MH0158	TY0002
CC0023	CK0478	DC0541	DL0005	FL0318	KY0224	MH0174	TY0003
CC0024	CK0479	DC0542	DL0007	FL0319	KY0225	MH0176	TY0005
CC0025	CK0483	DC0543	DL0008	FL0320	KY0229	MH0178	TY0006
CC0026	CK0491	DC0544	DL0010	FL0322	KY0235	MH0179	TY0007
CC0027	CK0496	DC0545	DL0011	FL0323	KY0236	MH0180	TY0008
CC0028	CK0497	DC0546	DL0012	FL0324	KY0237	MH0181	TY0010
CC0029	CK0499	DC0547	DL0013	FL0325	KY0238	MH0182	TY0013
CC0030	CK0500	DC0548	DL0014	FL0326	KY0240	MH0184	TY0014
CC0031	CK0503	DC0549	DL0015	FL0327	KY0241	MH0185	TY0016
CC0032	CK0504	DC0550	DL0016	FL0328	KY0245	MH0186	TY0018
CC0033	CK0515	DC0551	DL0017	FL0329	KY0246	MH0187	TY0019
CC0034	CK0521	DC0552	DL0018	FL0331	KY0247	MH0188	TY0021
CC0035	CK0522	DC0553	DL0020	FL0332	KY0248	MH0189	TY0022
CC0036	CK0523	DC0554	DL0021	FL0333	KY0249	MH0190	TY0023
CC0038	CK0526	DC0555	DL0023	FL0334	LD0001	MH0192	TY0028
CC0041	CK0527	DC0556	DL0024	FL0335	LD0002	MH0200	TY0032
CC0042	CK0530	DC0557	DL0025	FL0336	LD0003	MH0204	TY0033
CC0043	CN0001	DC0558	DL0027	FL0337	LD0004	MH0250	TY0034
CC0044	CN0002	DC0559	DL0028	FL0338	LD0005	MH0251	TY0035
CC0045	CN0003	DC0560	DL0029	FL0339	LD0006	MH0252	TY0036
CC0046	CN0004	DC0562	DL0030	FL0340	LD0008	MH0253	TY0039
CC0047	CN0005	DC0563	DL0031	FL0341	LD0009	MH0256	TY0082

CC0048	CN0006	DC0564	DL0035	FL0342	LD0011	MH0258	TY0083
CC0049	CN0007	DC0566	DL0037	FL0343	LD0012	MH0259	TY0085
CC0051	CN0008	DC0567	DL0038	FL0344	LD0013	MH0260	TY0090
CC0053	CN0009	DC0568	DL0039	FL0345	LD0015	MH0261	TY0093
CC0054	CN0010	DC0569	DL0040	FL0346	LD0016	MN0003	TY0117
CC0055	CN0011	DC0570	DL0041	FL0347	LD0048	MN0004	TY0118
CC0058	CN0012	DC0571	DL0042	FL0348	LD0049	MN0005	TY0124
CC0059	CN0013	DC0572	DL0045	FL0349	LD0050	MN0008	TY0125
CC0060	CN0014	DC0573	DL0051	FL0350	LD0055	MN0009	TY0126
CC0061	CN0028	DC0574	DL0052	FL0353	LH0001	MN0011	TY0129
CC0062	CN0083	DC0575	DL0055	FL0354	LH0002	MN0014	TY0130
CC0063	CN0085	DC0577	DL0056	FL0355	LH0003	MN0015	TY0131
CC0064	CN0086	DC0579	DL0057	FL0356	LH0005	MN0016	TY0132
CC0065	CN0087	DC0580	DL0058	FL0357	LH0008	MN0018	TY0133
CC0066	CN0089	DC0581	DL0059	FL0358	LH0009	MN0019	TY0134
CC0069	CN0090	DC0582	DL0060	GC0002	LH0010	MN0020	TY0135
CC0070	CN0091	DC0583	DL0061	GC0004	LH0012	MN0028	TY0136
CC0071	CN0092	DC0585	DL0062	GC0007	LH0013	MN0029	TY0137
CC0072	CN0093	DC0586	DL0137	GC0010	LH0015	MN0030	TY0138
CC0073	CN0094	DC0587	DL0157	GC0011	LH0016	MN0047	TY0139
CC0074	CN0095	DC0588	DL0167	GC0012	LH0017	MN0051	TY0140
CC0075	CN0096	DC0589	DL0169	GC0013	LH0018	MN0054	TY0141
CC0076	CN0100	DC0590	DL0170	GC0014	LH0021	MN0072	TY0142
CC0077	CW0001	DC0591	DL0171	GC0015	LH0025	MN0093	TY0143
CC0078	CW0002	DC0592	DL0172	GC0016	LH0026	MN0094	TY0144
CC0079	CW0003	DC0593	DL0174	GC0017	LH0027	MN0097	TY0145
CC0081	CW0004	DC0594	DL0176	GC0018	LH0028	MO0001	TY0147
CC0082	CW0005	DC0595	DL0177	GC0019	LH0030	MO0003	TY0148
CC0083	CW0007	DC0596	DL0178	GC0020	LH0033	MO0006	TY0149
CC0084	CW0008	DC0597	DL0179	GC0021	LH0034	MO0007	TY0150
CC0085	CW0009	DC0598	DL0182	GC0022	LH0036	MO0009	TY0151
CC0086	CW0012	DC0599	DL0183	GC0023	LH0037	MO0010	TY0152
CC0087	CW0013	DC0600	DL0186	GC0024	LH0038	MO0011	TY0153
CC0089	CW0014	DC0601	DL0188	GC0025	LH0041	MO0012	TY0155
CC0092	CW0015	DC0602	DL0229	GC0026	LH0043	MO0013	TY0156
CC0093	CW0016	DC0603	DL0230	GC0027	LH0045	MO0014	TY0157
CC0094	CW0017	DC0604	DL0231	GC0028	LH0046	MO0016	TY0159
CC0095	CW0018	DC0606	DL0232	GC0029	LH0047	MO0017	TY0162
CC0096	CW0019	DC0607	DL0233	GC0031	LH0050	MO0019	TY0168
CC0097	CW0036	DC0608	DR0008	GC0032	LH0051	MO0024	TY0179
CC0098	CW0038	DC0609	DR0014	GC0036	LH0054	MO0028	TY0182
CC0099	CW0039	DC0610	DR0018	GC0037	LH0055	MO0031	TY0208
CC0100	CW0041	DC0611	DR0019	GC0038	LH0056	MO0033	TY0209
CC0101	CW0042	DC0612	DR0022	GC0043	LH0057	MO0035	TY0214
CC0102	CW0043	DC0613	DR0025	GC0045	LH0058	MO0038	TY0222

CC0103	CW0044	DC0614	DR0030	GC0046	LH0059	MO0040	TY0223
CC0104	CW0045	DC0615	DR0032	GC0047	LH0060	MO0064	TY0224
CC0106	CW0046	DC0616	DR0034	GC0049	LH0062	MO0066	TY0226
CC0107	CW0049	DC0617	DR0035	GC0050	LH0063	MO0082	TY0227
CC0108	CW0050	DC0618	DR0037	GC0051	LH0064	MO0085	TY0228
CC0109	CW0051	DC0619	DR0038	GC0053	LH0065	MO0088	TY0229
CC0110	CW0053	DC0620	DR0039	GC0054	LH0066	MO0130	TY0230
CC0111	DC0001	DC0621	DR0040	GC0055	LH0067	MO0131	TY0231
CC0113	DC0018	DC0622	DR0041	GC0056	LH0068	MO0133	TY0232
CC0114	DC0019	DC0623	DR0045	GC0057	LH0070	MO0176	WD0001
CC0115	DC0022	DC0624	DR0052	GC0058	LH0071	OY0009	WD0002
CC0116	DC0023	DC0625	DR0053	GC0060	LH0072	OY0011	WD0003
CC0119	DC0024	DC0626	DR0054	GC0061	LH0073	OY0012	WD0004
CC0120	DC0028	DC0627	DR0055	GC0062	LH0074	OY0014	WD0005
CC0121	DC0032	DC0628	DR0056	GC0063	LH0075	OY0015	WD0007
CC0122	DC0037	DC0629	DR0057	GC0064	LH0076	OY0016	WD0008
CC0123	DC0038	DC0630	DR0058	GC0065	LH0080	OY0017	WD0009
CC0125	DC0043	DC0631	DR0059	GC0066	LH0086	OY0020	WD0010
CC0126	DC0049	DC0632	DR0060	GC0067	LH0087	OY0021	WD0011
CC0127	DC0051	DC0633	DR0061	GC0068	LH0088	OY0023	WD0012
CC0128	DC0052	DC0634	DR0070	GC0069	LH0089	OY0024	WD0013
CC0130	DC0053	DC0636	DR0072	GC0070	LH0091	OY0025	WD0014
CC0131	DC0054	DC0637	DR0073	GC0072	LH0103	OY0027	WD0015
CC0136	DC0057	DC0638	DR0074	GC0073	LH0126	OY0028	WD0016
CC0138	DC0060	DC0639	DR0075	GC0075	LH0131	OY0057	WD0017
CC0139	DC0061	DC0641	DR0077	GC0076	LH0132	OY0060	WD0018
CC0140	DC0063	DC0643	DR0078	GC0077	LH0133	OY0084	WD0019
CC0141	DC0064	DC0644	DR0079	GC0078	LH0135	OY0085	WD0020
CC0142	DC0072	DC0645	DR0080	GC0079	LH0136	OY0090	WD0021
CC0144	DC0074	DC0646	DR0081	GC0080	LH0137	OY0096	WD0022
CC0145	DC0077	DC0648	DR0085	GC0081	LH0138	RN0001	WD0024
CC0147	DC0078	DC0649	DR0086	GC0082	LH0139	RN0003	WD0026
CC0148	DC0084	DC0651	DR0089	GC0083	LH0140	RN0004	WD0031
CC0149	DC0086	DC0654	DR0090	GC0085	LH0141	RN0005	WD0032
CC0150	DC0087	DC0655	DR0091	GC0086	LH0142	RN0006	WD0033
CC0151	DC0093	DC0657	DR0092	GC0087	LH0143	RN0007	WD0034
CC0152	DC0094	DC0661	DR0106	GC0088	LH0145	RN0030	WD0035
CC0153	DC0095	DC0662	DR0107	GC0089	LH0146	RN0031	WD0036
CC0154	DC0096	DC0664	DR0108	GC0091	LH0147	RN0056	WD0037
CC0155	DC0098	DC0667	DR0109	GC0092	LH0148	RN0071	WD0038
CC0159	DC0100	DC0669	DR0110	GC0094	LH0149	RN0076	WD0039
CC0160	DC0107	DC0670	DR0111	GC0095	LH0150	RN0077	WD0040
CC0161	DC0110	DC0671	DR0112	GC0096	LH0151	RN0079	WD0041
CC0162	DC0111	DC0674	DR0113	GC0097	LH0152	RN0080	WD0042
CC0163	DC0112	DC0677	DR0115	GC0100	LH0153	RN0081	WD0043

CC0164	DC0121	DC0681	DR0116	GC0101	LH0156	RN0082	WD0044
CC0165	DC0125	DC0685	DR0117	GC0102	LH0157	RN0084	WD0046
CC0166	DC0129	DC0688	DR0120	GC0103	LH0159	SD0003	WD0047
CC0168	DC0134	DC0689	DR0122	GC0104	LH0167	SD0008	WD0049
CC0169	DC0137	DC0690	DR0123	GC0105	LH0187	SD0016	WD0050
CC0171	DC0138	DC0691	DR0124	GC0106	LH0188	SD0020	WD0051
CC0172	DC0139	DC0692	DR0125	GC0107	LH0189	SD0021	WD0052
CC0173	DC0150	DC0693	DR0126	GC0108	LH0190	SD0022	WD0053
CC0174	DC0154	DC0697	DR0143	GC0109	LH0191	SD0023	WD0056
CC0175	DC0160	DC0698	DR0144	GC0110	LH0192	SD0026	WD0057
CC0176	DC0162	DC0700	DR0145	GC0111	LK0001	SD0027	WD0058
CC0177	DC0166	DC0702	DR0146	GC0113	LK0002	SD0028	WD0059
CC0178	DC0167	DC0703	DR0147	GC0114	LK0004	SD0030	WD0063
CC0182	DC0169	DC0704	DR0149	GC0115	LK0005	SD0033	WD0067
CC0183	DC0170	DC0705	DR0150	GC0117	LK0007	SD0036	WD0068
CC0184	DC0172	DC0706	DR0151	GC0118	LK0008	SD0037	WD0069
CC0186	DC0175	DC0708	DR0152	GC0120	LK0009	SD0039	WD0071
CC0187	DC0178	DC0709	DR0153	GC0121	LK0010	SD0041	WD0074
CC0188	DC0182	DC0710	DR0154	GC0122	LK0012	SD0044	WD0075
CC0189	DC0183	DC0711	DR0155	GC0123	LK0013	SD0045	WD0076
CC0190	DC0184	DC0712	DR0156	GC0124	LK0014	SD0048	WD0077
CC0191	DC0186	DC0713	DR0157	GC0125	LK0015	SD0049	WD0078
CC0192	DC0187	DC0714	DR0158	GC0126	LK0017	SD0050	WD0079
CC0193	DC0188	DC0715	DR0159	GC0127	LK0018	SD0052	WD0080
CC0194	DC0189	DC0716	DR0160	GC0128	LK0019	SD0053	WD0082
CC0195	DC0190	DC0717	DR0161	GC0129	LK0020	SD0054	WD0083
CC0196	DC0191	DC0719	DR0162	GC0130	LK0022	SD0055	WD0084
CC0197	DC0192	DC0720	DR0163	GC0132	LK0023	SD0056	WD0085
CC0198	DC0193	DC0721	DR0164	GC0133	LK0024	SD0061	WD0086
CC0199	DC0194	DC0722	DR0165	GC0134	LK0025	SD0073	WD0087
CC0200	DC0195	DC0723	DR0166	GC0135	LK0026	SD0074	WD0088
CC0201	DC0196	DC0724	DR0167	GC0136	LK0027	SD0075	WD0089
CC0202	DC0197	DC0725	DR0168	GC0137	LK0029	SD0076	WD0090
CC0203	DC0198	DC0726	DR0169	GC0139	LK0030	SD0077	WD0091
CC0204	DC0199	DC0727	DR0170	GC0140	LK0031	SD0079	WD0092
CC0205	DC0200	DC0728	DR0171	GC0141	LK0033	SD0080	WD0093
CC0206	DC0201	DC0732	DR0172	GC0142	LK0034	SD0081	WD0094
CC0209	DC0203	DC0733	DR0173	GC0143	LK0035	SD0082	WD0095
CC0210	DC0206	DC0734	DR0174	GC0144	LK0036	SD0084	WD0096
CC0211	DC0212	DC0735	DR0175	GC0145	LK0038	SD0085	WD0097
CC0212	DC0213	DC0736	DR0176	GC0146	LK0039	SD0086	WD0098
CC0213	DC0217	DC0737	DR0177	GC0147	LK0040	SD0090	WD0099
CC0214	DC0218	DC0738	DR0178	GC0148	LK0041	SD0091	WD0100
CC0215	DC0219	DC0739	DR0179	GC0149	LK0042	SD0092	WD0101
CC0216	DC0224	DC0740	DR0180	GC0150	LK0044	SD0093	WD0103

CC0217	DC0226	DC0741	DR0181	GC0151	LK0045	SD0095	WD0104
CC0219	DC0227	DC0742	DR0182	GC0152	LK0046	SD0106	WD0105
CC0221	DC0231	DC0743	DR0183	GC0153	LK0047	SD0108	WD0106
CE0005	DC0232	DC0744	DR0190	GY0003	LK0050	SD0115	WD0108
CE0006	DC0236	DC0745	DR0191	GY0005	LK0051	SD0116	WD0118
CE0008	DC0237	DC0746	DR0192	GY0006	LK0052	SD0119	WD0162
CE0013	DC0240	DC0747	DR0193	GY0007	LK0054	SD0132	WD0163
CE0035	DC0242	DC0748	DR0195	GY0008	LK0055	SD0143	WH0002
CE0036	DC0243	DC0749	DR0196	GY0009	LK0056	SD0144	WH0003
CE0039	DC0244	DC0750	DR0197	GY0011	LK0057	SD0148	WH0004
CE0040	DC0245	DC0752	DR0198	GY0030	LK0058	SD0151	WH0005
CE0041	DC0247	DC0756	DR0199	GY0044	LK0059	SD0152	WH0006
CE0042	DC0248	DC0758	DR0200	GY0045	LK0060	SD0153	WH0008
CE0046	DC0250	DC0761	DR0205	GY0046	LK0061	SD0154	WH0009
CE0047	DC0251	DC0762	DR0206	GY0047	LK0062	SD0155	WH0010
CE0048	DC0252	DC0770	DR0214	GY0048	LK0063	SD0156	WH0011
CE0049	DC0253	DC0771	DR0235	GY0049	LK0065	SD0157	WH0012
CE0050	DC0254	DC0772	DR0236	GY0050	LK0067	SD0158	WH0013
CE0052	DC0255	DC0774	DR0239	GY0051	LK0069	SD0159	WH0014
CE0053	DC0257	DC0776	DR0241	GY0052	LK0070	SD0162	WH0015
CE0054	DC0258	DC0779	DR0242	GY0063	LK0071	SD0165	WH0016
CE0055	DC0259	DC0788	DR0243	GY0088	LK0072	SD0174	WH0019
CE0056	DC0260	DC0791	DR0244	GY0089	LK0074	SD0176	WH0020
CE0057	DC0261	DC0792	DR0245	GY0090	LK0075	SD0177	WH0021
CE0058	DC0262	DC0794	DR0247	GY0093	LK0076	SD0181	WH0023
CE0059	DC0263	DC0797	DR0251	GY0094	LK0077	SD0183	WH0028
CE0060	DC0264	DC0800	DR0264	GY0095	LK0078	SD0185	WH0029
CE0061	DC0265	DC0802	DR0265	GY0096	LK0079	SD0186	WH0031
CE0065	DC0268	DC0804	DR0266	GY0097	LK0080	SD0187	WH0032
CE0067	DC0270	DC0805	DR0267	GY0098	LK0081	SD0188	WH0033
CE0068	DC0271	DC0809	DR0268	GY0099	LK0082	SD0193	WH0034
CE0069	DC0272	DC0811	DR0270	GY0160	LK0083	SD0194	WH0035
CE0070	DC0273	DC0818	DR0271	GY0161	LK0084	SD0195	WH0036
CE0071	DC0274	DC0819	DR0272	GY0163	LK0085	SD0198	WH0037
CE0072	DC0275	DC0820	DR0273	GY0164	LK0086	SD0200	WH0038
CE0073	DC0276	DC0821	DR0274	GY0165	LK0087	SD0201	WH0039
CE0076	DC0277	DC0822	DR0275	GY0166	LK0088	SD0204	WH0051
CE0081	DC0278	DC0823	DR0276	GY0167	LK0090	SD0206	WH0052
CE0083	DC0279	DC0825	DR0277	GY0169	LK0092	SD0216	WH0053
CE0087	DC0280	DC0833	DR0278	GY0170	LK0093	SD0217	WH0083
CE0088	DC0281	DC0834	DR0279	GY0172	LK0094	SD0222	WH0084
CE0090	DC0282	DC0837	DR0280	KE0002	LK0095	SD0223	WH0100
CE0091	DC0284	DC0838	DR0281	KE0003	LK0096	SD0224	WH0101
CE0094	DC0285	DC0839	DR0282	KE0004	LK0097	SD0229	WH0103
CE0095	DC0286	DC0840	DR0290	KE0006	LK0098	SD0231	WH0104

