



Commission for
Communications Regulation

The 700 MHz radio frequency band

**Results of the Cost Benefit Analysis (CBA) of
a change in use of the 700 MHz radio
frequency band in Ireland**

Information Notice

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1 The 700 MHz band

1.1 Introduction

- 1.1 In 2014, the Commission for Communications Regulation (“ComReg”) began considering the future of the 694–790 MHz band (“700 MHz band”) ¹ in Ireland, pursuant to its statutory function to manage the radio frequency spectrum.
- 1.2 The 700 MHz band is currently used for Digital Terrestrial Television (“DTT”) ² and Programme Making and Special Events (“PMSE”). However it could be used for other purposes including mobile wireless broadband services. In recent years, consumer demand for mobile data services has increased substantially and continues to increase. The demand is currently being serviced by spectrum in other bands and there is now an increasing international impetus within Europe towards making the 700 MHz band available for this same purpose; for example, Germany recently completed its competitive award for the repurposed 700 MHz band while France intends to do so later this year.
- 1.3 In August 2014, ComReg commissioned Frontier Economics Ltd. (“Frontier”) to carry out a cost benefit analysis (“CBA”) on a repurposing of the 700 MHz band. Frontier engaged with a number of stakeholders in preparing its CBA, namely DCENR, RTÉ, 2RN, the MNOs, and PMSE service providers. ComReg wishes to thank those stakeholders for their valued co-operation and input.
- 1.4 The CBA is now complete and it is published alongside this document as Document 15/62a and 15/62b.

1.2 Results of the CBA

- 1.5 The CBA central estimate is that if the 700 MHz band was repurposed in Ireland in 2018 then this would result in a total benefit of **€103.5m** predicated on total upfront costs of **€12.4m**, yielding a net benefit of **€91m**.
- 1.6 The estimated total benefit would be in the form of a direct benefit to MNOs, resulting from the network cost savings they could achieve if they could, following a competitive award process, use the 700 MHz band to improve the performance of their networks, ultimately to the benefit of consumers. The CBA also indicates that other, wider economic and societal benefits would likely result from the repurposing, including a further 25 MHz of radio spectrum

¹ See ComReg Documents 14/13 and 14/85.

² DTT services are provided by RTÉ via the *Saorview* service operated by 2RN.

available in the band.³ Indeed these potential wider benefits, though not quantified in the CBA, may exceed the estimated direct benefits.

- 1.7 Of the estimated total costs, these would mainly be incurred by incumbent providers of DTT and PMSE services as a result of them having to replace some equipment earlier than would otherwise be necessary. A smaller amount of the total costs would be incurred by some end-users as a result of them having to replace aerials or re-tune set-top boxes. Finally, some of the total cost relates to the cost of running a public information campaign.⁴



Figure 1 Estimated costs and benefits of repurposing the 700 MHz band in 2018⁵

1.3 Next Steps

- 1.8 There is an increasing impetus internationally towards repurposing the 700 MHz band for mobile wireless broadband (see section 1.4) while the CBA central estimate is a net benefit of **€91m** resulting from such a repurposing in Ireland in 2018. ComReg is thus of the preliminary view that the 700 MHz band can and should be repurposed as this would represent its most efficient use.

³ These wider economic and societal benefits include: use of the 700 MHz centre gap (which consists of 25 MHz of spectrum); consumer welfare benefits in the form of improved and/or lower cost services and increased demand for mobile services stimulated by greater network capacity; and the impact that increased mobile connectivity can have on economic performance.

⁴ Frontier also assessed the social or cultural costs which could result from a repurposing of the 700 MHz band and conclude that these are likely to be negligible as a 700 MHz repurposing is unlikely to materially impact the take up by users of the DTT service.

⁵ For further details please see Table 10 of the Frontier report ComReg Document 15/62a

- 1.9 However, ComReg is also fully aware that such a repurposing would require that the incumbent DTT and PMSE service providers be migrated from the 700 MHz band. There are a number of matters to consider as regards such a migration, including its timing, its co-ordination with neighbouring countries, and the costs likely to be incurred by the incumbents, and in particular by 2RN which are currently not provided for.
- 1.10 To develop Ireland's consideration of these important matters, ComReg will continue to engage with all relevant stakeholders, including DCENR and the incumbents. ComReg will also continue to work on finalising its revised UHF plan to migrate DTT below the 700 MHz band which will also involve co-ordination with neighbouring countries.

1.4 International developments

- 1.11 At WRC 2012⁶ a decision was taken to allocate the 700 MHz band to Mobile on a co-primary basis, alongside its existing allocation to DTT. This decision will take effect when WRC 2015 ends in late November 2015.
- 1.12 In Europe, CEPT⁷ and the European Commission (EC) and its advisory groups⁸ are preparing for mobile wireless broadband services in the 700 MHz band. Harmonised technical conditions have been agreed by CEPT⁹ and an EC Decision on same is expected in 2016. These technical conditions are intended to maximise harmonisation between Europe and the Asia-Pacific region and they have enabled a number of Member States to advance their plans towards releasing new spectrum rights of use in the 700 MHz band (see below).
- 1.13 Both EU advisory groups support a deadline of 2020 (+/- 2 years) by which to make the 700 MHz band available for mobile broadband across the EU. To achieve this deadline, the RSPG recommends that cross-border spectrum co-ordination agreements be finalised by the end of 2017. The EC is also expected to make specific proposals which may include setting a deadline by which all EU Member States shall make the 700 MHz band available for mobile broadband¹⁰.

⁶ World Radiocommunication Conference 2012

⁷ The European Conference of Postal and Telecommunications Administrations ('CEPT').

⁸ The Radio Spectrum Policy Group (RSPG) issued an [opinion on the UHF band](#), and the High Level Group ("HLG") on the UHF band produced the [Lamy Report](#)

⁹ [ECC Decision 15\(01\)](#), entered into force on 6 March 2015,

¹⁰ See section 3.1 of the [EC's Digital Single Market strategy for Europe](#)

- 1.14 EU Member States are also making preparations. The WEDDIP group¹¹, of which Ireland is a member, is working to facilitate discussions among its members relating to co-ordinating the migration of DTT from the 700 MHz band; it aims to complete its work by April 2016. The UK, France, Finland, Sweden and Germany¹² have already gone further. Germany completed its auction for the 700 MHz band earlier this month; France aims to issue a 700 MHz call for