CE0096	DC0291	DC0841	DR0292	KE0007	LK0102	SD0235	WH0106
CE0097	DC0292	DC0842	DR0293	KE0021	LK0103	SD0249	WH0108
CE0098	DC0293	DC0843	DR0294	KE0024	LK0105	SD0250	WH0111
CE0101	DC0294	DC0844	DR0297	KE0030	LK0107	SD0252	WH0112
CE0102	DC0295	DC0845	DR0299	KE0032	LK0109	SD0253	WH0113
CE0111	DC0297	DC0846	DR0301	KE0033	LK0110	SD0255	WH0115
CE0154	DC0298	DC0847	DR0305	KE0036	LK0112	SD0256	WH0116
CE0155	DC0300	DC0848	DR0306	KE0037	LK0114	SD0257	WH0117
CK0015	DC0302	DC0849	FL0001	KE0038	LK0115	SD0258	WH0119
CK0016	DC0303	DC0850	FL0002	KE0039	LK0117	SD0259	WH0120
CK0018	DC0304	DC0851	FL0003	KE0040	LK0118	SD0260	WH0121
CK0020	DC0305	DC0852	FL0004	KE0042	LK0119	SD0261	WH0122
CK0021	DC0306	DC0853	FL0005	KE0044	LK0121	SD0264	WH0123
CK0023	DC0307	DC0854	FL0006	KE0045	LK0122	SD0265	WH0124
CK0024	DC0308	DC0855	FL0007	KE0053	LK0169	SD0266	WH0125
CK0025	DC0310	DC0857	FL0008	KE0056	LK0170	SD0267	WH0126
CK0035	DC0313	DC0858	FL0009	KE0057	LK0175	SD0268	WH0127
CK0036	DC0314	DC0859	FL0010	KE0058	LK0178	SD0269	WH0128
CK0037	DC0316	DC0860	FL0011	KE0062	LK0184	SD0270	WH0129
CK0038	DC0317	DC0861	FL0012	KE0063	LK0185	SD0271	WH0131
CK0039	DC0319	DC0863	FL0013	KE0087	LK0186	SD0272	WH0132
CK0040	DC0320	DC0864	FL0014	KE0088	LK0187	SD0273	WH0133
CK0041	DC0323	DC0865	FL0015	KE0089	LK0188	SD0274	WH0134
CK0045	DC0324	DC0866	FL0017	KE0090	LK0189	SD0275	WH0136
CK0046	DC0325	DC0867	FL0018	KE0102	LK0190	SD0276	WH0138
CK0047	DC0326	DC0868	FL0019	KE0111	LK0191	SD0277	WH0139
CK0048	DC0328	DC0869	FL0020	KE0112	LK0192	SD0278	WW0001
CK0049	DC0329	DC0870	FL0021	KE0116	LK0193	SD0279	WW0003
CK0051	DC0330	DC0871	FL0022	KE0119	LK0194	SD0280	WW0004
CK0054	DC0331	DC0872	FL0023	KE0121	LK0195	SD0281	WW0005
CK0055	DC0332	DC0873	FL0024	KE0122	LK0196	SD0282	WW0010
CK0056	DC0333	DC0875	FL0033	KE0124	LK0197	SD0283	WW0013
CK0057	DC0334	DC0877	FL0036	KE0125	LK0198	SD0285	WW0018
CK0059	DC0335	DC0879	FL0037	KE0127	LK0199	SD0286	WW0022
CK0060	DC0336	DC0882	FL0041	KE0137	LK0200	SD0288	WW0023
CK0061	DC0337	DC0888	FL0042	KE0138	LK0202	SD0290	WW0025
CK0062	DC0338	DC0889	FL0044	KE0139	LK0203	SD0291	WW0026
CK0064	DC0339	DC0891	FL0046	KE0140	LK0204	SD0292	WW0027
CK0065	DC0340	DC0892	FL0049	KE0141	LK0205	SD0293	WW0028
CK0067	DC0341	DC0894	FL0053	KE0143	LK0206	SD0299	WW0030
CK0068	DC0342	DC0895	FL0054	KE0145	LK0207	SD0300	WW0031
CK0069	DC0343	DC0896	FL0057	KE0147	LK0210	SD0306	WW0032
CK0070	DC0344	DC0897	FL0058	KE0148	LK0212	SD0307	WW0033
CK0071	DC0345	DC0898	FL0059	KE0149	LK0213	SD0308	WW0034
CK0072	DC0346	DC0899	FL0062	KE0157	LK0214	SD0309	WW0035

CK0116	DC0347	DC0900	FL0064	KE0159	LK0217	SD0310	WW0036
CK0120	DC0348	DC0901	FL0065	KE0184	LK0218	SD0311	WW0037
CK0150	DC0349	DC0902	FL0068	KE0186	LK0219	SD0312	WW0038
CK0155	DC0350	DC0903	FL0070	KE0187	LK0220	SD0313	WW0040
CK0156	DC0351	DC0904	FL0072	KE0188	LK0221	SD0314	WW0042
CK0159	DC0352	DC0905	FL0073	KE0195	LK0222	SD0315	WW0043
CK0160	DC0353	DC0906	FL0074	KE0197	LK0223	SD0316	WW0044
CK0167	DC0354	DC0907	FL0077	KE0199	LK0224	SD0317	WW0045
CK0168	DC0355	DC0908	FL0080	KE0200	LK0225	SD0318	WW0047
CK0169	DC0356	DC0909	FL0083	KE0202	LK0226	SD0319	WW0049
CK0170	DC0357	DC0910	FL0084	KE0203	LK0227	SD0320	WW0051
CK0171	DC0358	DC0911	FL0095	KE0204	LK0228	SD0321	WW0052
CK0172	DC0359	DC0912	FL0102	KE0205	LK0229	SD0323	WW0053
CK0175	DC0360	DC0913	FL0104	KE0206	LK0230	SD0324	WW0054
CK0176	DC0361	DC0914	FL0105	KE0213	LK0231	SD0325	WW0064
CK0178	DC0362	DC0915	FL0106	KE0214	LK0233	SD0327	WW0065
CK0179	DC0363	DC0916	FL0107	KE0215	LK0243	SD0330	WW0066
CK0181	DC0364	DC0917	FL0108	KE0217	LK0244	SD0331	WW0067
CK0182	DC0365	DC0918	FL0109	KE0218	LK0245	SD0332	WW0068
CK0192	DC0366	DC0919	FL0113	KE0221	LK0246	SD0333	WW0078
CK0195	DC0367	DC0920	FL0114	KE0223	LK0247	SD0334	WW0079
CK0200	DC0368	DC0921	FL0118	KE0224	LK0248	SD0335	WW0082
CK0201	DC0369	DC0922	FL0119	KE0225	LK0261	SD0336	WW0084
CK0202	DC0370	DC0923	FL0120	KE0226	LK0280	SD0337	WW0093
CK0203	DC0371	DC0924	FL0121	KE0230	LK0283	SD0338	WW0094
CK0204	DC0372	DC0927	FL0122	KE0232	LK0284	SD0339	WW0096
CK0205	DC0373	DC0929	FL0123	KE0233	LK0286	SD0341	WW0097
CK0206	DC0376	DC0930	FL0130	KE0247	LK0287	SD0342	WW0098
CK0210	DC0378	DC0931	FL0132	KE0248	LK0290	SD0345	WW0100
CK0211	DC0380	DC0932	FL0134	KE0249	LK0292	SD0346	WW0103
CK0212	DC0381	DC0933	FL0135	KE0251	LK0293	SD0349	WW0111
CK0214	DC0382	DC0934	FL0136	KE0252	LM0010	SD0350	WW0112
CK0215	DC0383	DC0935	FL0137	KE0255	LM0017	SD0353	WW0113
CK0216	DC0385	DC0938	FL0138	KE0256	LM0028	SD0354	WW0114
CK0217	DC0386	DC0940	FL0139	KE0257	LS0032	SD0355	WW0115
CK0218	DC0387	DC0941	FL0140	KE0277	LS0037	SD0356	WW0117
CK0219	DC0388	DC0942	FL0142	KE0283	LS0052	SD0357	WW0146
CK0220	DC0389	DC0943	FL0143	KE0288	LS0053	SD0359	WW0147
CK0221	DC0390	DC0944	FL0144	KE0290	LS0055	SD0362	WW0149
CK0222	DC0391	DC0945	FL0145	KK0001	LS0056	SD0363	WW0150
CK0224	DC0392	DC0946	FL0146	KK0003	LS0057	SD0364	WW0152
CK0225	DC0393	DC0947	FL0161	KK0004	LS0058	SD0365	WW0153
CK0227	DC0394	DC0948	FL0167	KK0005	LS0060	SD0366	WW0155
CK0228	DC0397	DC0949	FL0168	KK0007	LS0063	SD0367	WW0162
CK0229	DC0399	DC0950	FL0169	KK0008	LS0065	SD0368	WW0163

CK0230	DC0400	DC0951	FL0170	KK0009	LS0066	SD0369	WW0164
CK0233	DC0401	DC0952	FL0172	KK0010	LS0067	SD0371	WX0001
CK0234	DC0402	DC0953	FL0174	KK0011	LS0068	SD0372	WX0002
CK0236	DC0405	DC0954	FL0175	KK0012	LS0069	SD0373	WX0003
CK0237	DC0406	DC0955	FL0178	KK0016	LS0072	SD0374	WX0004
CK0238	DC0408	DC0956	FL0179	KK0018	LS0074	SD0375	WX0005
CK0239	DC0409	DC0957	FL0180	KK0019	LS0075	SD0376	WX0008
CK0241	DC0410	DC0958	FL0181	KK0020	LS0076	SD0377	WX0009
CK0244	DC0413	DC0959	FL0182	KK0021	LS0077	SD0378	WX0017
CK0245	DC0417	DC0960	FL0185	KK0022	LS0078	SD0379	WX0018
CK0247	DC0418	DC0961	FL0195	KK0023	LS0079	SD0383	WX0019
CK0261	DC0420	DC0962	FL0198	KK0026	LS0080	SD0386	WX0020
CK0268	DC0421	DC0963	FL0199	KK0027	LS0081	SD0387	WX0021
CK0275	DC0422	DC0964	FL0210	KK0030	LS0082	SD0388	WX0022
CK0281	DC0423	DC0965	FL0211	KK0031	LS0083	SD0389	WX0023
CK0282	DC0425	DC0966	FL0212	KK0032	LS0084	SD0394	WX0024
CK0284	DC0426	DC0967	FL0214	KK0036	LS0085	SD0397	WX0025
CK0285	DC0428	DC0968	FL0215	KK0039	LS0086	SD0399	WX0026
CK0289	DC0430	DC0969	FL0216	KK0040	LS0087	SD0402	WX0028
CK0290	DC0431	DC0970	FL0217	KK0083	LS0088	SD0405	WX0030
CK0291	DC0434	DC0971	FL0218	KK0087	LS0089	SD0406	WX0031
CK0292	DC0436	DC0972	FL0219	KK0089	LS0090	SD0407	WX0032
CK0293	DC0445	DC0973	FL0220	KK0099	LS0091	SD0413	WX0033
CK0294	DC0448	DC0974	FL0223	KK0101	LS0092	SO0001	WX0034
CK0295	DC0449	DC0975	FL0224	KK0102	LS0093	SO0002	WX0035
CK0296	DC0450	DC0976	FL0226	KK0103	MH0004	SO0003	WX0036
CK0297	DC0451	DC0977	FL0227	KK0110	MH0005	SO0004	WX0063
CK0298	DC0452	DC0978	FL0234	KK0111	MH0007	SO0005	WX0066
CK0299	DC0453	DC0979	FL0235	KK0153	MH0008	SO0006	WX0083
CK0300	DC0454	DC0980	FL0239	KK0154	MH0009	SO0007	WX0101
CK0301	DC0455	DC0981	FL0241	KY0002	MH0010	SO0008	WX0109
CK0302	DC0456	DC0982	FL0242	KY0007	MH0011	SO0009	WX0111
CK0303	DC0457	DC0983	FL0250	KY0008	MH0012	SO0012	WX0112
CK0304	DC0458	DC0984	FL0253	KY0009	MH0013	SO0013	WX0113
CK0305	DC0459	DC0985	FL0254	KY0012	MH0015	SO0014	WX0114
CK0306	DC0460	DC0986	FL0257	KY0013	MH0019	SO0015	WX0115
CK0307	DC0461	DC0987	FL0259	KY0015	MH0021	SO0016	WX0137
CK0308	DC0462	DC0988	FL0261	KY0017	MH0022	SO0017	WX0153
CK0309	DC0463	DC0989	FL0264	KY0019	MH0024	SO0019	WX0155
CK0310	DC0464	DC0990	FL0265	KY0020	MH0025	SO0020	WX0157
CK0311	DC0465	DC0991	FL0270	KY0021	MH0027	SO0021	WX0158
CK0312	DC0466	DC0995	FL0271	KY0022	MH0028	SO0022	WX0172
CK0313	DC0470	DC0996	FL0275	KY0023	MH0036	SO0023	WX0173
CK0314	DC0471	DC0999	FL0277	KY0024	MH0037	SO0024	WX0196
CK0315	DC0472	DC1003	FL0281	KY0025	MH0050	SO0025	WX0197

CK0316	DC0474	DC1004	FL0287	KY0027	MH0053	SO0026	WX0199
CK0317	DC0475	DC1005	FL0292	KY0028	MH0054	SO0027	WX0200
CK0320	DC0480	DC1007	FL0293	KY0043	MH0055	SO0028	WX0204
CK0322	DC0493	DC1008	FL0294	KY0047	MH0059	SO0030	WX0205
CK0323	DC0496	DC1009	FL0295	KY0048	MH0062	SO0031	WX0206
CK0333	DC0497	DC1010	FL0296	KY0049	MH0063	SO0032	WX0207
CK0336	DC0498	DC1011	FL0297	KY0050	MH0064	SO0034	WX0208
CK0338	DC0499	DC1012	FL0298	KY0051	MH0065	SO0035	WX0209
CK0339	DC0503	DC1013	FL0299	KY0052	MH0066	SO0036	WX0211
CK0340	DC0504	DC1015	FL0300	KY0053	MH0070	SO0037	WX0212
CK0365	DC0509	DC1017	FL0301	KY0054	MH0072	SO0038	WX0213

1.2 MI WDC MARKET 2

MI WDC Market 2 WPZ's							
CC0004	CK0502	DC0696	FL0200	KK0047	LK0275	MO0144	TY0102
CC0006	CK0505	DC0730	FL0203	KK0057	LK0276	MO0145	TY0104
CC0007	CK0506	DC0731	FL0204	KK0058	LK0277	MO0146	TY0106
CC0037	CK0508	DC0753	FL0207	KK0060	LK0278	MO0148	TY0110
CC0039	CK0509	DC0754	FL0208	KK0061	LK0281	MO0149	TY0111
CC0129	CK0510	DC0757	FL0209	KK0062	LK0282	MO0150	TY0112
CC0135	CK0511	DC0759	FL0221	KK0063	LK0289	MO0151	TY0113
CC0156	CK0512	DC0763	FL0222	KK0064	LK0294	MO0152	TY0114
CC0157	CK0514	DC0765	FL0225	KK0065	LK0295	MO0153	TY0115
CC0158	CK0516	DC0767	FL0230	KK0070	LK0297	MO0154	TY0116
CC0170	CK0518	DC0768	FL0231	KK0072	LK0299	MO0155	TY0119
CC0179	CK0520	DC0773	FL0232	KK0074	LK0300	MO0156	TY0120
CC0180	CK0528	DC0778	FL0238	KK0075	LK0307	MO0159	TY0123
CC0185	CK0529	DC0784	FL0246	KK0076	LK0309	MO0162	TY0127
CC0208	CK0531	DC0785	FL0247	KK0080	LK0310	MO0166	TY0158
CE0001	CK0534	DC0786	FL0248	KK0084	LK0311	MO0169	TY0160
CE0002	CK0535	DC0787	FL0256	KK0085	LK0312	MO0172	TY0161
CE0004	CK0537	DC0795	FL0258	KK0086	LK0313	MO0173	TY0163
CE0009	CK0538	DC0799	FL0263	KK0090	LK0314	MO0174	TY0165
CE0011	CK0547	DC0801	FL0268	KK0091	LK0318	MO0175	TY0167
CE0012	CK0548	DC0803	FL0273	KK0093	LM0001	MO0177	TY0169
CE0014	CK0550	DC0812	FL0274	KK0095	LM0002	MO0178	TY0170
CE0016	CK0551	DC0836	FL0278	KK0097	LM0003	MO0179	TY0171
CE0017	CK0552	DC0856	FL0279	KK0098	LM0006	MO0180	TY0173
CE0018	CK0553	DC0862	FL0283	KK0100	LM0007	MO0181	TY0180
CE0019	CK0554	DC0874	FL0284	KK0104	LM0008	MO0184	TY0183
CE0020	CK0555	DC0878	FL0285	KK0105	LM0009	MO0185	TY0185
CE0021	CK0556	DC0880	FL0286	KK0107	LM0011	MO0188	TY0187
CE0022	CK0557	DC0881	FL0288	KK0108	LM0012	MO0190	TY0189
CE0023	CK0559	DC0883	FL0307	KK0116	LM0013	MO0192	TY0190
CE0024	CK0560	DC0884	FL0330	KK0117	LM0015	MO0194	TY0191
CE0027	CK0562	DC0885	FL0351	KK0121	LM0016	MO0195	TY0193
CE0032	CK0563	DC0886	GC0001	KK0124	LM0019	MO0196	TY0198
CE0033	CK0564	DC0893	GC0008	KK0127	LM0020	MO0198	TY0199
CE0034	CK0566	DC0997	GC0009	KK0128	LM0021	MO0199	TY0200
CE0037	CK0567	DC1002	GC0040	KK0129	LM0023	MO0201	TY0201
CE0038	CK0568	DC1006	GC0041	KK0135	LM0024	OY0001	TY0207
CE0043	CK0569	DC1014	GC0042	KK0136	LM0027	OY0002	TY0210
CE0044	CK0570	DC1018	GC0052	KK0137	LM0029	OY0003	TY0211
CE0045	CK0571	DC1022	GC0119	KK0139	LM0030	OY0004	TY0212
CE0062	CK0572	DC1024	GC0131	KK0140	LM0031	OY0005	TY0215
CE0063	CK0573	DC1033	GY0001	KK0142	LM0032	OY0006	TY0216

CE0082	CK0575	DC1035	GY0002	KK0146	LM0033	OY0007	TY0225
CE0084	CK0576	DL0006	GY0004	KK0147	LM0034	OY0008	TY0233
CE0086	CK0579	DL0009	GY0010	KK0155	LM0035	OY0013	TY0234
CE0089	CK0583	DL0022	GY0015	KK0156	LM0036	OY0018	TY0237
CE0092	CK0584	DL0026	GY0018	KK0157	LM0040	OY0022	TY0240
CE0099	CK0585	DL0036	GY0020	KK0158	LM0041	OY0029	TY0242
CE0100	CK0586	DL0046	GY0022	KK0159	LM0043	OY0030	TY0243
CE0103	CN0015	DL0047	GY0024	KK0160	LM0044	OY0031	TY0244
CE0104	CN0016	DL0048	GY0025	KK0161	LM0047	OY0032	TY0245
CE0109	CN0019	DL0050	GY0026	KK0162	LS0001	OY0035	TY0247
CE0110	CN0020	DL0053	GY0027	KK0163	LS0002	OY0042	TY0248
CE0112	CN0021	DL0054	GY0028	KY0001	LS0003	OY0043	TY0251
CE0123	CN0022	DL0064	GY0029	KY0003	LS0005	OY0044	WD0023
CE0124	CN0026	DL0065	GY0031	KY0004	LS0006	OY0045	WD0025
CE0125	CN0027	DL0068	GY0032	KY0006	LS0007	OY0049	WD0028
CE0126	CN0029	DL0069	GY0033	KY0010	LS0010	OY0050	WD0029
CE0127	CN0030	DL0070	GY0035	KY0016	LS0013	OY0056	WD0030
CE0128	CN0031	DL0071	GY0039	KY0018	LS0017	OY0058	WD0054
CE0129	CN0033	DL0072	GY0042	KY0029	LS0018	OY0059	WD0060
CE0136	CN0034	DL0073	GY0054	KY0030	LS0019	OY0061	WD0061
CE0140	CN0035	DL0074	GY0058	KY0033	LS0022	OY0063	WD0062
CE0141	CN0038	DL0075	GY0059	KY0034	LS0023	OY0064	WD0066
CE0143	CN0039	DL0078	GY0061	KY0035	LS0029	OY0065	WD0072
CE0144	CN0040	DL0080	GY0062	KY0036	LS0031	OY0070	WD0073
CE0145	CN0041	DL0081	GY0065	KY0037	LS0039	OY0074	WD0107
CE0149	CN0044	DL0082	GY0069	KY0039	LS0040	OY0075	WD0110
CE0150	CN0046	DL0087	GY0073	KY0040	LS0043	OY0076	WD0111
CE0152	CN0047	DL0088	GY0074	KY0041	LS0045	OY0077	WD0113
CE0157	CN0048	DL0089	GY0077	KY0042	LS0047	OY0078	WD0114
CE0159	CN0049	DL0091	GY0079	KY0044	LS0048	OY0079	WD0116
CE0160	CN0054	DL0092	GY0080	KY0045	LS0049	OY0081	WD0117
CE0164	CN0055	DL0094	GY0081	KY0046	LS0051	OY0088	WD0119
CE0165	CN0056	DL0095	GY0082	KY0057	LS0059	OY0089	WD0124
CE0169	CN0059	DL0096	GY0086	KY0058	LS0061	OY0091	WD0126
CE0171	CN0060	DL0097	GY0087	KY0060	LS0071	OY0092	WD0129
CE0172	CN0062	DL0098	GY0091	KY0063	LS0073	OY0097	WD0130
CE0174	CN0063	DL0099	GY0100	KY0068	LS0094	OY0098	WD0132
CE0177	CN0066	DL0100	GY0102	KY0072	LS0096	OY0099	WD0136
CE0181	CN0067	DL0101	GY0104	KY0073	LS0097	RN0008	WD0138
CE0182	CN0069	DL0103	GY0105	KY0074	LS0102	RN0011	WD0139
CK0001	CN0071	DL0104	GY0107	KY0075	LS0103	RN0013	WD0146
CK0002	CN0074	DL0106	GY0112	KY0076	LS0105	RN0014	WD0149
CK0003	CN0075	DL0107	GY0120	KY0077	LS0106	RN0015	WD0150
CK0004	CN0080	DL0108	GY0126	KY0078	MH0002	RN0017	WD0151
CK0005	CN0081	DL0109	GY0127	KY0080	MH0003	RN0019	WD0152

CK0006	CN0088	DL0110	GY0128	KY0081	MH0006	RN0020	WD0154
CK0007	CN0097	DL0111	GY0129	KY0082	MH0016	RN0023	WD0156
CK0008	CN0099	DL0112	GY0130	KY0083	MH0017	RN0025	WD0159
CK0009	CN0101	DL0113	GY0131	KY0087	MH0018	RN0026	WD0160
CK0011	CN0102	DL0116	GY0133	KY0088	MH0020	RN0027	WD0164
CK0012	CN0103	DL0117	GY0137	KY0091	MH0023	RN0028	WD0165
CK0014	CN0108	DL0118	GY0138	KY0092	MH0029	RN0032	WD0167
CK0017	CN0109	DL0123	GY0139	KY0093	MH0034	RN0035	WD0168
CK0019	CN0112	DL0124	GY0141	KY0094	MH0039	RN0036	WD0171
CK0026	CN0115	DL0125	GY0142	KY0095	MH0041	RN0037	WD0172
CK0027	CN0116	DL0127	GY0143	KY0096	MH0042	RN0038	WD0173
CK0028	CN0120	DL0129	GY0144	KY0097	MH0043	RN0039	WD0174
CK0029	CW0020	DL0130	GY0146	KY0098	MH0044	RN0040	WD0175
CK0030	CW0021	DL0131	GY0147	KY0099	MH0046	RN0043	WD0176
CK0032	CW0023	DL0133	GY0152	KY0102	MH0047	RN0046	WD0177
CK0033	CW0025	DL0134	GY0156	KY0108	MH0048	RN0047	WD0178
CK0034	CW0026	DL0139	GY0158	KY0110	MH0049	RN0048	WD0181
CK0042	CW0029	DL0140	GY0171	KY0111	MH0056	RN0049	WH0001
CK0043	CW0031	DL0144	GY0174	KY0112	MH0057	RN0050	WH0017
CK0050	CW0033	DL0145	GY0177	KY0113	MH0058	RN0051	WH0018
CK0052	CW0035	DL0146	GY0178	KY0114	MH0061	RN0054	WH0024
CK0053	CW0037	DL0151	GY0179	KY0116	MH0069	RN0055	WH0026
CK0063	CW0040	DL0152	GY0181	KY0118	MH0075	RN0057	WH0027
CK0073	CW0056	DL0153	GY0182	KY0120	MH0092	RN0058	WH0044
CK0076	CW0059	DL0154	GY0183	KY0121	MH0096	RN0059	WH0045
CK0079	CW0060	DL0156	GY0184	KY0124	MH0098	RN0060	WH0046
CK0080	CW0061	DL0158	GY0185	KY0125	MH0100	RN0063	WH0047
CK0081	CW0065	DL0159	GY0186	KY0127	MH0103	RN0069	WH0049
CK0083	CW0066	DL0163	GY0187	KY0130	MH0105	RN0070	WH0050
CK0088	CW0069	DL0173	GY0189	KY0135	MH0106	RN0072	WH0056
CK0089	CW0070	DL0175	GY0190	KY0138	MH0108	RN0073	WH0057
CK0090	CW0071	DL0180	GY0191	KY0140	MH0109	RN0075	WH0060
CK0091	CW0074	DL0191	GY0192	KY0141	MH0111	RN0078	WH0062
CK0092	CW0075	DL0192	GY0193	KY0142	MH0114	RN0083	WH0063
CK0093	CW0077	DL0194	GY0194	KY0143	MH0115	RN0085	WH0065
CK0094	CW0078	DL0195	GY0195	KY0144	MH0116	RN0086	WH0070
CK0097	CW0080	DL0197	GY0199	KY0146	MH0121	RN0087	WH0071
CK0099	CW0081	DL0198	GY0200	KY0149	MH0124	RN0088	WH0072
CK0100	DC0003	DL0199	GY0201	KY0151	MH0126	RN0089	WH0073
CK0101	DC0004	DL0201	GY0202	KY0154	MH0130	SD0002	WH0076
CK0103	DC0005	DL0204	GY0204	KY0155	MH0131	SD0004	WH0077
CK0107	DC0006	DL0206	GY0206	KY0156	MH0132	SD0005	WH0078
CK0108	DC0007	DL0207	GY0207	KY0158	MH0133	SD0006	WH0079
CK0109	DC0009	DL0210	GY0208	KY0160	MH0134	SD0011	WH0080
CK0112	DC0010	DL0211	GY0209	KY0161	MH0137	SD0014	WH0082

CK0113	DC0011	DL0212	GY0211	KY0162	MH0138	SD0015	WH0085
CK0114	DC0012	DL0214	GY0217	KY0163	MH0139	SD0017	WH0087
CK0115	DC0013	DL0215	GY0218	KY0164	MH0140	SD0024	WH0090
CK0117	DC0014	DL0217	GY0219	KY0173	MH0142	SD0025	WH0095
CK0118	DC0015	DL0218	GY0222	KY0177	MH0143	SD0029	WH0096
CK0119	DC0020	DL0222	GY0223	KY0179	MH0144	SD0032	WH0097
CK0121	DC0021	DL0224	GY0224	KY0180	MH0147	SD0035	WH0098
CK0122	DC0025	DL0225	GY0225	KY0184	MH0148	SD0038	WH0099
CK0124	DC0026	DL0228	GY0226	KY0187	MH0151	SD0040	WH0102
CK0125	DC0027	DL0234	GY0227	KY0189	MH0154	SD0042	WH0105
CK0126	DC0029	DL0235	GY0229	KY0193	MH0156	SD0043	WH0107
CK0129	DC0030	DR0001	GY0230	KY0195	MH0157	SD0046	WH0109
CK0130	DC0035	DR0002	GY0233	KY0198	MH0160	SD0051	WH0110
CK0131	DC0041	DR0009	GY0234	KY0200	MH0162	SD0058	WH0114
CK0134	DC0046	DR0010	GY0235	KY0201	MH0168	SD0059	WH0135
CK0135	DC0047	DR0015	GY0236	KY0203	MH0169	SD0060	WW0006
CK0136	DC0055	DR0016	GY0237	KY0205	MH0170	SD0067	WW0007
CK0140	DC0058	DR0020	GY0239	KY0206	MH0172	SD0069	WW0011
CK0142	DC0062	DR0021	GY0242	KY0209	MH0173	SD0070	WW0012
CK0146	DC0066	DR0023	GY0243	KY0210	MH0175	SD0071	WW0016
CK0148	DC0067	DR0026	GY0246	KY0211	MH0191	SD0072	WW0017
CK0149	DC0069	DR0028	GY0247	KY0212	MH0196	SD0083	WW0020
CK0151	DC0070	DR0042	GY0248	KY0213	MH0199	SD0094	WW0039
CK0152	DC0076	DR0044	GY0249	KY0214	MH0201	SD0096	WW0048
CK0153	DC0080	DR0046	GY0250	KY0215	MH0202	SD0097	WW0050
CK0154	DC0081	DR0049	KE0005	KY0223	MH0207	SD0099	WW0055
CK0158	DC0083	DR0050	KE0009	KY0226	MH0208	SD0100	WW0056
CK0161	DC0085	DR0062	KE0010	KY0227	MH0209	SD0103	WW0057
CK0162	DC0090	DR0063	KE0012	KY0230	MH0211	SD0105	WW0058
CK0163	DC0099	DR0064	KE0013	KY0232	MH0214	SD0107	WW0062
CK0164	DC0101	DR0066	KE0014	KY0234	MH0218	SD0111	WW0063
CK0173	DC0103	DR0067	KE0015	KY0242	MH0219	SD0112	WW0071
CK0174	DC0104	DR0068	KE0016	KY0243	MH0220	SD0113	WW0072
CK0180	DC0105	DR0069	KE0018	KY0250	MH0223	SD0114	WW0073
CK0183	DC0108	DR0071	KE0019	LD0017	MH0224	SD0123	WW0080
CK0184	DC0109	DR0076	KE0022	LD0018	MH0227	SD0128	WW0081
CK0187	DC0113	DR0082	KE0023	LD0019	MH0231	SD0130	WW0085
CK0188	DC0114	DR0083	KE0026	LD0020	MH0235	SD0131	WW0086
CK0189	DC0115	DR0084	KE0027	LD0021	MH0238	SD0140	WW0087
CK0193	DC0117	DR0087	KE0028	LD0025	MH0239	SD0145	WW0089
CK0194	DC0119	DR0094	KE0031	LD0029	MH0240	SD0163	WW0091
CK0196	DC0122	DR0095	KE0034	LD0031	MH0241	SD0166	WW0092
CK0199	DC0123	DR0096	KE0041	LD0032	MH0243	SD0167	WW0095
CK0207	DC0124	DR0097	KE0043	LD0037	MH0244	SD0168	WW0101
CK0208	DC0127	DR0098	KE0046	LD0045	MH0248	SD0172	WW0104

CK0209	DC0128	DR0099	KE0047	LD0047	MH0254	SD0173	WW0106
CK0223	DC0131	DR0101	KE0049	LD0053	MH0257	SD0175	WW0109
CK0231	DC0132	DR0102	KE0050	LD0054	MN0001	SD0178	WW0116
CK0232	DC0133	DR0104	KE0054	LD0056	MN0002	SD0179	WW0119
CK0235	DC0135	DR0105	KE0059	LD0057	MN0006	SD0180	WW0120
CK0240	DC0136	DR0129	KE0061	LD0058	MN0007	SD0184	WW0122
CK0242	DC0143	DR0130	KE0065	LD0059	MN0010	SD0190	WW0123
CK0246	DC0144	DR0131	KE0067	LH0007	MN0012	SD0191	WW0126
CK0250	DC0145	DR0135	KE0068	LH0019	MN0013	SD0192	WW0127
CK0254	DC0146	DR0136	KE0069	LH0023	MN0017	SD0196	WW0128
CK0255	DC0147	DR0137	KE0073	LH0024	MN0021	SD0197	WW0130
CK0258	DC0148	DR0142	KE0080	LH0031	MN0022	SD0199	WW0131
CK0259	DC0149	DR0186	KE0081	LH0039	MN0024	SD0207	WW0132
CK0260	DC0155	DR0187	KE0082	LH0040	MN0026	SD0211	WW0133
CK0262	DC0159	DR0188	KE0083	LH0044	MN0027	SD0212	WW0134
CK0263	DC0161	DR0202	KE0084	LH0048	MN0034	SD0213	WW0135
CK0267	DC0171	DR0203	KE0086	LH0052	MN0036	SD0214	WW0136
CK0269	DC0173	DR0210	KE0095	LH0069	MN0037	SD0218	WW0137
CK0279	DC0202	DR0211	KE0096	LH0083	MN0040	SD0219	WW0139
CK0280	DC0204	DR0212	KE0097	LH0084	MN0042	SD0220	WW0140
CK0283	DC0207	DR0216	KE0100	LH0085	MN0043	SD0221	WW0142
CK0318	DC0209	DR0219	KE0101	LH0093	MN0045	SD0225	WW0145
CK0319	DC0210	DR0220	KE0105	LH0094	MN0052	SD0226	WW0148
CK0321	DC0211	DR0221	KE0107	LH0096	MN0056	SD0228	WW0151
CK0324	DC0216	DR0222	KE0109	LH0100	MN0061	SD0230	WW0156
CK0327	DC0220	DR0223	KE0113	LH0104	MN0062	SD0233	WW0157
CK0328	DC0222	DR0224	KE0114	LH0105	MN0063	SD0236	WW0160
CK0331	DC0223	DR0225	KE0128	LH0106	MN0064	SD0238	WW0165
CK0332	DC0229	DR0226	KE0129	LH0112	MN0065	SD0239	WW0167
CK0344	DC0234	DR0231	KE0132	LH0114	MN0068	SD0241	WW0168
CK0346	DC0235	DR0233	KE0134	LH0117	MN0074	SD0246	WW0169
CK0348	DC0238	DR0238	KE0135	LH0118	MN0077	SD0247	WW0170
CK0349	DC0239	DR0240	KE0136	LH0119	MN0081	SD0284	WW0176
CK0350	DC0241	DR0246	KE0142	LH0120	MN0082	SD0303	WW0177
CK0351	DC0246	DR0248	KE0150	LH0122	MN0084	SD0343	WW0178
CK0352	DC0266	DR0250	KE0154	LH0124	MN0085	SD0344	WW0181
CK0357	DC0269	DR0252	KE0155	LH0125	MN0086	SD0352	WW0183
CK0358	DC0287	DR0253	KE0156	LH0127	MN0088	SD0382	WX0007
CK0359	DC0288	DR0254	KE0158	LH0128	MN0092	SD0385	WX0010
CK0363	DC0289	DR0255	KE0160	LH0130	MN0095	SD0410	WX0013
CK0364	DC0290	DR0256	KE0161	LH0134	MN0098	SD0411	WX0014
CK0367	DC0318	DR0258	KE0167	LH0154	MN0099	SO0046	WX0015
CK0369	DC0322	DR0261	KE0174	LH0164	MN0100	SO0050	WX0016
CK0372	DC0374	DR0284	KE0177	LH0170	MN0102	SO0052	WX0027
CK0373	DC0375	DR0286	KE0178	LH0171	MN0103	SO0053	WX0029

CK0374	DC0377	DR0288	KE0179	LH0173	MO0002	SO0054	WX0045
CK0376	DC0379	DR0289	KE0181	LH0174	MO0004	SO0056	WX0048
CK0379	DC0384	DR0291	KE0182	LH0175	MO0005	SO0058	WX0051
CK0381	DC0395	DR0295	KE0183	LH0176	MO0008	SO0062	WX0053
CK0384	DC0396	DR0296	KE0189	LH0177	MO0018	SO0065	WX0054
CK0385	DC0404	DR0300	KE0190	LH0178	MO0020	SO0066	WX0055
CK0386	DC0407	DR0304	KE0191	LH0180	MO0021	SO0067	WX0057
CK0387	DC0411	DR0307	KE0192	LH0181	MO0022	SO0068	WX0058
CK0389	DC0415	DR0308	KE0194	LH0182	MO0023	SO0069	WX0059
CK0391	DC0429	DR0309	KE0208	LH0183	MO0025	SO0070	WX0060
CK0394	DC0437	DR0310	KE0210	LH0184	MO0026	SO0073	WX0065
CK0396	DC0440	DR0311	KE0211	LH0185	MO0027	SO0074	WX0067
CK0399	DC0441	DR0312	KE0212	LH0186	MO0029	SO0077	WX0068
CK0400	DC0443	DR0313	KE0216	LH0193	MO0030	SO0079	WX0069
CK0401	DC0444	FL0025	KE0219	LK0011	MO0032	SO0080	WX0072
CK0402	DC0446	FL0026	KE0228	LK0016	MO0036	SO0081	WX0080
CK0404	DC0467	FL0030	KE0231	LK0021	MO0041	SO0082	WX0081
CK0405	DC0468	FL0032	KE0235	LK0073	MO0043	SO0085	WX0084
CK0415	DC0469	FL0034	KE0236	LK0111	MO0044	SO0086	WX0095
CK0417	DC0476	FL0035	KE0237	LK0113	MO0045	SO0088	WX0096
CK0418	DC0477	FL0039	KE0238	LK0120	MO0046	SO0089	WX0097
CK0419	DC0481	FL0043	KE0239	LK0123	MO0047	SO0092	WX0098
CK0420	DC0483	FL0047	KE0240	LK0125	MO0048	SO0093	WX0099
CK0421	DC0485	FL0050	KE0241	LK0127	MO0049	SO0096	WX0102
CK0423	DC0486	FL0056	KE0242	LK0128	MO0050	SO0099	WX0103
CK0425	DC0487	FL0060	KE0243	LK0129	MO0054	SO0100	WX0107
CK0426	DC0489	FL0061	KE0245	LK0130	MO0060	SO0101	WX0110
CK0429	DC0490	FL0067	KE0250	LK0131	MO0068	SO0102	WX0116
CK0430	DC0491	FL0069	KE0253	LK0139	MO0069	SO0103	WX0126
CK0431	DC0495	FL0071	KE0254	LK0142	MO0073	TY0004	WX0130
CK0434	DC0506	FL0075	KE0258	LK0143	MO0075	TY0009	WX0136
CK0435	DC0508	FL0078	KE0259	LK0144	MO0077	TY0011	WX0139
CK0436	DC0515	FL0082	KE0261	LK0150	MO0079	TY0012	WX0140
CK0439	DC0517	FL0087	KE0263	LK0151	MO0081	TY0015	WX0141
CK0442	DC0521	FL0098	KE0265	LK0157	MO0084	TY0024	WX0142
CK0444	DC0525	FL0100	KE0266	LK0160	MO0086	TY0025	WX0143
CK0446	DC0530	FL0111	KE0267	LK0161	MO0087	TY0026	WX0146
CK0447	DC0532	FL0112	KE0268	LK0162	MO0089	TY0027	WX0147
CK0450	DC0534	FL0117	KE0270	LK0163	MO0091	TY0030	WX0148
CK0452	DC0535	FL0124	KE0271	LK0164	MO0098	TY0031	WX0154
CK0453	DC0576	FL0127	KE0272	LK0165	MO0099	TY0037	WX0156
CK0455	DC0578	FL0129	KE0273	LK0168	MO0102	TY0040	WX0165
CK0456	DC0640	FL0148	KE0276	LK0171	MO0104	TY0042	WX0166
CK0457	DC0642	FL0154	KE0278	LK0172	MO0105	TY0044	WX0167
CK0461	DC0650	FL0159	KE0280	LK0173	MO0106	TY0046	WX0168

CK0463	DC0652	FL0164	KE0281	LK0174	MO0107	TY0059	WX0170
CK0467	DC0658	FL0165	KE0286	LK0182	MO0110	TY0063	WX0171
CK0468	DC0659	FL0166	KE0287	LK0209	MO0113	TY0068	WX0174
CK0469	DC0665	FL0171	KE0289	LK0215	MO0120	TY0069	WX0182
CK0472	DC0666	FL0173	KE0292	LK0232	MO0124	TY0073	WX0183
CK0475	DC0668	FL0177	KE0294	LK0234	MO0125	TY0074	WX0186
CK0477	DC0672	FL0184	KE0295	LK0239	MO0129	TY0075	WX0188
CK0480	DC0673	FL0186	KE0296	LK0242	MO0132	TY0076	WX0189
CK0481	DC0676	FL0187	KE0299	LK0258	MO0134	TY0077	WX0190
CK0484	DC0678	FL0188	KK0025	LK0259	MO0135	TY0084	WX0192
CK0486	DC0683	FL0189	KK0029	LK0260	MO0138	TY0086	WX0193
CK0487	DC0684	FL0190	KK0038	LK0263	MO0139	TY0087	WX0198
CK0492	DC0686	FL0193	KK0043	LK0264	MO0140	TY0088	WX0201
CK0494	DC0687	FL0194	KK0044	LK0268	MO0141	TY0092	
CK0495	DC0694	FL0196	KK0045	LK0269	MO0142	TY0098	
CK0501	DC0695	FL0197	KK0046	LK0272	MO0143	TY0101	

1.3 MI WDC MARKET 3

MI WDC Market 3 WPZ's							
CC0001	CN0111	DC0807	FL0099	KE0126	LK0099	MO0136	TY0062
CC0003	CN0113	DC0808	FL0101	KE0130	LK0100	MO0167	TY0064
CC0005	CN0114	DC0810	FL0103	KE0131	LK0101	MO0186	TY0065
CC0008	CN0118	DC0813	FL0110	KE0144	LK0104	MO0187	TY0070
CC0010	CN0119	DC0814	FL0115	KE0146	LK0106	MO0197	TY0079
CC0021	CW0006	DC0815	FL0125	KE0151	LK0108	OY0010	TY0080
CC0040	CW0010	DC0817	FL0126	KE0152	LK0116	OY0019	TY0089
CC0050	CW0011	DC0824	FL0131	KE0153	LK0133	OY0026	TY0091

CC0052	CW0024	DC0827	FL0133	KE0168	LK0140	OY0033	TY0094
CC0056	CW0030	DC0829	FL0141	KE0180	LK0148	OY0034	TY0109
CC0057	CW0032	DC0830	FL0150	KE0185	LK0152	OY0055	TY0121
CC0067	CW0047	DC0831	FL0151	KE0193	LK0155	OY0066	TY0122
CC0068	CW0048	DC0832	FL0152	KE0196	LK0167	OY0072	TY0128
CC0080	CW0052	DC0835	FL0153	KE0198	LK0176	OY0073	TY0146
CC0088	DC0002	DC0876	FL0157	KE0201	LK0177	OY0087	TY0154
CC0090	DC0016	DC0887	FL0158	KE0209	LK0179	OY0093	TY0164
CC0091	DC0017	DC0890	FL0160	KE0220	LK0180	OY0094	TY0166
CC0105	DC0033	DC0925	FL0162	KE0222	LK0181	OY0095	TY0181
CC0112	DC0042	DC0926	FL0176	KE0227	LK0183	RN0002	TY0218
CC0117	DC0044	DC0928	FL0183	KE0229	LK0201	RN0009	TY0252
CC0118	DC0045	DC0936	FL0191	KE0234	LK0208	RN0010	WD0006
CC0124	DC0048	DC0937	FL0192	KE0244	LK0211	RN0016	WD0027
CC0132	DC0050	DC0939	FL0201	KE0246	LK0216	RN0021	WD0045
CC0133	DC0059	DC0992	FL0202	KE0279	LK0235	RN0022	WD0048
CC0134	DC0065	DC0993	FL0205	KE0282	LK0241	RN0052	WD0055
CC0137	DC0068	DC0994	FL0206	KE0284	LK0249	RN0061	WD0070
CC0143	DC0071	DC0998	FL0213	KE0285	LK0250	RN0062	WD0081
CC0146	DC0073	DC1000	FL0228	KE0291	LK0251	RN0066	WD0102
CC0167	DC0075	DC1001	FL0229	KE0293	LK0253	RN0068	WD0109
CC0181	DC0079	DC1016	FL0236	KE0297	LK0262	RN0074	WD0115
CC0207	DC0088	DC1025	FL0243	KE0298	LK0274	SD0001	WD0121
CC0218	DC0089	DC1028	FL0244	KK0002	LK0279	SD0007	WD0122
CC0220	DC0091	DC1031	FL0249	KK0006	LK0285	SD0009	WD0123
CE0007	DC0092	DL0019	FL0251	KK0013	LK0288	SD0018	WD0125
CE0010	DC0097	DL0032	FL0252	KK0014	LK0291	SD0019	WD0127
CE0015	DC0102	DL0033	FL0255	KK0015	LK0296	SD0031	WD0128
CE0031	DC0106	DL0034	FL0260	KK0017	LM0014	SD0047	WD0133
CE0051	DC0116	DL0043	FL0262	KK0024	LM0025	SD0062	WD0134
CE0064	DC0118	DL0044	FL0266	KK0028	LM0026	SD0063	WD0135
CE0066	DC0120	DL0049	FL0267	KK0033	LM0037	SD0064	WD0137
CE0074	DC0130	DL0063	FL0272	KK0034	LM0038	SD0078	WD0144
CE0075	DC0140	DL0120	FL0276	KK0035	LM0045	SD0087	WD0148
CE0077	DC0151	DL0121	FL0280	KK0037	LS0008	SD0088	WD0158
CE0078	DC0152	DL0122	FL0282	KK0078	LS0012	SD0089	WD0166
CE0079	DC0156	DL0128	FL0289	KK0081	LS0014	SD0101	WD0169
CE0080	DC0157	DL0136	FL0290	KK0082	LS0021	SD0104	WD0179
CE0085	DC0158	DL0138	FL0291	KK0088	LS0025	SD0109	WD0180
CE0093	DC0163	DL0148	FL0315	KK0092	LS0026	SD0110	WH0007
CE0106	DC0164	DL0155	FL0316	KK0094	LS0027	SD0117	WH0022
CE0108	DC0165	DL0160	FL0321	KK0106	LS0028	SD0118	WH0030
CE0113	DC0168	DL0161	FL0352	KK0109	LS0036	SD0120	WH0041
CE0142	DC0174	DL0165	GC0003	KK0112	LS0042	SD0121	WH0054
CE0153	DC0176	DL0166	GC0005	KK0119	LS0044	SD0122	WH0081

CE0156	DC0180	DL0168	GC0006	KK0125	LS0054	SD0124	WH0094
CE0158	DC0181	DL0184	GC0030	KK0131	LS0062	SD0125	WH0118
CE0161	DC0185	DL0185	GC0033	KK0149	LS0064	SD0126	WH0130
CE0162	DC0205	DL0187	GC0034	KK0151	LS0070	SD0127	WH0137
CE0163	DC0208	DL0208	GC0035	KK0152	LS0095	SD0129	WW0002
CE0178	DC0214	DL0216	GC0039	KY0005	LS0104	SD0133	WW0008
CE0179	DC0215	DL0219	GC0044	KY0011	MH0001	SD0135	WW0009
CK0022	DC0221	DL0221	GC0048	KY0014	MH0014	SD0136	WW0014
CK0044	DC0225	DL0227	GC0059	KY0026	MH0026	SD0138	WW0015
CK0058	DC0228	DR0004	GC0071	KY0032	MH0030	SD0139	WW0019
CK0066	DC0230	DR0005	GC0074	KY0038	MH0038	SD0141	WW0021
CK0074	DC0233	DR0007	GC0084	KY0066	MH0040	SD0142	WW0024
CK0077	DC0249	DR0012	GC0090	KY0069	MH0045	SD0146	WW0029
CK0078	DC0256	DR0017	GC0093	KY0133	MH0051	SD0147	WW0041
CK0082	DC0296	DR0024	GC0098	KY0139	MH0052	SD0149	WW0046
CK0084	DC0299	DR0027	GC0099	KY0190	MH0067	SD0150	WW0069
CK0105	DC0301	DR0029	GC0112	KY0191	MH0071	SD0160	WW0083
CK0157	DC0309	DR0031	GC0116	KY0194	MH0077	SD0161	WW0090
CK0165	DC0311	DR0033	GC0138	KY0199	MH0079	SD0164	WW0099
CK0190	DC0312	DR0036	GY0014	KY0207	MH0082	SD0169	WW0102
CK0191	DC0315	DR0043	GY0016	KY0219	MH0089	SD0170	WW0105
CK0197	DC0321	DR0047	GY0023	KY0220	MH0091	SD0171	WW0107
CK0198	DC0327	DR0048	GY0040	KY0228	MH0095	SD0182	WW0108
CK0213	DC0398	DR0051	GY0043	KY0231	MH0097	SD0202	WW0110
CK0226	DC0403	DR0065	GY0053	KY0233	MH0101	SD0203	WW0118
CK0243	DC0412	DR0088	GY0055	KY0239	MH0117	SD0205	WW0121
CK0248	DC0419	DR0103	GY0057	KY0244	MH0128	SD0215	WW0124
CK0251	DC0424	DR0114	GY0064	LD0007	MH0129	SD0232	WW0138
CK0252	DC0427	DR0118	GY0066	LD0010	MH0146	SD0234	WW0141
CK0253	DC0432	DR0119	GY0070	LD0014	MH0149	SD0243	WW0144
CK0256	DC0433	DR0121	GY0071	LD0040	MH0152	SD0244	WW0154
CK0264	DC0435	DR0140	GY0084	LD0041	MH0153	SD0251	WW0159
CK0265	DC0447	DR0141	GY0092	LD0042	MH0159	SD0254	WW0161
CK0266	DC0473	DR0148	GY0110	LD0044	MH0161	SD0262	WW0171
CK0270	DC0478	DR0184	GY0111	LD0051	MH0177	SD0263	WW0172
CK0271	DC0479	DR0185	GY0115	LD0052	MH0183	SD0287	WX0006
CK0272	DC0482	DR0189	GY0116	LD0061	MH0193	SD0289	WX0011
CK0273	DC0484	DR0194	GY0117	LH0004	MH0194	SD0294	WX0040
CK0274	DC0492	DR0201	GY0118	LH0006	MH0195	SD0295	WX0041
CK0286	DC0494	DR0204	GY0119	LH0011	MH0197	SD0297	WX0043
CK0287	DC0500	DR0207	GY0123	LH0014	MH0198	SD0298	WX0044
CK0288	DC0501	DR0208	GY0125	LH0020	MH0203	SD0304	WX0046
CK0325	DC0502	DR0215	GY0155	LH0022	MH0221	SD0305	WX0050
CK0326	DC0507	DR0217	GY0159	LH0029	MH0234	SD0322	WX0052
CK0329	DC0510	DR0218	GY0162	LH0032	MH0236	SD0326	WX0056

CK0330	DC0512	DR0232	GY0168	LH0035	MH0237	SD0340	WX0061
CK0337	DC0514	DR0234	GY0212	LH0042	MH0242	SD0347	WX0062
CK0354	DC0518	DR0237	GY0213	LH0049	MH0246	SD0348	WX0064
CK0356	DC0520	DR0249	GY0216	LH0053	MH0255	SD0358	WX0070
CK0360	DC0524	DR0259	GY0220	LH0061	MN0023	SD0360	WX0073
CK0403	DC0529	DR0262	GY0238	LH0077	MN0032	SD0361	WX0075
CK0408	DC0531	DR0263	GY0241	LH0078	MN0035	SD0370	WX0085
CK0409	DC0533	DR0269	KE0001	LH0079	MN0038	SD0381	WX0086
CK0413	DC0536	DR0283	KE0008	LH0081	MN0044	SD0384	WX0087
CK0414	DC0561	DR0287	KE0011	LH0090	MN0049	SD0390	WX0091
CK0422	DC0565	DR0298	KE0017	LH0095	MN0053	SD0391	WX0092
CK0427	DC0584	DR0302	KE0020	LH0097	MN0055	SD0392	WX0093
CK0451	DC0605	DR0303	KE0025	LH0098	MN0060	SD0393	WX0094
CK0458	DC0635	DR0314	KE0029	LH0099	MN0075	SD0395	WX0100
CK0459	DC0647	DR0315	KE0035	LH0108	MN0076	SD0396	WX0104
CK0460	DC0653	DR0316	KE0052	LH0113	MN0079	SD0398	WX0105
CK0464	DC0656	FL0016	KE0055	LH0115	MN0089	SD0400	WX0106
CK0473	DC0663	FL0027	KE0060	LH0116	MN0090	SD0401	WX0108
CK0474	DC0675	FL0028	KE0064	LH0121	MN0091	SD0403	WX0117
CK0482	DC0679	FL0029	KE0070	LH0123	MN0096	SD0404	WX0118
CK0488	DC0680	FL0031	KE0075	LH0129	MO0015	SD0408	WX0124
CK0493	DC0682	FL0038	KE0077	LH0144	MO0034	SD0409	WX0129
CK0498	DC0699	FL0040	KE0078	LH0158	MO0037	SD0412	WX0131
CK0507	DC0701	FL0045	KE0079	LH0168	MO0039	SO0010	WX0132
CK0513	DC0707	FL0048	KE0085	LH0169	MO0057	SO0011	WX0151
CK0525	DC0718	FL0051	KE0091	LK0003	MO0058	SO0018	WX0152
CK0545	DC0729	FL0052	KE0092	LK0006	MO0059	SO0029	WX0162
CK0549	DC0751	FL0055	KE0093	LK0028	MO0061	SO0033	WX0164
CK0580	DC0755	FL0063	KE0094	LK0032	MO0063	SO0051	WX0175
CK0581	DC0766	FL0066	KE0098	LK0037	MO0065	SO0064	WX0176
CK0582	DC0769	FL0076	KE0099	LK0043	MO0071	SO0071	WX0177
CN0064	DC0775	FL0079	KE0103	LK0048	MO0083	SO0072	WX0179
CN0065	DC0777	FL0081	KE0104	LK0049	MO0090	TY0017	WX0181
CN0072	DC0780	FL0085	KE0110	LK0053	MO0097	TY0020	WX0184
CN0076	DC0782	FL0086	KE0115	LK0064	MO0118	TY0029	WX0185
CN0078	DC0790	FL0089	KE0117	LK0066	MO0121	TY0038	WX0202
CN0082	DC0793	FL0093	KE0118	LK0068	MO0126	TY0041	WX0203
CN0098	DC0798	FL0094	KE0120	LK0089	MO0127	TY0054	WX0210
CN0106	DC0806	FL0096	KE0123	LK0091	MO0128	TY0056	

1.4 MI WDC MARKET 4

MI WDC Market 4 WPZ's							
CE0003	CK0533	DL0162	KE0072	KY0202	MH0088	OY0046	TY0205
CE0025	CK0536	DL0164	KE0074	KY0204	MH0093	OY0047	TY0206
CE0026	CK0539	DL0181	KE0076	KY0216	MH0094	OY0048	TY0213
CE0028	CK0540	DL0189	KE0106	KY0217	MH0104	OY0051	TY0217
CE0029	CK0541	DL0190	KE0108	KY0218	MH0107	OY0052	TY0219
CE0030	CK0542	DL0193	KE0133	KY0221	MH0110	OY0053	TY0220
CE0105	CK0543	DL0196	KE0162	KY0222	MH0112	OY0054	TY0221
CE0107	CK0544	DL0200	KE0163	LD0022	MH0113	OY0062	TY0235
CE0114	CK0546	DL0202	KE0164	LD0023	MH0118	OY0067	TY0236

CE0115	CK0558	DL0203	KE0165	LD0024	MH0119	OY0068	TY0238
CE0116	CK0561	DL0205	KE0166	LD0026	MH0120	OY0069	TY0239
CE0117	CK0565	DL0209	KE0169	LD0027	MH0122	OY0071	TY0241
CE0118	CK0574	DL0213	KE0170	LD0028	MH0123	OY0080	TY0246
CE0119	CK0577	DL0220	KE0171	LD0030	MH0125	OY0082	TY0249
CE0120	CK0578	DL0223	KE0172	LD0033	MH0135	OY0083	TY0250
CE0121	CN0017	DL0226	KE0173	LD0034	MH0141	OY0086	TY0253
CE0122	CN0018	DR0003	KE0175	LD0035	MH0145	RN0012	TY0254
CE0130	CN0023	DR0006	KE0176	LD0036	MH0155	RN0018	TY0255
CE0131	CN0024	DR0011	KE0207	LD0038	MH0163	RN0024	TY0256
CE0132	CN0025	DR0013	KE0260	LD0039	MH0164	RN0029	WD0064
CE0133	CN0032	DR0093	KE0262	LD0043	MH0165	RN0033	WD0065
CE0134	CN0036	DR0100	KE0264	LD0046	MH0166	RN0034	WD0112
CE0135	CN0037	DR0127	KE0269	LD0060	MH0167	RN0041	WD0120
CE0137	CN0042	DR0128	KE0274	LH0082	MH0171	RN0042	WD0131
CE0138	CN0043	DR0132	KE0275	LH0092	MH0205	RN0044	WD0140
CE0139	CN0045	DR0133	KE0300	LH0101	MH0206	RN0045	WD0141
CE0146	CN0050	DR0134	KE0301	LH0102	MH0210	RN0053	WD0142
CE0147	CN0051	DR0138	KK0041	LH0107	MH0212	RN0064	WD0143
CE0148	CN0052	DR0139	KK0042	LH0109	MH0213	RN0065	WD0145
CE0151	CN0053	DR0209	KK0048	LH0110	MH0215	RN0067	WD0147
CE0166	CN0057	DR0213	KK0049	LH0111	MH0216	SD0010	WD0153
CE0167	CN0058	DR0227	KK0050	LH0155	MH0217	SD0012	WD0155
CE0168	CN0061	DR0228	KK0051	LH0160	MH0222	SD0013	WD0157
CE0170	CN0068	DR0229	KK0052	LH0161	MH0225	SD0034	WD0161
CE0173	CN0070	DR0230	KK0053	LH0162	MH0226	SD0057	WD0170
CE0175	CN0073	DR0257	KK0054	LH0163	MH0228	SD0065	WH0025
CE0176	CN0077	DR0260	KK0055	LH0165	MH0229	SD0066	WH0040
CE0180	CN0079	DR0285	KK0056	LH0166	MH0230	SD0068	WH0042
CK0010	CN0084	FL0088	KK0059	LH0172	MH0232	SD0098	WH0043
CK0013	CN0104	FL0090	KK0066	LH0179	MH0233	SD0102	WH0048
CK0031	CN0105	FL0091	KK0067	LK0124	MH0245	SD0134	WH0055
CK0075	CN0107	FL0092	KK0068	LK0126	MH0247	SD0137	WH0058
CK0085	CN0110	FL0097	KK0069	LK0132	MH0249	SD0189	WH0059
CK0086	CN0117	FL0116	KK0071	LK0134	MN0025	SD0208	WH0061
CK0087	CN0121	FL0128	KK0073	LK0135	MN0031	SD0209	WH0064
CK0095	CW0022	FL0147	KK0077	LK0136	MN0033	SD0210	WH0066
CK0096	CW0027	FL0149	KK0079	LK0137	MN0039	SD0227	WH0067
CK0098	CW0028	FL0155	KK0096	LK0138	MN0041	SD0237	WH0068
CK0102	CW0034	FL0156	KK0113	LK0141	MN0046	SD0240	WH0069
CK0104	CW0054	FL0163	KK0114	LK0145	MN0048	SD0242	WH0074
CK0106	CW0055	FL0233	KK0115	LK0146	MN0050	SD0245	WH0075
CK0110	CW0057	FL0237	KK0118	LK0147	MN0057	SD0248	WH0086
CK0111	CW0058	FL0240	KK0120	LK0149	MN0058	SD0296	WH0088
CK0123	CW0062	FL0245	KK0122	LK0153	MN0059	SD0301	WH0089

CK0127	CW0063	FL0269	KK0123	LK0154	MN0066	SD0302	WH0091
CK0128	CW0064	GY0012	KK0126	LK0156	MN0067	SD0328	WH0092
CK0132	CW0067	GY0013	KK0130	LK0158	MN0069	SD0329	WH0093
CK0133	CW0068	GY0017	KK0132	LK0159	MN0070	SD0351	WW0059
CK0137	CW0072	GY0019	KK0133	LK0166	MN0071	SD0380	WW0060
CK0138	CW0073	GY0021	KK0134	LK0236	MN0073	SO0055	WW0061
CK0139	CW0076	GY0034	KK0138	LK0237	MN0078	SO0057	WW0070
CK0141	CW0079	GY0036	KK0141	LK0238	MN0080	SO0059	WW0074
CK0143	CW0082	GY0037	KK0143	LK0240	MN0083	SO0060	WW0075
CK0144	DC0008	GY0038	KK0144	LK0252	MN0087	SO0061	WW0076
CK0145	DC0031	GY0041	KK0145	LK0254	MN0101	SO0063	WW0077
CK0147	DC0034	GY0056	KK0148	LK0255	MO0042	SO0076	WW0088
CK0166	DC0036	GY0060	KK0150	LK0256	MO0051	SO0078	WW0125
CK0177	DC0039	GY0067	KY0031	LK0257	MO0052	SO0083	WW0129
CK0185	DC0040	GY0068	KY0055	LK0265	MO0053	SO0084	WW0143
CK0186	DC0056	GY0072	KY0071	LK0266	MO0055	SO0087	WW0158
CK0249	DC0082	GY0075	KY0079	LK0267	MO0056	SO0090	WW0166
CK0257	DC0126	GY0076	KY0084	LK0270	MO0062	SO0091	WW0173
CK0276	DC0141	GY0078	KY0085	LK0271	MO0067	SO0094	WW0174
CK0277	DC0142	GY0083	KY0086	LK0273	MO0070	SO0095	WW0175
CK0278	DC0153	GY0085	KY0089	LK0298	MO0072	SO0097	WW0179
CK0334	DC0177	GY0101	KY0090	LK0301	MO0074	SO0098	WW0180
CK0335	DC0179	GY0103	KY0100	LK0302	MO0076	TY0043	WW0182
CK0341	DC0267	GY0106	KY0101	LK0303	MO0078	TY0045	WX0012
CK0342	DC0283	GY0108	KY0103	LK0304	MO0080	TY0047	WX0037
CK0343	DC0414	GY0109	KY0104	LK0305	MO0092	TY0048	WX0038
CK0345	DC0416	GY0113	KY0105	LK0306	MO0093	TY0049	WX0039
CK0347	DC0438	GY0114	KY0106	LK0308	MO0094	TY0050	WX0042
CK0353	DC0439	GY0121	KY0107	LK0315	MO0095	TY0051	WX0047
CK0355	DC0442	GY0122	KY0109	LK0316	MO0096	TY0052	WX0049
CK0361	DC0488	GY0124	KY0115	LK0317	MO0100	TY0053	WX0071
CK0362	DC0505	GY0132	KY0117	LM0004	MO0101	TY0055	WX0074
CK0370	DC0660	GY0134	KY0119	LM0005	MO0103	TY0057	WX0076
CK0371	DC0760	GY0135	KY0122	LM0018	MO0108	TY0058	WX0077
CK0375	DC0764	GY0136	KY0123	LM0022	MO0109	TY0060	WX0078
CK0377	DC0781	GY0140	KY0126	LM0039	MO0111	TY0061	WX0079
CK0378	DC0783	GY0145	KY0128	LM0042	MO0112	TY0066	WX0082
CK0380	DC0789	GY0148	KY0129	LM0046	MO0114	TY0067	WX0088
CK0382	DC0796	GY0149	KY0131	LS0004	MO0115	TY0071	WX0089
CK0383	DC0816	GY0150	KY0132	LS0009	MO0116	TY0072	WX0090
CK0388	DC0826	GY0151	KY0134	LS0011	MO0117	TY0078	WX0119
CK0390	DC0828	GY0153	KY0136	LS0015	MO0119	TY0081	WX0120
CK0392	DC1019	GY0154	KY0137	LS0016	MO0122	TY0095	WX0121
CK0393	DL0066	GY0157	KY0152	LS0020	MO0123	TY0096	WX0122
CK0395	DL0067	GY0173	KY0153	LS0024	MO0137	TY0097	WX0123

CK0406	DL0076	GY0175	KY0157	LS0030	MO0147	TY0099	WX0125
CK0407	DL0077	GY0176	KY0159	LS0033	MO0157	TY0100	WX0127
CK0412	DL0079	GY0180	KY0165	LS0034	MO0158	TY0103	WX0128
CK0432	DL0083	GY0188	KY0166	LS0035	MO0160	TY0105	WX0133
CK0433	DL0084	GY0196	KY0167	LS0038	MO0161	TY0107	WX0134
CK0437	DL0085	GY0197	KY0168	LS0041	MO0163	TY0108	WX0135
CK0438	DL0086	GY0198	KY0169	LS0046	MO0164	TY0172	WX0138
CK0440	DL0090	GY0203	KY0170	LS0050	MO0165	TY0174	WX0144
CK0441	DL0093	GY0205	KY0171	LS0098	MO0168	TY0175	WX0145
CK0443	DL0102	GY0210	KY0172	LS0099	MO0170	TY0176	WX0149
CK0445	DL0105	GY0214	KY0174	LS0100	MO0171	TY0177	WX0150
CK0448	DL0114	GY0215	KY0175	LS0101	MO0182	TY0178	WX0159
CK0449	DL0115	GY0221	KY0176	MH0031	MO0183	TY0184	WX0160
CK0462	DL0119	GY0228	KY0178	MH0032	MO0189	TY0186	WX0161
CK0465	DL0126	GY0231	KY0181	MH0033	MO0191	TY0188	WX0163
CK0466	DL0132	GY0232	KY0182	MH0035	MO0193	TY0192	WX0169
CK0485	DL0135	GY0240	KY0183	MH0060	MO0200	TY0194	WX0178
CK0489	DL0141	GY0244	KY0185	MH0068	OY0036	TY0195	WX0180
CK0490	DL0142	GY0245	KY0186	MH0078	OY0037	TY0196	WX0187
CK0517	DL0143	KE0048	KY0188	MH0080	OY0038	TY0197	WX0191
CK0519	DL0147	KE0051	KY0192	MH0081	OY0039	TY0202	WX0194
CK0524	DL0149	KE0066	KY0196	MH0086	OY0040	TY0203	WX0195
CK0532	DL0150	KE0071	KY0197	MH0087	OY0041	TY0204	

SCHEDULE 2

AGGREGATION REGIONS

TRUNK NODE EXCHANGES AND NON-TRUNK NODE EXCHANGES –

2.1 AGGREGATION REGIONS

Region No.	PE Node 1 / IP Backbone Node 1 Location	PE Node 2 / IP Backbone Node 2 Location
1	Beggars Bush (BBH)	Priory Park (PRP)
2	Blanchardstown (BDT)	Finglas (FNG)
3	Belcamp (BLP)	Summerhill (SRL)
4	Nangor Road, Clondalkin (CLD)	Dolphins Barn (DBN)
5	Churchfield (CHF)	Quaker Road (QKR)
6	Limerick (LMK)	Mallow (MLW)
7	Limerick (LMK)	Portlaoise (PGS)
8	Mervue (MVW)	Shantalla (SLA)
9	Priory Park (PRP)	Waterford (WTD)
10	Bridgend (BGE)	Rathedmond, Sligo (RTD)
11	Drogheda (DBC)	Mullingar (MGR)
12	Roslevin, Athlone (RSL)	Rathedmond, Sligo (RTD)

2.2 TRUNK NODES

[See Annex 12]

2.3 NON-TRUNK NODES

[See Annex 12]

SCHEDULE 3
WPZ MOVING ZONES SINCE 2020

Table A: WPZ MOVING FROM ZONE B TO ZONE A

[*See Annex 13*]

Table B: WPZ MOVING FROM ZONE A TO ZONE B

[*See Annex 13*]

SCHEDULE 4

DEFINITION OF KPI METRICS

22. WDC orders

22.1 In each Data Collection Period Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of WDC orders:

Supply time

Metric 205. The total number of supplied (completed) WDC orders

Metric 206. The average supply time in working days for standard, project and non-standard designated orders for all WDC Orders

Metric 207. The average supply time in working days for standard, project and non-standard designated orders for 97.5% of WDC Orders (2.5% of orders with the longest supply times discarded)

Designation of WDC orders

Metric 208. The number of WDC Orders categorised respectively as standard, project and non-standard

Metric 209. The percentage of Orders categorised respectively as standard, project and non-standard

Fault Repair

Metric 210. Number of faults (excluding non-faults and co-op faults) reported on Zone B MI WDC access services repaired within 8, 24 and after 24 working hours (WHs)

Metric 211. Percentage of faults (excluding non-faults and co-op faults) reported on Zone B MI WDC access services repaired respectively within 8, 24 and after 24 working hours, of all faults repaired

22.2 Metric 205, 208 and 210 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

23. Interconnection services

23.1 In each Data Collection Period Eircom shall collect data and calculate the following metrics on a quarterly basis in respect of Interconnection Services:

Fault Repair

Metric 212. Number of faults (excludes non-faults and co-op faults) reported on MI WDC Interconnection services repaired respectively within 8, 24 and after 24 clock hours (CHs)

Metric 213. Percentage of faults (excludes non-faults and co-op faults) reported on MI WDC Interconnection services repaired respectively within 8, 24 and after 24 clock hours, of all faults repaired

Supply

Metric 214. The total number of completed Interconnection Services orders

Metric 215. The average supply time in working days for standard, project and non-standard designated orders for all Interconnection Services orders

Metric 216. The average supply time in working days for standard, project and non-standard designated orders for 97.5% of Interconnection Services orders (2.5% of orders with the longest supply times discarded)

Designation of Interconnection orders

Metric 217. The number of completed Interconnection Services orders categorised respectively as standard, project and non-standard;

Metric 218. The percentage of Interconnection Services orders categorised respectively as standard, project and non-standard

22.2 Metric 212, 214 and 217 shall be reported to ComReg only; they shall be kept confidential and shall not be published.

SCHEDULE 5
KPI REPORTS (TABLES)

Table 19

Supply of Zone B MI WDC Access Services (excl. Dark Fibre) including order categorisation										
Metric No.	Metric Description	Equivalent for Eircom Retail				Available to Access Seeker				ComReg only Y/N
		STD	Proj	NSTD	Total	STD	Proj	NSTD	Total	
205 208	Number of completed WDC Orders									Y
206	Average supply time of completed orders in working days									N
207	Average supply time of 97.5% of completed orders									N
209	Percentage of orders per category									N

Table 20

Zone B MI WDC Orders (excl. Dark Fibre) – Fault Repair										
Metric No.	Metric Description	Equivalent for Eircom Retail				Available to Access Seeker				ComReg only Y/N
		<8 WHs	<24 WHs	>24 WHs	Total	<8 WHs	<24 WHs	>24 WHs	Total	
210	Number of faults repaired									Y
211	Percentage of faults repaired per category									N

Table 21

MI WDC Interconnection Services – Repair										
Metric No.	Metric Description	Equivalent for Eircom Retail				Available to Access Seeker				ComReg only Y/N
		<8 CHs	<24 CHs	>24 CHs	Total	<8 CHs	<24 CHs	>24 CHs	Total	
212	Number of faults repaired									Y
213	Percentage of faults repaired per category									N

Table 22

MI WDC Interconnection Services - Supply										
Metric No.	Metric Description	Equivalent for Eircom Retail				Available to Access Seeker				ComReg only Y/N
		STD	Proj	NSTD	Total	STD	Proj	NSTD	Total	
214 217	Number of completed Interconnection Services Orders									Y
215	Average supply time of completed orders in working days									N
216	Average supply time of 97.5% of completed orders									N
218	Percentage of Interconnection Services orders categorised respectively as standard, project and non-standard									N

Annex: 2

Consultation with the Competition and Consumer Protection Commission (CCPC)

ComReg received a response from the CCPC on 10 Oct 2025, see below:



Garrett Blaney
Chairperson
Commission for Communications Regulation
1 Dockland Central
Guild Street
Dublin 1,
D01 E4X0

10 October 2025

Re Market Review - Wholesale Dedicated Capacity (WDC) Market

Dear Mr Blaney,

Pursuant to Regulation 49(1) of SI No. 444 of 2022 - European Union (Electronic Communications Code) Regulations 2022 (the “**ECC Regulations**”) the Commission for Communications Regulation (“**ComReg**”) shall carry out an analysis of a relevant market defined in accordance with Regulation 46 of the ECC Regulations, and determine whether that relevant market is such as to justify the imposition of the regulatory obligations set out in Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code. This analysis shall be carried out, where appropriate, in collaboration with the Competition and Consumer Protection Commission (the “**CCPC**”).

In this instance, the relevant market is the wholesale market for the provision of wholesale dedicated capacity (“**WDC**”).

Based on the facts and analysis presented by ComReg in the draft decision provided to the CCPC on 26 September 2025, the CCPC does not object to ComReg’s definition of the market for the provision of low bandwidth traditional interface high quality access (the “**LB TI WHQA Market**”) and to the definition of four markets for the provision of Modern Interface Wholesale Dedicated Capacity (the “**MI WDC Markets**”). The CCPC notes further ComReg’s reference to MI WDC Market 1 and MI WDC Market 3 as the Zone A MI WDC Markets, and MI WDC Market 2 and MI WDC Market 4 as the Zone B MI WDC Markets and the Aggregation Regions.

Page 1 of 2



Comisiún um
Iomparáidh agus
Cosaint Tomhaltóirí
Competition and
Consumer Protection
Commission

With regard to ComReg’s competition assessment and Significant Market Power (“SMP”) designation, the CCPC has no objection to ComReg’s findings in the draft decision that:

- (a) Eircom Limited (“Eircom”) no longer holds SMP in the LB TI WHQA Market and that Eircom’s designation with SMP in the LB TI WHQA Market, pursuant to ComReg Decision D03/20, is withdrawn.
- (b) On a forward-looking basis, the Zone A MI WDC Markets are effectively competitive, and that no undertaking has SMP in those markets.
- (c) On a forward-looking basis, the Zone B MI WDC Markets are not effectively competitive and that Eircom is designated as having SMP in those markets.

The CCPC has no objection to the SMP obligations to be imposed in the applicable relevant markets.

Yours sincerely,

A handwritten signature in black ink that reads 'Craig Whelan'. The signature is written in a cursive style and is positioned above a thin red horizontal line.

Craig Whelan

Director

Antitrust Division

Competition and Consumer Protection Commission

Annex: 3

European Commission Response to ComReg's Draft Notified Measures

ComReg received a response from the EC on [TBC]

Annex: 4

ComReg's consideration of European Commissions response to Notified Draft Measures

TBC

Annex: 5

Non-confidential versions of Respondent Submissions to the 2024 Consultation

A non-confidential version of the respondent submissions to the 2024 Consultation is published as ComReg Document No. 25/69a

Annex: 6 Sensitivity Test on the Proportionality Criterion

A 6.1 In considering the proportionality criterion, ComReg conducted a sensitivity analysis using the H2 2024 data. Table 24 below demonstrates the differences in the number and percentage of premises falling in Zone A and Zone B between a proportionality criterion of 75%, 65%, 60% and 50%. We find that the changes are relatively small when the percentage was gradually reduced. There is a 0.2% increase in the number of Zone A CPs when the proportionality is reduced from 75% to 65%, and almost no change in Zone A CPs when the proportionality criteria is reduced to 60%. When the proportionality is reduced further to 50% criterion, there is a further 3.5% increase in the number of Zone A CPs.

Table 24: Proportionality Criterion Comparison (Number of Connected Premises)

Zone	75%	65%	60%	50%
Zone A	9,589 (67.2%)	9,629 (67.4%)	9,635 (67.5%)	10,140 (71.0%)
Zone B	4,687 (32.8%)	4,647 (32.6%)	4,641 (32.5%)	4,136 (29.0%)
Total	14,276	14,276	14,276	14,276

A 6.2 ComReg also conducted a sensitivity analysis on the changes of SP market shares at each of the proportionality criteria (see Table 25 and Table). We find that the market shares are not sensitive to changes in the proportionality criterion. There are barely any changes when the proportionality criterion is reduced from 75% to 65% and then 60%. When it is reduced to 50%, the market shares changes are slightly bigger, with the largest difference being a 2.4% increase for [REDACTED].

Table 25: Proportionality Criterion Comparison (Market Shares Zone A) [REDACTED]

	75%	65%	60%	50%
Eircom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
SFG (excl BT)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
SIRO	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Others	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED] 2.4%
Total	100.0%	100.0%	100.0%	100.0%

**Table 26: Proportionality Criterion Comparison (Market Shares Zone B) [REDACTED]
PARTIALLY REDACTED]**

	75%	65%	60%	50%
Eircom	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
SFG (excl BT)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BT	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Virgin Media	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
SIRO	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Others	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	100.0%	100.0%	100.0%	100.0%

A 6.3 The sensitivity analyses demonstrate that the application of the assessment criteria, namely whether 60% of connected premises are within 50 meters of 2 or more ANs, are not overly sensitive to small changes in the proportionality criterion itself.

Annex: 7

List of Business Parks

ID	Name
CAVN_001	Century Business Park, Cavan
CARL_001	Strawhill Industrial Estate
CARL_002	Barrowside Business Park
CARL_003	St. Patricks College
CARL_004	Kernanstown Industrial Estate
CARL_005	Institute of Technology
CARL_005	Fairgreen Shopping Centre
CLAR_001	Smithstown Industrial Estate
CLAR_002	Shannon Free Zone
CLAR_003	Gort Road Industrial Estate, Ennis
CORK_001	Mallow Road Industrial Area
CORK_002	Kilnap Business & Technology Park (part of Mallow Rd. Industrial Area)
CORK_003	Kilbarry Business & Technology Park
CORK_004	Hollymount Industrial Estate
CORK_005	Hollyhill Industrial Estate
CORK_006	EMC Campus, Ballincollig (IDA Industrial Estate, Barnagore)
CORK_007	Ballincollig Technology Park
CORK_008	Barrack Square, Ballincollig
CORK_009	IDA Cork Business & Technology Park, Model Farm Road
CORK_010	Cork Institute of Technology
CORK_011	University Technology Centre, Curraheen Road
CORK_012	UCC Cork (Main & West Campuses)
CORK_013	Wilton Shopping Centre
CORK_014	Cleve Business Park, Ballintemple
CORK_015	Tivoli Industrial Estate
CORK_016	Riverview Business Park, Mahon
CORK_017	Mahon Industrial Estate
CORK_018	Heritage Business Park, Mahon, Cork (part of Mahon Industrial Estate)
CORK_019	Longmahon Technology Park
CORK_020	Voxpro Campus, Mahon
CORK_021	National Software Campus, Mahon
CORK_022	City Gate Business Park
CORK_023	Mahon Point Shopping Centre
CORK_024	Eastgate Business Park, Little Island
CORK_025	Cork Plastics Campus, Little Island
CORK_026	Wallingstown Industrial Area, Little Island
CORK_027	Waterfront Business Park, Little Island
CORK_028	Euro Business Park, Little Island
CORK_029	Little Island Industrial Estate

CORK_030	IDA Business & Technology Park, Carrigtwohill
CORK_031	South Cork Industrial Estate
CORK_032	Youngline Industrial Estate, Pooladuff
CORK_033	Sitecast Industrial Estate, Togher
CORK_034	Pooladuff Industrial Estate
CORK_035	Leghanamore Industrial Estate
CORK_036	Forgehill Industrial Estate
CORK_037	Metro Business Park, Ballycurreen Road
CORK_038	South Link Park,
CORK_039	Ballycurreen Industrial Estate
CORK_040	Cork Airport
CORK_041	Cork Airport Business Park
CORK_042	Pfizer, Ringaskiddy
CORK_043	Port of Cork Deepwater Berth, Ringaskiddy
CORK_044	Janssen, Ringaskiddy
CORK_045	Novartis, Ringaskiddy
CORK_046	Raheen East Industrial Area, Ringaskiddy
CORK_047	Ringport, Ringaskiddy
CORK_048	DePuy, Ringaskiddy
CORK_049	Hovione Loughbeg, Ringaskiddy
CORK_050	GlaxoSmithKline, Ringaskiddy
CORK_051	Kilnagleary Business Park, Carrigaline
CORK_052	Estuary Industrial Estate, Carrigaline
CORK_053	Carrigaline Industrial Estate, Carrigaline
CORK_054	Togher Industrial Estate, Ferrero Ireland, Grange Industrial Estate
CORK_055	Churchfield Industrial Estate
CORK_056	IDA Business and Technology Park, Mallow
DONE_001	Pine Hill Industrial Estate
DONE_002	Letterkenny Office Park, Windy Hall
DONE_003	IDA Business & Technology Park
DONE_004	Ballyraine Industrial Estate
DONE_005	Letterkenny Institute of Technology
DUBL_001	Turvey Business Park
DUBL_002	Redleaf (Roseville) Business Park
DUBL_003	Swords Business Park
DUBL_004	Airside Retail & Business Park, Swords
DUBL_005	Dublin Airport
DUBL_006	North Ring Business Park, Santry D.9
DUBL_007	Dublin Airport Business Park, Santry D.9
DUBL_008	Woodford Business Park D.9
DUBL_009	Furry Park Industrial Estate, Santry D.9
DUBL_010	Airport Business Campus, Santry D.9

DUBL_011	Airways Business Park, Santry, D.9
DUBL_012	Clonshaugh/Willsborough Business Park D.17
DUBL_013	Northwood Business Park, Santry, D.9
DUBL_014	Northern Cross, Malahide Road D.17
DUBL_015	Dublin City University Glasnevin Campus D.9
DUBL_016	Dublin City University Saint Patrick's Campus D.9
DUBL_017	Dublin City University All Hallows Campus D.9
DUBL_018	Dublin City University, Mater Dei Campus D.3
DUBL_019	DIT Bolton St. D1
DUBL_020	DIT College of Catering and Tourism, Cathal Bruagh St. D.1
DUBL_021	East Point Business Park D.3
DUBL_022	Dublin Port D.1
DUBL_023	Docklands Innovation Park, East Wall Road, D.3
DUBL_024	I.F.S.C. D.1
DUBL_025	Dublin Docklands (Northside D.1)
DUBL_026	Dublin Docklands (Southside D.2 & D.4)
DUBL_027	Grand Canal Square, D.2 (part of South Docklands)
DUBL_028	Trinity Technology and Enterprise Campus D.2
DUBL_029	Trinity College, Dublin D.2
DUBL_030	RIAM Westland Row, D.2
DUBL_031	IDA Centre, Newmarket, D.8
DUBL_032	National College of Art & Design, Thomas Street D.8
DUBL_033	Dublin Institute of Technology, Faculty of Business, Aungier St. D.2
DUBL_034	RCSI St. Stephens Green D.2
DUBL_035	Dublin Institute of Technology Kevin Street Campus D.8
DUBL_036	CDET B Camden Row D.8
DUBL_037	Dublin Institute of Advanced Studies, Burlington Rd D.4
DUBL_038	IPA (Institute of Public Administration) Landsdowne Rd. D4
DUBL_039	Radio Telefis Eireann Montrose Campus, Donnybrook D.4
DUBL_040	University College Dublin (Belfield Campus) D.4
DUBL_041	Glenview Industrial Estate, Herbeton Drive, D.8
DUBL_042	Goldenbridge Industrial Estate D.8
DUBL_043	Park West Business Park D.22
DUBL_044	Nangor Road Business Park, Nangor Road D.12
DUBL_045	Riverview Business Park, Nangor Road D,12
DUBL_046	John Kennedy Industrial Estate D.12
DUBL_047	Old Naas Road Industrial Area, Bluebell D.12
DUBL_048	Naas Road Industrial Park, Old Naas Road D.12
DUBL_049	Aldi (and adjacent commercial areas), Long Mile Road, D.12
DUBL_050	Robinhood Industrial Estate D.12
DUBL_051	Lwr. Ballymount Business Area, Nth.D.12
DUBL_052	Lwr. Ballymount Business Area, Sth.D.12

DUBL_053	Ballymount Drive Business Area D.12
DUBL_054	Western Parkway Business Centre D.22
DUBL_055	Westway Business Centre, Ballymount D.12
DUBL_056	Ballymount Cross Industrial Estate D.22
DUBL_057	Crosslands Business Park, Ballymount D.22
DUBL_058	Crossbeg Industrial Estate, Ballymount D.22
DUBL_059	Westgate Business Park, Ballymount D.22
DUBL_060	M50 Business Park, Ballymount, D.22
DUBL_061	Fashion City, Ballymount D.22
DUBL_062	Cookstown Industrial Estate, Tallaght D.24
DUBL_063	Belgard Retail Park, Belgard Rd. D.24
DUBL_064	Institute of Technology, Tallaght D.24
DUBL_065	The Square, Tallaght, D.24 (Inc. Belgard Squares)
DUBL_066	Grangecastle Business Park
DUBL_067	Kilcarberry Business Park D.22
DUBL_068	Profile Park D.22
DUBL_069	Baldonnell Business Park, Naas Rd
DUBL_070	Citywest Business Park D.24
DUBL_071	Stillorgan Industrial Park D.18
DUBL_072	Sandyford Industrial Estate D.18
DUBL_073	Central Park, Leopardstown, D.18
DUBL_074	Mountain View Business Park, Leopardstown, D. 18
DUBL_075	South County Business Park, Leopardstown D.18
DUBL_076	Deansgrange Business Park
DUBL_077	Dun Laoghaire College of Art & Design
DUBL_078	The Park, Carrickmines D.18
DUBL_079	Cherrywood Business Park D.18
DUBL_080	Bristol Myers Squibb, Cruiserath D.15
DUBL_081	Blanchardstown Corporate Park D.15
DUBL_082	College Business & Technology Park, Blanchardstown D.15
DUBL_083	Institute of Technology Blanchardstown D.15
DUBL_084	Blanchardstown Business & Technology Business Park D.15
DUBL_085	IDA Ballycoollin Business Park D.15
DUBL_086	Northwest Business Park D.15
DUBL_087	Millennium Business Park Blanchardstown D.15
DUBL_088	Rosemount Business Park, Blanchardstown D.15
DUBL_089	Keypoint Business Park Blanchardstown D.15
DUBL_090	Stadium Business Park, Blanchardstown D.15
DUBL_091	Premier Business Park, Blanchardstown D.15
DUBL_092	Damastown Industrial Park D.15
DUBL_093	Plato Business Park, Mullhuddart D.15
DUBL_094	BASE Enterprise Park, Mullhuddart D.15

DUBL_095	Damastown Technology Park, Damastown Walk D.15
DUBL_096	Kepak, Damastown D.15
DUBL_097	Blanchardstown
DUBL_098	Dublin Airport Logistics Park
DUBL_099	Whitestown and South City Business Park, D24
DUBL_100	Hibernian Industrial Estate, Tallaght D24
DUBL_101	Tesco Distribution Centre, Donabate
DUBL_102	Northern Cross Business Park and North Park Industrial Estate, Finglas, Dublin 11.
DUBL_103	North Road, Jamestown Road and Poppintree, Fingal Dublin 11
DUBL_104	Amazon Mulhuddart, D15
DUBL_105	Beach Hill Office Campus and Richview Office Park, D4
DUBL_106	Dundrum Town Centre, D16
DUBL_107	Cherrywood Business Park Extension
DUBL_108	Liffey Valley Shopping Centre
DUBL_109	Fonthill Business Park
DUBL_110	St. James Hospital
DUBL_111	Citywest Shopping Centre
DUBL_112	Department of Education, Marlborough Street
DUBL_113	Dundrum Business Park, Farranboley
DUBL_114	Magna Business Park, Fortunestown
DUBL_115	St. Vincent's University Hospital
DUBL_116	Jervis Centre
GALW_001	IDA Loughrea Business and Technology Park
GALW_002	East Point Business Park
GALW_003	Raheen Industrial Estate
GALW_004	Ballinasloe Enterprise & Technology Centre
GALW_005	Westside Shopping Centre
GALW_006	Westside Enterprise Park
GALW_007	University College Galway Campus
GALW_008	Liosban Industrial Estate, Tuam Road
GALW_009	Mervue Industrial Estate
GALW_010	Galway Financial Services Centre, Moneenageisha
GALW_011	IDA Business Park, Dangan
GALW_012	Ballybane Industrial Estate
GALW_013	Ballybrit Industrial Estate
GALW_014	Cityeast (Business Park, Ballybrit)
GALW_015	Ballibrit Industrial Estate Upper
GALW_016	Galway/Mayo Institute of Technology (GMIT), Dublin Road
GALW_017	Parkmore Industrial Estate
GALW_018	Galway Technology Park
GALW_019	Briarhill Business Park
GALW_020	Oranmore Business Park

GALW_021	Deerpark Industrial Estate, Oranmore
GALW_022	Westlink Industrial Park. Oranmore
GALW_023	Thermo King and Medtronic, Galway
GALW_024	Northpoint Retail Centre and City North Business Park
GALW_025	Tuam Business and Technology Park, Co. Galway
KERR_001	Clieveragh Business Park
KERR_002	Monavalley Industrial Estate
KERR_003	IT Tralee & Kerry Technology Park
KERR_004	Tralee Business Park, (Clash Business Park)
KERR_005	Woodlands Industrial Estate
KERR_006	Ballyspillane Industrial Estate
KERR_007	County Buildings, Tralee
KERR_008	University Hospital Kerry
KILD_001	Colinstown Industrial Park
KILD_002	Colinstown Business Park
KILD_003	Ryebrook Business Park
KILD_004	Liffey Park Technology Campus
KILD_005	Clane Business Park
KILK_001	Hebron Industrial Estate
KILK_002	Cillín Hill (Retail & Business Park)
KILK_003	Ormonde Business Park
KILK_004	Kilkenny Industrial and Business Park, Purcellsinch
KILK_005	Kilkenny Retail & Business Park
KILK_006	Kilkenny Business & Technology Park, Loughboy
KILK_007	Danville Business Park
KILK_008	Newpark Shopping Centre Killkenny
LAOI_001	Portlaoise College
LAOI_002	Kea-Lew Business Park
LAOI_003	Clonminam Business Park
LAOI_004	Portlaoise Retail Park
LAOI_005	Lismard Business Park
LIME_001	Limerick IT
LIME_002	UL Limerick
LIME_003	Plassey park Industrial/Commercial Parks
LIME_004	Cook Ireland, Castletroy
LIME_005	Vistakon, Plassey
LIME_006	Cornacree Business Park, Dock Road
LIME_007	Limerick Docks, Dock Road
LIME_008	Mary Immaculate College, SCR
LIME_009	Limerick Enterprise Development Partnership, Roxboro
LIME_010	Galvone Industrial Estate
LIME_011	Crossagalla Business Park

LIME_012	Ballysimon North
LIME_013	East Link (& Monaclione Business) Parks, Ballysimon
LIME_014	Ballysimon South
LIME_015	Garryglass Industrial Estate, Ballysimon
LIME_016	City East Retail Park, Ballysimon
LIME_017	Crescent Shopping Centre, Dooradoyle
LIME_018	Raheen Industrial Estate
LIME_019	Annacotty Business Park
LIME_020	Jetland Shopping Centre Limerick
LIME_021	Castletroy Retail Park Limerick
LIME_022	Crossgalla Business Park Limerick
LONG_001	N4 Retail & Business Park
LONG_002	Longford Business & Technology Park, Lisnamuck
LONG_003	IDA Business & Technology Park, Ballinalee
LONG_004	Townspark Industrial Estate
LOUT_001	Northlink Retail Park
LOUT_002	Coes Road Industrial Estate
LOUT_003	The Brewery Business Park
LOUT_004	Dundalk IT
LOUT_005	Finnabair industrial Park (IDA Business Park)
LOUT_006	Xerox Business Park
LOUT_007	Donore Road Industrial Estate
LOUT_008	Newgrange Business Park
LOUT_009	The Marshes Shopping Centre, Dundalk
LOUT_010	Boyne Business Park, Drogheda
MAYO_001	Ballina Beverages Campus
MAYO_002	Hollister Business Park, Rehins
MAYO_003	IDA Business Park
MAYO_004	Claremorris Retail Centre
MAYO_005	Clar Industrial Estate
MAYO_006	Lakeside Retail Park
MEAT_001	Ballmoral Industrial Estate
MEAT_002	Mullaghboy Industrial Estate
MEAT_003	Beechmount Industrial Estate
MEAT_004	Navan Business and Technology Park, Athlumney
MEAT_005	Oaktree Business Park
MEAT_006	Facebook Clonee Datacentre
MEAT_007	Dunboyne Business Park
MEAT_008	Bracetown Business Park
MEAT_009	Meta Data Centres Clonee
MEAT_010	Ashbourne Business Park, Ashbourne Industrial Estate and Ashbourne Business Centre
OFFA_001	Axis Business Park

OFFA_002	Burlington Business Park
OFFA_003	Srah IDA Business & Technology Park
OFFA_004	Central Business Park, Clonminch Road
ROSC_001	IDA Business & Technology Park
SLIG_001	Finisklin Industrial Estate
SLIG_002	Sligo Institute of Technology
SLIG_003	Abbott and AbbVie, Sligo
TIPP_001	Ard Gaoithe Business Park
TIPP_002	Cashel Road Industrial Estate
TIPP_003	Carrigeen Business Park
TIPP_004	Gurtnafleur Business Park
TIPP_005	Showgrounds Shopping Centre, Clonmel
WATE_001	Waterford Institute of Technology, West Campus
WATE_002	Westside Business Park
WATE_003	Waterford Business Park, Cork Road
WATE_004	Waterford Industrial Estate, Cork Road
WATE_005	Cleaboy Business Park
WATE_006	Waterford Institute of Technology, Cork Road Campus
WATE_007	Six Crossroads Business Park
WATE_008	Kingsmeadow Business Park
WATE_009	Tramore Road Business Park
WATE_010	Ardkeen Shopping Centre
WATE_011	Sanofi Waterford, Waterford City
WATE_012	Farranshoween Retail Park
WEST_001	Monksland Industrial Area
WEST_002	Westpoint Business Park, Tuam Road
WEST_003	Cornamaddy Business Area (Dept. of Education & Science & Covidien sites)
WEST_004	Blyry Industrial Estate
WEST_005	Athlone Institute of Technology
WEST_006	Athlone Business & Technology Park, Garrycastle
WEST_007	Mullingar Business Park
WEST_008	Lough Sheever Corporate Park
WEST_009	Robinstown Business Park
WEXF_001	Ardcavan Business Park
WEXF_002	Whitemill Industrial estate
WEXF_003	Kerlogue Business Park
WEXF_004	Kerlogue & Stanfield Business Area
WEXF_005	Wexford Business and Technology Park
WEXF_006	Wexford Business and Technology Park Extension

- (h) **Step 8:** in Area B2, ComReg considers that NBI network is present at a WPZ if that WPZ contains business premises⁵⁸⁶ that are on the NBI list of premises. This is based on (1) the obligation NBI has under the NBP contract to provide LL products to all premises on their list, and (2) residential premises are unlikely to require LL services. ComReg then conduct the 2 AN test and redesignate those WPZs that pass the test as in Area A7.

⁵⁸⁶ ComReg uses NACE codes to determine if a premises on the NBI list is a business premises. Those premises that have a specific NACE code indicate that economic activity are carried out at these premises. They can therefore be considered business premises. Further, we note that we exclude agricultural businesses from the list as they are mostly small farming businesses and are unlikely to require LL services.

Annex: 9

Full list of WPZs

- A 9.1 Please see the separate ComReg Document 25/69b, which is an Excel spreadsheet containing the list of WPZs.

Annex: 10

Map of WPZs

A 10.1 Please see the separate link below to a map showing each WPZ and whether it is in the Zone A MI WDC Markets or Zone B MI WDC Markets.

[LINK TO BE INSERTED AT PUBLICATION OF DECISION]

Annex: 11 Other Factors for SMP Assessment

- A 11.1 As noted in paragraph 5.11, ComReg has considered other factors that could be used to indicate the potential market power of an SP but which, for the reasons set out below, are considered of little or no relevance for the purposes of the SMP assessment in the Relevant WDC Markets.

Technological advantages or superiority

- A 11.2 Technological advances or superiority can represent a barrier to entry as well as conferring the ability for an SP to achieve cost or production advantages or efficiencies over its competitors. However, the technologies used to provide WDC services have little or no bearing on the assessment of SMP in the Relevant WDC Markets. In particular, it appears that any technological advancement made by one operator could, from a purely technological point of view, be adopted over time by others. For example, ethernet and WDM technologies are not proprietary technologies, and are available to all operators seeking to provide WDC and retail services. This criterion is, therefore, considered of less relevance in the Relevant WDC Markets.

Easy or privileged access to capital markets/financial resources

- A 11.3 Easy or privileged access to capital markets may act as a barrier to entry in markets where small, private companies compete with a large incumbent in the WDC markets and are not able to leverage sufficient finance to invest in alternative infrastructure and use it to compete effectively with the incumbent.
- A 11.4 ComReg considers that this is unlikely to be a factor in the WDC markets, considering that the main potential entrants are subsidiaries of large parent companies. e.g. SFG, Virgin Media, SIRO, Vodafone and NBI. These SPs are equally able to access capital markets and are therefore not at a disadvantage relative to the incumbent. This criterion is, therefore, considered of little or no relevance.

A highly developed distribution and sales network

- A 11.5 The need to establish distribution systems might delay short term market entry or expansion, given the costs involved and could act as a barrier to entry. However, entry into the WDC Markets is unlikely to involve establishing extensive distribution and sales networks, since there are only a small number of potential wholesale customers. Therefore, this is unlikely to represent a significant barrier to entry in the WDC markets.

Annex: 12

List of Eircom Trunk and Non-Trunk Nodes

Table 27: List of Eircom Trunk Nodes

Eircom Trunk Nodes										
1	ARD	Ardee		49	DBC	Drogheda		97	NMK	Newtownmtkennedy
2	AKW	Arklow		50	DNU	Droichead Nua		98	NMN	North Main
3	ATD	Athlunkard		51	DEZ	Dunboyne		99	NUT	Nutley
4	ATY	Athy		52	DDK	Dundalk		100	PAL	Palmerstown
5	BRN	Balbriggan		53	BLR	Dundalk Blackrock		101	PKW	Park West
6	BLA	Ballina		54	DDM	Dundrum		102	PHB	Phibsboro
7	BSE	Ballinasloe		55	DVA	Dungarvan		103	PAN	Portarlington
8	BNC	Ballincollig		56	DSN	Dunshaughlin		104	PGS	Portlaoise
9	BRE	Ballinrobe		57	EPT	Eastpoint		105	PMK	Portmarnock
10	BLB	Ballyboden		58	EDY	Edenderry		106	PRP	Priory Park
11	BOF	Ballybofey		59	ENS	Ennis		107	QKR	Quaker Road
12	BBH	Beggars Bush		60	ETY	Enniscorthy		108	RCL	Rathcoole
13	BLP	Belcamp		61	FMY	Fermoy		109	RTD	Rathedmond
14	BDT	Blanchardstown		62	FBK	Ferrybank		110	RMS	Rathmines
15	BSN	Blessington		63	FNG	Finglas		111	RTH	Ratoath
16	BRI	Bray		64	FOX	Foxrock		112	ROC	Rochestown
17	BGE	Bridgend		65	GAL	Galway		113	RCM	Roscommon
18	BUA	Buncrana		66	GMR	Glanmire		114	RSA	Roscrea
19	CAB	Cabra		67	GRY	Gorey		115	RSL	Roslevin
20	CHD	Caherdavin		68	GRS	Greystones		116	RUS	Rush
21	CRW	Carlow		69	HYD	Hettyfield		117	SND	Sandyford
22	CCS	Carrickmacross		70	HSQ	Heuston South Quarter		118	SNH	Sandyford Aeh
23	CGI	Carrigaline		71	KTK	Kanturk		119	SAN	Santry
24	CHT	Carrigtwohill		72	KOK	Kilcock		120	SKL	Shankill
25	CSL	Cashel		73	KLE	Kildare		121	SHN	Shannon Town
26	CBR	Castlebar		74	KNY	Kilkenny		122	SLA	Shantalla
27	CTY	Castletroy		75	KLN	Killarney		123	SHP	Ship Street
28	CAV	Cavan		76	KSL	Kinsale		124	SKS	Skerries
29	CSR	Ceanannus		77	LKY	Letterkenny		125	SKB	Skibbereen
30	CEL	Celbridge		78	LMK	Limerick		126	SRL	Summerhill
31	CHF	Churchfield		79	LED	Little Island		127	STN	Sutton
32	CWM	Citywest Data Centre		80	LOD	Longford		128	SRD	Swords
33	CWT	Citywest		81	LGA	Loughrea		129	TLH	Tallaght
34	CAE	Clane		82	LCN	Lucan Ballydowd		130	THS	Thurles

35	CEE	Clonee		83	MAH	Mahon		131	TPR	Tipperary
36	CLM	Clonmel		84	MHZ	Malahide		132	TWV	Tralee
37	CLT	Clontarf		85	MLW	Mallow		133	TRM	Trim
38	CLK	Coolock		86	MNT	Maynooth		134	TLM	Tullamore
39	CKC	Cork Central		87	MER	Merrion		135	WAL	Walkinstown
40	CRZ	Crown Alley		88	MVW	Mervue		136	WTD	Waterford
41	CRL	Crumlin		89	MDN	Midleton		137	TYC	Waterford Tycor
42	CUS	Customs Hs Docks		90	MGN	Monaghan		138	WRD	Wellington Road
43	DYX	Dennehys Cross		91	MGR	Mullingar		139	WXD	Wexford
44	DBN	Dolphins Barn		92	NAS	Naas		140	WHI	Whitehall
45	DBT	Donabate		93	CLD	Nangor Road		141	WLW	Wicklow
46	DGL	Donegal		94	AUV	Navan		142	YHL	Youghal
47	LKD	Dooradoyle		95	NNH	Nenagh				
48	DGS	Douglas		96	NWT	Newcastle West				

Table 28: List of Eircom Non-Trunk Nodes

Eircom Non-Trunk Nodes										
1	ABE	Ashbourne		18	COV	Cobh		35	MBG	Muine Bheag
2	ASN	Askeaton		19	CSO	Costello		36	NRS	New Ross
3	ANR	Athenry		20	DLO	Dungloe		37	NWL	Newlands Cross
4	BTE	Ballymote		21	DLA	Dunlaoghaire		38	OME	Oranmore
5	BND	Bandon		22	EFN	Elphin		39	RLC	Rathluirc
6	BAY	Bantry		23	EFD	Enfield		40	RME	Rathmore
7	BSZ	Bettystown		24	ETN	Ennistymon		41	RSN	Robertstown
8	BIR	Birr		25	GRT	Gort		42	TAA	Tara
9	BAI	Blarney		26	GNA	Granard		43	TRE	Terenure
10	CDH	Carndonagh		27	KME	Kenmare		44	TRR	Tramore
11	COS	Carrick-On-Suir		28	KRG	Killorglin		45	TUM	Tuam
12	CRE	Castlerea		29	KRH	Kilrush		46	TLW	Tullow
13	CAL	Charlestown		30	KBY	Knockboy		47	VGA	Virginia
14	CKN	Ck-On-Shannon		31	LEX	Leixlip		48	WTB	Wellington Bridge
15	CMS	Claremorris		32	LIS	Listowel		49	WST	Westport
16	CDN	Clifden		33	MRM	Macroom				
17	CKY	Clonakilty		34	MOT	Moate				

Annex: 13

List of WPZs which change Zone designation

Table A: WPZs Moving from Zone B to Zone A

Zone B to A							
CC0002	CK0513	DL0008	GC0054	LD0006	MH0174	SD0224	WD0115
CC0003	CK0515	DL0010	GC0062	LD0008	MH0176	SD0229	WD0118
CC0005	CK0521	DL0020	GC0091	LD0009	MH0178	SD0231	WD0121
CC0008	CK0522	DL0024	GC0092	LD0015	MH0179	SD0232	WD0122
CC0009	CK0523	DL0025	GC0093	LD0016	MH0188	SD0234	WD0123
CC0013	CK0526	DL0033	GC0094	LD0040	MH0190	SD0243	WD0125
CC0015	CK0545	DL0034	GC0096	LD0041	MH0194	SD0244	WD0127
CC0019	CK0549	DL0035	GC0097	LD0042	MH0197	SD0249	WD0128
CC0024	CK0580	DL0037	GC0098	LD0044	MH0200	SD0250	WD0133
CC0025	CK0581	DL0038	GC0099	LD0045	MH0204	SD0251	WD0134
CC0027	CK0582	DL0039	GC0100	LD0046	MH0221	SD0253	WD0135
CC0028	CN0001	DL0040	GC0101	LD0047	MH0236	SD0254	WD0137
CC0030	CN0002	DL0041	GC0104	LD0048	MH0242	SD0255	WD0144
CC0031	CN0003	DL0042	GC0108	LD0049	MH0253	SD0256	WD0148
CC0036	CN0004	DL0043	GC0117	LD0050	MH0258	SD0263	WD0158
CC0038	CN0005	DL0044	GC0118	LD0051	MN0003	SD0287	WD0162
CC0040	CN0006	DL0045	GC0125	LD0052	MN0004	SD0288	WD0163
CC0092	CN0007	DL0049	GC0126	LD0053	MN0005	SD0289	WD0166
CC0098	CN0008	DL0051	GC0132	LD0054	MN0008	SD0291	WD0169
CC0113	CN0009	DL0052	GC0136	LD0055	MN0009	SD0292	WD0179
CC0114	CN0010	DL0055	GC0137	LD0056	MN0011	SD0293	WD0180
CC0121	CN0011	DL0056	GC0138	LD0057	MN0014	SD0294	WH0008
CC0122	CN0012	DL0057	GC0139	LD0058	MN0015	SD0295	WH0015
CC0123	CN0013	DL0058	GC0140	LD0059	MN0016	SD0300	WH0021
CC0134	CN0014	DL0059	GC0141	LD0060	MN0018	SD0309	WH0022
CC0136	CN0028	DL0060	GC0142	LD0061	MN0019	SD0319	WH0023
CC0140	CN0064	DL0061	GC0143	LD0062	MN0020	SD0325	WH0029
CC0143	CN0065	DL0062	GC0146	LD0063	MN0023	SD0327	WH0031
CC0144	CN0072	DL0063	GC0147	LD0064	MN0028	SD0331	WH0036
CC0154	CN0076	DL0120	GY0007	LD0065	MN0029	SD0332	WH0037
CC0155	CN0078	DL0121	GY0008	LD0066	MN0030	SD0333	WH0041
CC0159	CN0082	DL0122	GY0009	LD0067	MN0032	SD0336	WH0053
CC0166	CN0083	DL0128	GY0011	LD0068	MN0035	SD0339	WH0054
CC0181	CN0085	DL0136	GY0014	LD0069	MN0038	SD0345	WH0094
CC0183	CN0086	DL0137	GY0016	LD0070	MN0044	SD0346	WH0100

CC0184	CN0087	DL0138	GY0023	LD0071	MN0047	SD0347	WH0120
CC0186	CN0089	DL0155	GY0030	LD0072	MN0049	SD0348	WH0121
CC0187	CN0090	DL0160	GY0040	LD0073	MN0051	SD0349	WH0123
CC0188	CN0091	DL0161	GY0043	LD0074	MN0053	SD0350	WH0131
CC0189	CN0092	DL0166	GY0044	LD0075	MN0054	SD0353	WH0132
CC0192	CN0093	DL0168	GY0045	LD0076	MN0055	SD0354	WW0001
CC0195	CN0094	DL0208	GY0046	LD0077	MN0060	SD0356	WW0002
CC0196	CN0095	DL0216	GY0047	LD0078	MN0072	SD0357	WW0004
CC0200	CN0096	DL0219	GY0048	LD0079	MN0075	SD0358	WW0005
CC0207	CN0098	DL0221	GY0049	LD0080	MN0076	SD0361	WW0008
CC0209	CN0100	DL0227	GY0050	LD0081	MN0079	SD0362	WW0009
CC0210	CN0106	DL0229	GY0052	LD0082	MN0089	SD0364	WW0010
CC0211	CN0111	DL0230	GY0053	LD0083	MN0090	SD0365	WW0013
CC0214	CN0113	DL0231	GY0055	LD0084	MN0091	SD0366	WW0014
CC0217	CN0114	DL0232	GY0057	LD0085	MN0093	SD0388	WW0015
CC0219	CN0118	DL0233	GY0063	LD0086	MN0094	SD0389	WW0022
CC0221	CN0119	DR0004	GY0064	LD0087	MN0096	SD0393	WW0026
CE0005	CW0003	DR0005	GY0066	LD0088	MN0097	SD0394	WW0028
CE0006	CW0005	DR0007	GY0070	LD0089	MO0001	SD0397	WW0030
CE0007	CW0017	DR0008	GY0084	LD0090	MO0006	SD0399	WW0032
CE0008	CW0024	DR0012	GY0088	LD0091	MO0007	SD0400	WW0033
CE0010	CW0030	DR0019	GY0089	LD0092	MO0009	SD0401	WW0034
CE0015	CW0032	DR0024	GY0090	LD0093	MO0010	SD0405	WW0035
CE0031	CW0038	DR0027	GY0092	LD0094	MO0011	SD0406	WW0036
CE0040	CW0039	DR0029	GY0093	LD0095	MO0013	SD0407	WW0037
CE0046	CW0045	DR0048	GY0094	LD0096	MO0024	SD0408	WW0038
CE0075	CW0046	DR0059	GY0097	LD0097	MO0028	SD0409	WW0040
CE0083	DC0019	DR0060	GY0110	LD0098	MO0031	SD0412	WW0043
CE0095	DC0022	DR0070	GY0111	LD0099	MO0033	SD0413	WW0044
CE0096	DC0023	DR0072	GY0115	LD0100	MO0040	SO0002	WW0045
CE0097	DC0037	DR0085	GY0116	LD0101	MO0061	SO0004	WW0046
CE0098	DC0042	DR0086	GY0117	LD0102	MO0063	SO0005	WW0047
CE0106	DC0043	DR0107	GY0118	LD0103	MO0064	SO0012	WW0049
CE0108	DC0057	DR0108	GY0119	LD0104	MO0071	SO0013	WW0051
CE0113	DC0071	DR0109	GY0123	LD0105	MO0082	SO0014	WW0052
CE0142	DC0072	DR0110	GY0125	LD0106	MO0083	SO0027	WW0053
CE0153	DC0074	DR0113	GY0159	LD0107	MO0085	SO0039	WW0054
CE0158	DC0091	DR0114	GY0165	LD0108	MO0088	SO0041	WW0064
CE0161	DC0094	DR0115	GY0166	LD0109	MO0090	SO0051	WW0065
CE0162	DC0110	DR0116	GY0167	LD0110	MO0097	SO0064	WW0066
CE0163	DC0111	DR0121	GY0212	LD0111	MO0118	SO0071	WW0067
CE0178	DC0116	DR0122	GY0213	LD0112	MO0121	SO0072	WW0068
CE0179	DC0130	DR0125	GY0216	LD0113	MO0126	TY0001	WW0069
CK0015	DC0138	DR0126	GY0220	LD0114	MO0127	TY0002	WW0078
CK0016	DC0139	DR0140	GY0238	LD0115	MO0128	TY0003	WW0079

CK0018	DC0140	DR0179	GY0241	LD0116	MO0130	TY0005	WW0082
CK0020	DC0163	DR0180	KE0001	LD0117	MO0131	TY0006	WW0083
CK0021	DC0170	DR0182	KE0002	LD0118	MO0133	TY0007	WW0084
CK0022	DC0187	DR0183	KE0003	LD0119	MO0136	TY0008	WW0090
CK0023	DC0189	DR0185	KE0004	LD0120	MO0167	TY0010	WW0093
CK0024	DC0193	DR0190	KE0006	LD0121	MO0176	TY0013	WW0096
CK0025	DC0197	DR0191	KE0007	LD0122	MO0186	TY0014	WW0097
CK0039	DC0201	DR0192	KE0021	LD0123	MO0187	TY0016	WW0098
CK0040	DC0208	DR0194	KE0024	LD0124	MO0197	TY0017	WW0099
CK0041	DC0212	DR0196	KE0042	LD0125	OY0015	TY0018	WW0100
CK0045	DC0213	DR0204	KE0053	LD0126	OY0019	TY0019	WW0102
CK0046	DC0219	DR0206	KE0060	LD0127	OY0021	TY0020	WW0103
CK0047	DC0224	DR0241	KE0062	LD0128	OY0025	TY0021	WW0105
CK0048	DC0225	DR0244	KE0063	LD0129	OY0027	TY0022	WW0107
CK0049	DC0226	DR0251	KE0064	LD0130	OY0033	TY0023	WW0108
CK0051	DC0227	DR0259	KE0070	LD0131	OY0034	TY0028	WW0110
CK0054	DC0228	DR0263	KE0075	LD0132	OY0055	TY0029	WW0112
CK0055	DC0230	DR0265	KE0077	LD0133	OY0057	TY0032	WW0113
CK0056	DC0232	DR0266	KE0078	LD0134	OY0060	TY0033	WW0114
CK0057	DC0237	DR0287	KE0079	LD0135	OY0066	TY0034	WW0115
CK0058	DC0247	DR0292	KE0089	LD0136	OY0073	TY0035	WW0117
CK0059	DC0248	DR0293	KE0090	LD0137	OY0087	TY0036	WW0118
CK0060	DC0249	DR0294	KE0091	LD0138	OY0090	TY0039	WW0121
CK0061	DC0251	DR0298	KE0092	LD0139	OY0093	TY0041	WW0124
CK0062	DC0273	DR0306	KE0093	LD0140	RN0004	TY0054	WW0138
CK0064	DC0274	DR0315	KE0094	LD0141	RN0010	TY0056	WW0141
CK0065	DC0276	DR0316	KE0098	LD0142	RN0016	TY0062	WW0144
CK0066	DC0295	FL0009	KE0099	LD0143	RN0021	TY0064	WW0146
CK0067	DC0300	FL0010	KE0102	LD0144	RN0022	TY0065	WW0147
CK0068	DC0301	FL0036	KE0103	LD0145	RN0030	TY0070	WW0149
CK0069	DC0302	FL0037	KE0104	LD0146	RN0052	TY0079	WW0150
CK0070	DC0313	FL0038	KE0110	LD0147	RN0056	TY0080	WW0152
CK0071	DC0321	FL0040	KE0111	LD0148	RN0061	TY0082	WW0153
CK0072	DC0398	FL0041	KE0112	LD0149	RN0062	TY0083	WW0154
CK0074	DC0399	FL0046	KE0137	LD0150	RN0066	TY0085	WW0155
CK0078	DC0400	FL0049	KE0138	LD0151	RN0068	TY0089	WW0159
CK0082	DC0401	FL0053	KE0139	LD0152	RN0071	TY0090	WW0161
CK0084	DC0402	FL0062	KE0140	LD0153	RN0074	TY0091	WW0162
CK0105	DC0403	FL0064	KE0141	LD0154	RN0076	TY0093	WW0163
CK0116	DC0406	FL0065	KE0146	LD0155	RN0077	TY0094	WW0164
CK0120	DC0408	FL0066	KE0148	LD0156	RN0079	TY0109	WW0171
CK0165	DC0410	FL0068	KE0152	LD0157	RN0080	TY0117	WW0172
CK0167	DC0412	FL0072	KE0157	LD0158	RN0081	TY0118	WX0001
CK0178	DC0417	FL0077	KE0159	LD0159	RN0082	TY0121	WX0002
CK0181	DC0418	FL0079	KE0168	LD0160	RN0084	TY0122	WX0004

CK0190	DC0427	FL0081	KE0180	LD0161	SD0001	TY0124	WX0005
CK0191	DC0431	FL0089	KE0184	LD0162	SD0003	TY0125	WX0006
CK0195	DC0445	FL0093	KE0193	LD0163	SD0007	TY0126	WX0008
CK0197	DC0473	FL0094	KE0197	LD0164	SD0009	TY0128	WX0009
CK0198	DC0484	FL0096	KE0202	LD0165	SD0016	TY0129	WX0011
CK0202	DC0494	FL0102	KE0209	LD0166	SD0018	TY0130	WX0022
CK0211	DC0504	FL0110	KE0230	LD0167	SD0023	TY0131	WX0023
CK0221	DC0507	FL0115	KE0233	LD0168	SD0026	TY0132	WX0024
CK0225	DC0513	FL0126	KE0244	LD0169	SD0027	TY0134	WX0031
CK0226	DC0516	FL0143	KE0246	LD0170	SD0044	TY0135	WX0034
CK0237	DC0522	FL0150	KE0247	LD0171	SD0045	TY0137	WX0035
CK0238	DC0524	FL0151	KE0248	LD0172	SD0049	TY0148	WX0040
CK0239	DC0526	FL0152	KE0249	LD0173	SD0050	TY0149	WX0041
CK0241	DC0529	FL0153	KE0251	LD0174	SD0061	TY0150	WX0043
CK0245	DC0537	FL0158	KE0252	LD0175	SD0062	TY0152	WX0044
CK0247	DC0538	FL0160	KE0277	LD0176	SD0073	TY0156	WX0046
CK0248	DC0594	FL0161	KE0291	LD0177	SD0074	TY0157	WX0050
CK0251	DC0631	FL0162	KE0297	LD0178	SD0075	TY0159	WX0052
CK0252	DC0632	FL0167	KE0298	LD0179	SD0076	TY0162	WX0056
CK0253	DC0641	FL0172	KK0002	LD0180	SD0077	TY0164	WX0061
CK0256	DC0643	FL0175	KK0039	LD0181	SD0078	TY0166	WX0062
CK0264	DC0648	FL0178	KK0081	LD0182	SD0081	TY0168	WX0063
CK0265	DC0657	FL0191	KK0088	LD0183	SD0093	TY0179	WX0064
CK0268	DC0661	FL0192	KK0119	LD0184	SD0115	TY0181	WX0066
CK0281	DC0662	FL0195	KK0125	LD0185	SD0116	TY0182	WX0070
CK0284	DC0670	FL0201	KK0131	LD0186	SD0117	TY0208	WX0073
CK0285	DC0674	FL0202	KK0149	LD0187	SD0118	TY0209	WX0075
CK0286	DC0677	FL0206	KK0151	LD0188	SD0120	TY0214	WX0083
CK0291	DC0679	FL0212	KK0152	LD0189	SD0121	TY0218	WX0085
CK0292	DC0681	FL0213	KK0153	LD0190	SD0124	TY0222	WX0086
CK0293	DC0689	FL0224	KK0154	LD0191	SD0125	TY0226	WX0087
CK0322	DC0693	FL0228	KY0002	LD0192	SD0126	TY0252	WX0091
CK0325	DC0700	FL0229	KY0005	LD0193	SD0127	WD0021	WX0092
CK0326	DC0703	FL0234	KY0011	LD0194	SD0129	WD0022	WX0093
CK0329	DC0704	FL0235	KY0012	LD0195	SD0148	WD0031	WX0094
CK0330	DC0710	FL0236	KY0013	LD0196	SD0149	WD0032	WX0100
CK0333	DC0771	FL0243	KY0014	LD0197	SD0151	WD0033	WX0101
CK0337	DC0782	FL0244	KY0015	LD0198	SD0152	WD0043	WX0104
CK0338	DC0790	FL0249	KY0017	LD0199	SD0153	WD0053	WX0105
CK0339	DC0797	FL0250	KY0020	LD0200	SD0154	WD0055	WX0106
CK0340	DC0800	FL0251	KY0021	LD0201	SD0155	WD0056	WX0108
CK0354	DC0804	FL0252	KY0022	LD0202	SD0156	WD0068	WX0109
CK0356	DC0805	FL0253	KY0023	LD0203	SD0157	WD0074	WX0111
CK0360	DC0808	FL0255	KY0024	LD0204	SD0158	WD0076	WX0112
CK0365	DC0811	FL0257	KY0025	LD0205	SD0159	WD0078	WX0113

CK0366	DC0817	FL0259	KY0028	LD0206	SD0162	WD0080	WX0114
CK0368	DC0829	FL0260	KY0032	LD0207	SD0164	WD0081	WX0115
CK0397	DC0876	FL0264	KY0038	LD0208	SD0169	WD0082	WX0117
CK0398	DC0879	FL0265	KY0047	LD0209	SD0170	WD0083	WX0118
CK0403	DC0882	FL0302	KY0059	LD0210	SD0171	WD0087	WX0124
CK0408	DC0887	FL0308	KY0066	LD0211	SD0176	WD0088	WX0129
CK0422	DC0992	FL0310	KY0133	LD0212	SD0177	WD0089	WX0131
CK0424	DC0994	FL0337	KY0139	LD0213	SD0182	WD0091	WX0132
CK0427	DC1000	FL0338	KY0145	LD0214	SD0183	WD0092	WX0137
CK0451	DC1004	FL0339	KY0147	LD0215	SD0193	WD0093	WX0152
CK0454	DC1005	FL0349	KY0148	LD0216	SD0194	WD0094	WX0153
CK0458	DC1007	GC0002	KY0150	LD0217	SD0195	WD0095	WX0162
CK0459	DC1010	GC0005	KY0190	LD0218	SD0198	WD0096	WX0164
CK0460	DC1012	GC0007	KY0191	LD0219	SD0200	WD0097	WX0175
CK0464	DC1020	GC0012	KY0194	LD0220	SD0201	WD0098	WX0176
CK0471	DC1027	GC0015	KY0207	LD0221	SD0202	WD0099	WX0177
CK0473	DC1028	GC0023	KY0208	LD0222	SD0203	WD0100	WX0179
CK0476	DC1029	GC0025	KY0219	LD0223	SD0204	WD0101	WX0181
CK0478	DC1030	GC0026	KY0228	LD0224	SD0205	WD0102	WX0184
CK0482	DL0001	GC0030	KY0229	LD0225	SD0206	WD0103	WX0185
CK0488	DL0002	GC0031	KY0239	LD0226	SD0215	WD0104	WX0196
CK0491	DL0003	GC0032	KY0241	LD0227	SD0216	WD0105	WX0197
CK0497	DL0004	GC0033	LD0002	LD0228	SD0217	WD0106	WX0200
CK0504	DL0005	GC0034	LD0003	LD0229	SD0222	WD0108	WX0203
CK0507	DL0007	GC0037	LD0005	LD0230	SD0223	WD0109	WX0207

Table B: WPZs Moving from Zone A to Zone B

Zone A to B							
CC0006	CW0040	DC0481	DR0082	FL0248	KK0104	LK0209	SD0071
CC0039	DC0004	DC0517	DR0083	FL0278	KK0105	LK0215	SD0094
CC0129	DC0041	DC0525	DR0084	FL0283	KY0010	LK0232	SD0099
CC0158	DC0046	DC0530	DR0129	FL0330	KY0018	LK0234	SD0103
CC0170	DC0047	DC0576	DR0186	GY0004	KY0040	LS0061	SD0113
CE0032	DC0058	DC0640	DR0187	GY0144	KY0042	LS0071	SD0140
CE0034	DC0062	DC0658	DR0188	GY0152	KY0045	LS0103	SD0145
CE0044	DC0067	DC0676	DR0202	GY0158	KY0046	MH0018	SD0168
CE0082	DC0080	DC0683	DR0220	KE0015	KY0057	MH0020	SD0179
CE0084	DC0085	DC0695	DR0224	KE0019	KY0063	MH0023	SD0382
CE0103	DC0099	DC0754	DR0226	KE0022	KY0068	MH0043	SO0046
CE0109	DC0109	DC0773	DR0231	KE0027	KY0200	MH0056	SO0074
CE0110	DC0119	DC0787	DR0233	KE0031	KY0227	MH0058	TY0025
CE0112	DC0126	DC0803	DR0238	KE0034	KY0230	MH0103	TY0037
CK0151	DC0145	DC0812	DR0240	KE0054	KY0232	MH0156	TY0170
CK0152	DC0146	DC0836	DR0258	KE0059	KY0234	MH0168	TY0244
CK0154	DC0147	DC0862	DR0284	KE0096	LD0058	MH0191	WD0028
CK0158	DC0148	DC0874	DR0286	KE0109	LD0059	MH0196	WD0062
CK0161	DC0155	DC0881	DR0295	KE0150	LH0023	MH0235	WD0072
CK0162	DC0159	DC0893	DR0300	KE0155	LH0024	MH0238	WH0017
CK0173	DC0161	DC0997	DR0308	KE0156	LH0039	MH0241	WH0018
CK0174	DC0171	DC1018	FL0025	KE0158	LH0040	MH0249	WH0024
CK0223	DC0202	DC1033	FL0032	KE0212	LH0048	MH0257	WH0025
CK0231	DC0204	DL0117	FL0047	KE0216	LH0084	MO0002	WH0027
CK0232	DC0207	DL0124	FL0050	KE0219	LH0085	MO0004	WH0045
CK0242	DC0209	DL0133	FL0056	KE0228	LH0114	MO0018	WH0080
CK0259	DC0211	DL0134	FL0075	KE0231	LH0125	MO0020	WH0096
CK0262	DC0220	DL0173	FL0087	KE0281	LH0127	MO0023	WH0105
CK0263	DC0223	DR0016	FL0187	KE0287	LH0128	MO0036	WH0107
CK0269	DC0229	DR0023	FL0188	KK0025	LH0134	MO0060	WH0109
CK0321	DC0269	DR0026	FL0189	KK0029	LH0178	OY0008	WH0110
CK0472	DC0322	DR0042	FL0197	KK0074	LH0185	OY0013	WH0135
CK0481	DC0384	DR0044	FL0203	KK0085	LK0011	OY0098	WW0020
CK0494	DC0404	DR0049	FL0207	KK0086	LK0021	SD0014	WX0029
CK0495	DC0411	DR0050	FL0209	KK0093	LK0111	SD0029	WX0170
CK0510	DC0437	DR0062	FL0221	KK0095	LK0113	SD0040	WX0171
CW0025	DC0467	DR0063	FL0222	KK0096	LK0120	SD0042	WX0174
CW0026	DC0469	DR0066	FL0225	KK0097	LK0172	SD0046	WX0198
CW0037	DC0476	DR0068	FL0247	KK0098	LK0173	SD0058	WX0201

Annex: 14 Pricing concepts

Index

Table 1: Price control descriptions

Table 2: Cost standard description

Table 3: General costing terms

Table 4: Cost base / cost model descriptions for setting cost oriented prices

Table 1: Price control descriptions

<u>Concept</u>	<u>Description</u>
Benchmarking	An approach where the regulated price is set with reference to the prices of comparable competitive markets (which can include prices in other countries).
Retail Minus	An approach where the regulated wholesale price is set by reference to a retail price (or offer) from which a margin is subtracted usually calculated by reference to the downstream costs that an operator purchasing the wholesale product would need to incur to provide an equivalent or similar service.
Margin Squeeze Test or MST	A test designed to ensure that a vertically integrated operator (operating in both the upstream and downstream markets) does not set the price of its downstream service too low or the price of its upstream products too high such that other operators competing in the downstream market using the upstream inputs cannot replicate the downstream prices of the vertically integrated operator.
Cost Orientation	An approach where the regulated price is set to reflect no more than the efficient costs of providing the relevant service including a reasonable rate of return.
Price Cap	An approach that sets the maximum price that can be charged by an operator; a price cap can be expressed as a limit on price increases over a period, for instance by setting a rate of change by reference to the rate of inflation, such as the Consumer Price Index ('CPI'). A price Cap may be expressed by way of a formula, for example, $CPI - X$, where 'X' is determined by reference to the level of efficiency that can reasonably be achieved by the end of the reference period.

Price Floor	An approach that sets the minimum price which the regulated operator must charge and is used to mitigate risks of foreclosure.
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Table 2: Cost standard descriptions

(Pure) Long Run Incremental Cost (LRIC) or Average Avoidable Cost (AAC)	The costs that can be avoided in the long run if a given increment (e.g. fibre broadband) is not produced. LRIC includes the direct fixed and variable costs relevant to the increment of providing the service over the long-run (or often referred to as ' Pure LRIC '). A Pure LRIC approach does not include recovery of joint (or shared) network costs or common corporate costs, from other divisions of the operator's business.
Long Run Average Incremental Cost (LRAIC)	The average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run. The main difference between LRAIC and LRIC, is that the increment that is considered under LRAIC tends to cover a wider range of services compared to the LRIC approach, e.g. LRAIC could consider all voice services while LRIC would focus on a sub-set of voice services such as wholesale call termination. LRAIC also includes an attribution of joint (or shared) network costs but excludes common corporate costs.
Long Run Average Incremental Cost plus an allocation for corporate overhead costs (LRAIC+)	The long run average incremental costs calculated in the same way as LRAIC, with an additional mark-up to allow for the recovery of common corporate costs typically using an equi-proportionate mark-up (EPMU). Hence, LRAIC+ includes all of the average efficiently incurred variable and fixed costs that are directly attributable to the activity concerned over the long-run, plus a mark-up for common corporate costs.

Fully Allocated Cost (FAC) or Average Total Cost (ATC)

All of the costs efficiently incurred by the regulated operator, including sunk costs, which are typically allocated to products on the basis of direct or indirect causality of costs with products. This approach includes all fixed costs, joint (or shared) network costs and common corporate costs. The FAC approach is similar to LRAIC+ to the extent that it attributes common corporate costs between the various services offered by the operator. However, the LRAIC+ and FAC outcomes can differ due to the different efficiency levels that are inherent to both approaches. The concept of LRAIC+ cost is generally applied in the context of an efficient operator building a modern network, whereas the FAC concept is usually applied to an existing operator and so runs the risk of including legacy inefficiencies.

Table 3: General costing terms

Joint Costs	Costs that can be allocated to some but not all services e.g., a voice platform that is used by call transit, call origination, call termination, but not by broadband services or leased lines services.
Shared Network Costs	Costs that can be allocated to all services e.g., the network costs of ducts and trenching are consumed by all fixed line services.
Common Corporate Costs/ Common Costs	Costs that cannot be allocated to services using a specific allocation method. These mainly relate to general overheads which typically include general IT system costs, office accommodation and transport management as well as corporate costs such as finance, legal, HR and senior management. These costs cannot be associated with one single service or a single set of services and so must be allocated to all services.

Table 4: Cost base / cost model descriptions for setting cost oriented prices

Current Cost	An approach whereby asset values are set at the current market value and which can be implemented either based on the operator's accounting system (Current Cost Accounting or CCA) or on a bottom-up (BU) model basis.
Historic Cost/Historic Cost Accounting	An approach that uses the actual costs recorded in the operator's accounting system.

Top Down (TD) Cost Model	<p>An approach relying on the operator's actual network and operational information to derive the relevant costs and to calculate the per unit cost for a service. TD models can be constructed on a HCA or CCA basis. For a TD model based on HCA, the net book values (NBV) of the relevant assets are derived from the operator's fixed asset register (FAR) and depreciated over their remaining useful life of the assets.</p>
Bottom Up (BU) Cost Model	<p>A model that reflects the choices of a hypothetical, forward-looking efficient operator from both a technical and an operational point of view and calculating the level of network costs on the basis of the quantity of equipment and infrastructure that an operator using efficient engineering rules would deploy to support an assumed level of demand.</p>

Annex: 15 Treatment of SPs' Data

- A 15.1 This annex details how ComReg has utilised SPs' data as an input into the algorithm supporting the geographic market assessment as detailed in Section 4.4 of this Decision.
- A 15.2 The network mapping data has been utilised as set out in Section 4.4.6 above and is consistent with the approach used in the 2020 Decision and our 2024 Consultation.
- A 15.3 The approach to the treatment of NBI in the geographic market assessment is outlined in Section 4.4.7 of this Decision. The data used in the Decision is the IA premises dataset for the period ending Q2 2025 and the most recent NACE code data from the Eircode Address Database (ECAD) of Q1 2025.
- A 15.4 Section 2.5.1 above outlines the information sources relied upon in this Decision, including the SIRs issued to SPs which collected the data used in this Decision. ComReg issued detailed SIRs to SPs covering the periods 2020 to 2024, which included lists of LL and DF sales and purchases. SPs were also obliged to provide detailed maps of their networks and lists of Dark Fibre connected premises for Q3 2022 and again for H2 2024.

Data used in the 2024 Consultation

- A 15.5 ComReg received queries as to how the total volume of CPs (where the individual number of each individual SP were added together), compared to that of the smaller volume of unique actual locations i.e. taking into account the fact that many locations are connected by multiple SPs. As an example, say there were 1,000 physical locations in total and 100 of these were connected by 4 SPs, 200 by 3 SPs, 100 by 2 SPs and the remainder by 1 SP; this means the SPs' total CP count for all SPs' CPs would be $(100 \times 4) + (200 \times 3) + (100 \times 2) + (500 \times 1) = 2,100$. For clarity, ComReg further explains here how SPs' data was treated in the 2024 Consultation, in addition to detailing the treatment of data in this Decision.
- A 15.6 The CP data used in the algorithm in the 2024 Consultation came from a number of sources; the demand-side data; Q3 2022 DF data; and the H2 2023 LL data; and supply-side data in the form of SPs' network maps.

- A 15.7 The Q3 2022 DF data was requested in route form, each route with 2 ends referred to as A-ends and B-ends (noting such routes could contain multiple fibres). As the DF data set consisted of 2,847 double-ended circuits or routes this meant a possible CP list of double this number, 5,694. There were significant gaps mostly contained in the B-end geocoding information (Eircodes or latitude/longitudes) provided by SPs, and this required manual intervention to accurately resolve locations using addresses and end-user customer names (where provided), or a combination of both. The overall volume of locations initially lacking specific Eircode or latitude/longitudes information was 1,596, or 28% of the total population.
- A 15.8 Such information was further investigated using maps and leveraging the available address information, which was partial in many instances. Other sources of geographic location data previously available to ComReg were leveraged, such as mobile high site coordinates, SPs' PoP locations and various data centres etc. Additionally, unique customer site locations which could be resolved using a combination of internet and mapping searches, such as retail outlets etc. were also used. In all, 539 locations that had missing geolocation information initially were resolved in this manner. This manual exercise took considerable time and effort but yielded results for which ComReg had a reasonable to high degree of confidence on their accuracy. The overall result was that a DF data set of 4,637 CPs was geocoded, representing over 81% of the candidate locations, the remaining 19% were discarded.
- A 15.9 The H2 2023 LL data used in required cleaning in the same manner as undertaken previously in the course our market analysis leading to the 2020 Decision. Wholesale interconnection circuits were removed as these are used for handover and are not considered LLs per se. All offnet/resold lines were also removed in accordance with the MGA whereby lines are attributed to the original provider of the LL to facilitate their appropriate and accurate measurement. This same reasoning was also applied to DF lines, and additionally to LLs which appeared in the DF list. These were also removed from the LL list where they could be attributed to a DF provider. Additionally, lines provided by SPs to entities which are wholly owned by them and are thereby non-contestable sales (e.g. to a subsidiary MNO or other similar enterprise) were also excluded. These are distinct from lines sold by SPs with both a presence in the contestable wholesale and associated retail markets, in which case such LLs are included as they are considered wholesale self-supply. This was consistent with the approach adopted previously by ComReg and in line with various guidelines.

- A 15.10 Ultimately, this allowed volumes for LL categories such as TDM, Ethernet and xWDM and analogue circuits to be calculated and correctly attributed to the originating on-net SP. Copper and wireless lines were then excluded from the data to create a fibre CP data set which is the basis of the data set which was inputted into the algorithm, as the data under consideration was limited to fibre CPs. It should be noted that the volume of high bandwidth fibre TI based TDM circuits were found to be trivial, and these were included in the fibre CP count which was incorporated into the algorithm.
- A 15.11 For the H2 2023 on-net LL location data points used in the 2024 Consultation, less than 150 fibre LL CPs were not capable of being geocoded (due to the absence of information) and so were excluded from the analysis, leaving a total of 22,695 records. When combined with the 4,637 DF CPs records, this gave a total of 27,322 records. These were then geographically deduplicated on a per operator basis by comparing the longitudes and latitudes of each SP's CP data set individually. This produced a total of 14,811 CP records for the 2024 Consultation. It should be noted that many premises within this data set are connected by more than one SP, hence this does not mean that this list consists of 14,811 unique premises. The number of unique premises or locations was 12,427, meaning that 2,384 locations were calculated as being connected by 2 or more operators.

Data used in this Decision

- A 15.12 The final data sets used in the algorithm for defining the geographic markets in this Decision and the subsequent SMP analysis is for the period up to and including H2 2024. In addition to being the most recent data, it contains the most detailed and accurate geolocation data for fibre connected premises, both for LLs and DF (of an improved quality to that used in the 2024 Consultation). This was because the requirement for SPs to provide geolocation data was made mandatory in the SIRs requesting 2024 data. Additionally, the format in which DF data was collected was aligned with the format which had been used for LL data collection and, in this respect, rather than using route data, it was based on CPs. This improved the quality of the information.

- A 15.13 There was one important change adopted in the treatment of location data used in this Decision in comparison to the approach that was used in the 2024 Consultation. This was in the approach taken in the method for the calculation of duplicate CP locations for individual operators. The deduplication process used in this Decision is more sophisticated in that, rather than mathematically comparing latitude and longitudes of each SP's CPs data, locations were compared on the basis of the footprint of the connected buildings or premises. Using Tailte Éireann's Prime Dataset, ComReg gave every unique building/polygon in the country a 'building identification label'⁵⁸⁷. This is made up using a code for the County the building is located in, followed by a string of numbers - for example the building identification label for a building in Dublin could be 'D/123456'.
- A 15.14 Every active premise was therefore, assigned a building identification label using a spatial join, where the point location of the premise was inside the polygon of a building. A new identifier was then created using the SP name plus the building identification label. This would mean that if SP AA's CP was inside the building in the above example, then the new identifier would be 'AA/D/123456'. Where two or more premises had the same identifier (i.e. two or more connections of the same SP were located within the same building), then these were considered to be duplicate records and only one of these connections would be used in the analysis.
- A 15.15 Where a premises was not located with the geometry of the building dataset, (e.g. the point of handover was at a street cabinet, high-site or chamber), the latitude and longitude of the premises was used instead. Hence, if 2 locations with the same operator were at the same latitude and longitude, only one of these premises would contribute to the total count of a SP's total unique CPs.
- A 15.16 The reason for adopting this new approach is that it is more accurate than that used previously and therefore, more correctly reflects the volume of connected premises of each SP.
- A 15.17 In July 2025 ComReg provided each SP with ComReg's cleansed version of its data applying the new methodology above, with the duplicate locations highlighted. This was to allow SPs to thoroughly check and verify their CP data sets and revert with any anomalies. Only one SP responded [X ██████████ ██████████ X] and provided corrected data for 5 of its CPs. There were no corrections or comments offered by the other SPs.

⁵⁸⁷ This data set can be purchased from Táihte Éireann and is available for free to public bodies.

- A 15.18 For H2 2024, SPs reported 23,309 fibre LLs and 7,121 DF CPs, a total of 30,430 CPs, now referred to as the 2024 data. In some cases, we have included H1 2024 data in this Decision to show trends where we considered this was suitable and informative. It should be noted that the higher volume of DF CPs reported for H2 2024 compared to Q3 2022 appears to be due to more accurate data reporting by SPs of DF sales in the latter period.
- A 15.19 Furthermore, many SPs legitimately repeated reporting of the same locations' multiple times in their H2 2024 data, due to many locations being junctions of interconnected fibre rings, or locations of high concentrations of supply, such as data centres and SP PoPs etc. The volume of unique CP locations within the 7,121 DF data set was 1,991. This is 207 less than the 2,198 unique DF CPs total for the Q3 2022 data, which was calculated using the original method for deduplicating locations (the mathematical comparison of longitudes and latitudes).
- A 15.20 As outlined above, H2 2024 LL and DF data provided by SPs contained 30,430 lines of potential in-scope CP data. Of these, a trivial volume of 49 lines (0.16%) did not contain precise Geo location information, (neither Eircode or lat/long), or were located outside the 26 counties. Therefore, they were excluded from the analysis. The remaining 30,381 in-scope CPs contained 16,095 duplicate locations which were calculated using the new approach set out above. This compares to 14,985 using the mathematical approach used in the 2024 Consultation, a difference of 1,110. The new approach using the Tailte Éireann's data base ultimately results in the identification of 14,276 CPs to which SP were connected. This also explains the overall reduction in the CP count between 2023 and 2024 (14,811 versus 14,276).
- A 15.21 This remaining data set of 14,276 of all SPs CP locations added together was used in the algorithm to calculate the geographic market boundaries, and subsequently, to calculate market shares for the geographic markets and SMP assessments. It should be noted that 2,452 of these CP locations were locations where multiple SP were connected, leaving 11,822 unique WDC locations. This is because, as explained in the example in paragraph A 15.5 above, the higher figure is calculated on a per operator basis and therefore, is higher than the total number of actual premises.

Annex: 16 End-user interviews summary

A 1.1 In March 2025 ComReg conducted the 2025 Consumer Survey, which involved issuing a survey to a number of both private and public sector customers of retail leased line services, to ascertain views across a range of issues. In this respect, ComReg contacted 37 users of LLs by post on 13 March 2025. 16 of these users responded and ultimately agreed to be interviewed between the 25th of March and the 13th of May. The questionnaire below was shared with end-users in advance of the interview. While 7 end-users filled in the questionnaire the remainder of end-users used it as a guide for topics to cover in interviews rather than an exhaustive list of questions. The interviews were conducted in a general way focusing on key issues with not all questions applying to each end-user. Interviews were conducted with all 16 end-users and they were provided with a meeting note by email summarising the interview.

2025 Customer Survey questionnaire

As outlined in our letter dated 13 March 2025, ComReg is currently conducting a market review of the wholesale dedicated capacity ('WDC') market, also known as the 'leased line' market. In this context, ComReg wishes to obtain the views of end users, with regards to their connectivity requirements, usage and decision making in procuring leased line services to assist with our understanding of how the market is working.

To that end, we have set out the following questions to guide us through the meeting/call, some of which may be more relevant than others to your organisation.

Name of Organisation: _____

Services used

1. How many business sites/different locations does your organisation have?
2. What is the nature of these sites? (e.g. Head office, retail site, branches etc.)
3. Who is your organisation's current supplier(s) of data connectivity services?

4. What are the main requirements (such as speed, security, reliability, symmetry etc.) of your organisation's data connectivity services? Do these differ across sites?
5. What are the main types of connectivity technology your organisation uses? (including various media, e.g. wireless, copper, managed services such and leased lines dark fibre etc.)
6. Please explain the reasons for the technologies mentioned in Question 5? For example, why do you choose one technology over the others? If you use combined technologies, are they used for different purposes?
7. What back-up resilience arrangements, if any, does your organisation have in place for data connectivity? E.g. second LL, broadband, wireless leased line, 4G/5G etc.?
8. Please provide the number of premises by type of connectivity technology in the table below as appropriate.

Connectivity Technology	Number of Premises
Broadband only	
Wired Leased lines only	
Wireless Leased Lines only	
Both Wired Leased line and Broadband	
Both Wireless Leased lines and Broadband	
Both Wired Leased line and wireless Leased Line	
Wired Leased Line, Wireless Leased lines and Broadband	
Other, please specify	
Total number of premises	

Switching of technologies

9. How does your organisation view the interchangeability between different technologies for your connectivity needs? For example, do you consider broadband or other technologies a good substitute for wired leased lines based on your connectivity requirements? Please explain your reasons.
10. How has your organisation's connectivity requirements evolved over the last 5 years? Has your organisation changed connectivity technologies? Please explain in detail in what way and why.
11. Does your organisation plan to change to a different technology(ies) in the next 5 years? If so, please explain in detail.
12. If you use wired leased lines and if the price of all wired leased lines increases by 10%, would your organisation
 - a. Switch to lower bandwidth wired leased lines?
 - b. Switch to wireless leased lines?
 - c. Switch to broadband?
 - d. No change?
 - e. Other (please specify)In answering this question, please take into account factors such as switching costs, any potential disruption etc.

Selecting Suppliers

13. How did your organisation choose the data connectivity suppliers? Is it by tender, preferred supplier, dialogue/negotiation etc.?
14. If your organisation uses a tendering process, how does this process work?
15. If your organisation uses a tendering process, which were the top 3 suppliers in the most recent evaluation process?
16. What are the main criteria by which your organisation chooses or scores suppliers? E.g., price, reliability, geographic coverage, single supplier requirement, additional or bundled value-add services? International connectivity to your foreign sites? etc. Please rank them in descending order of importance.
17. Does your organisation purchase leased lines as part of a bundle? If your answer is yes, which service(s) do you bundle (or add-on) to your leased line service?
18. Does your organisation split your leased line requirements between different suppliers (for access/connectivity services) e.g. use different suppliers for different locations or technologies? Why?

19. What major technology changes/developments does your organisation anticipate happening over the next 2 to 3 years in relation to leased lines market specifically?

View on Suppliers & Connectivity Development

20. Any other observations on the overall connectivity market, or specifically in relation to leased lines that may be useful to our market review?

Summary of Key Findings

A 1.2 In response to Question 4, regarding the main requirements of their organisation's data connectivity services, security was mentioned most often, (11), followed by reliability (9) with 6 mentioning speed and 4 end-users mentioned resilience.

A 1.3 In response to Questions 5 and 8, regarding the main types of connectivity technology their organisation uses: the following summaries the overall findings :

- all end-users used fibre LLs
- 3 end-users used dark fibre
- 3 end-users used TDM technology however, two of those were actively transitioning towards fibre LLs.
- 9 of the 16 end-users use wireless to some extent, primarily as back-up.

A 1.4 In response to Question 7, regarding what back-up resilience arrangements, if any, did the organisations have in place:

End-users indicated wireless is used largely as back-up to a wired leased line. Just two end-users use wireless as the only LL connection at a small number of sites and both of those end-users indicated wireless is used only where fibre is not available. 8 of the 9 end-users that use wireless use it as back-up, with the remaining single end-user using both wired and wireless LLs at the same site with load shared across both connections.

Broadband is used to some extent by 10 end-users of the 16 end-users, with 5 of these 10 end-users using it for much lower bandwidth use cases that do not require a LL, with the other 5 end-users using it as backup to a wired LL.

- A 1.5 In response to Questions 9, regarding the interchangeability between different technologies for their connectivity needs, 13 of 15 end-users did not consider broadband to be a substitute for a LL but use it instead as a backup connection to LLs or for lower bandwidth use cases, with the remaining 2 considering that broadband may be a substitute only at lower bandwidths. 14 of these 15 end-users expressed a preference for wired LLs. 4 of the 5 end-users that use broadband as a primary connection do not consider broadband to be a substitute for LLs.
- A 1.6 In response to Question 12, regarding the demand side response to a hypothetical SSNIP of a wired LL in the range of 10%, end-users expressed a clear preference for wired fibre LL over other solutions. 14 end-users answered Question 12, and of those 11 would not switch technologies, while three said they would consider alternatives but would not compromise on reliability or SLAs.
- A 1.7 In response to Question 18, relating to whether their organisations split their leased line requirements between different suppliers, 3 end-users had an explicit preference for a single supplier who could supply all of their sites. These included end-users with geographically widely dispersed sites. A small number of end-users with very high requirements and multiple wired LLs to the same site expressed a preference for both route and carrier diversity to improve resilience.

Annex: 17

List of Acronyms

Acronym	Explanation
3CT	Three Criteria Test
AAC	Average Avoidable Cost
AC	Alternating Current
AFI	Additional Financial Information
AN	Alternative Network
ARWS	Additional Required Wholesale Products
AS	Access Seeker
AS	Accounting Separation
ATC	Average Total Cost
AVC	Average Variable Cost
BAFO	Best And Final Offer
BEREC	Body of Economic Regulators for Electronic Communications
BU-LRAIC+	Bottom-up Long Run Average Incremental costs plus a contribution to Common Costs
CAT	Competition Appeals Tribunal
CATI	Computer Aided Telephone Interview
CBP	Countervailing Buying Power
CCA	Current Cost Accounting
CCPC	Competition and Consumer Protection Commission
CEI	Civil Engineering Infrastructure
CoS	Class of Service
CP	Connected Premises

CSH	Customer sited Handover
CSO	Central Statistics Office
DC	Direct Current
DCCS	Department of Culture, Communications and Sport
DF	Dark Fibre
DI	Decision Instrument
EC	European Commission
ECS	Electronic Communications Service
EECC	European Electronic Communications Code
EF	Expedited Forwarding
EFM	Ethernet First Mile
ENH	Edge Node Handover
EoI	Equivalence of Inputs
EoO	Equivalence of Outputs
EU	European Union
EUL	End User Link
FTTC	Fibre to the Cabinet
FTTH	Fibre to the Home
FTTx	Fibre to the x
HB	High Bandwidth
HCA	Historic Cost Accounts
HM	Hypothetical Monopolist
HMT	Hypothetical Monopolist Test
HQA	High Quality Access

HQA Provider	Operators offering HQA services
IA	Intervention Area (relating to NBP)
IBH	In Building Handover
ICT	Information and Technology
IP	Internet Protocol
ISH	In-Span Handover
KPI	Key Performance Indicator
LB	Low Bandwidth
LL	Leased Line
LLRO	Leased Line Reference Offer
LLU	Local Loop Unbundling
LRAIC	Long Run Average Incremental Cost
LRAIC plus	Long Run Average Incremental Cost plus
LRIC	Long Run Incremental Cost
M2M	Machine to Machine
MAN	Metropolitan Area Network
MGA	Modified Greenfield Approach
MI	Modern Interface
MNO	Mobile Network Operator
MRWP	Minimum Required Wholesale Products
MST	Margin Squeeze Test
NBP	National Broadband Plan
NG	Next Generation
NGA	Next Generation Access

NGN	Next Generation Network
NO	Network Operator
NRA	National Regulatory Authority
NTU	Network Termination Unit
OECD	Organisation for Economic Co-operation and Development
ODN	Optical Distribution Network
OO	Other Operator
OPWS	Other Permitted Wholesale Products
OSS	Operational Support Systems
ONT	Optical Network Terminal
P2P	Point to Point
PE	Provider Edge
PoA	Price on Application
PoH	Point of Handover
PoP	Point of Presence
PSTN	Public Switched Telephone Network
PtP	Point to Point
QKDR	ComReg Quarterly Key Data Report
QQ	Qualitative Questionnaire
RAP	Regulated Access Product
RCBS	Retail Business Connectivity Services
RGM	Regulatory Governance Model
RIA	Regulatory Impact Assessment
RIO	Reference Interconnect Offer

SA	Small Area
SaaS	Software as a Service
SED	Special Engineering Difficulty
SDH	Synchronous Digital Hierarchy
SDN	Software Defined Networking
SEO	Similarly Efficient Operator
SIR	Statutory Information Request
SLA	Service Level Agreement
SME	Small to Medium Enterprise
SMP	Significant Market Power
SoC	Statement of Compliance
SP	Service Provider
SSNIP	Small but Significant Non-transitory Increase in Price
TD	Top Down
TDM	Time Domain Multiplex
TI	Traditional Interface
TII	Transport Infrastructure Ireland
WAN	Wide Area Network
WCA	Wholesale Central Access
WDC	Wholesale Dedicated Capacity
WEIL	Wholesale Ethernet Interconnection Link
WES	Wholesale Ethernet Service
Wholesale LL	Wholesale Leased Line (generic term for wholesale service)
WHQA	Wholesale High Quality Access

WLA	Wholesale Local Access
WPZ	Workplace Zone
WSEA	Wholesale Symmetrical Ethernet Access
WUP	Wholesale Uncontended Product
xWDM	Wavelength Division Multiplexed (coarse or dense)
ZONE A	Geographic Area relating to Zone A MI WDC markets
ZONE B	Geographic Area relating to Zone B MI WDC markets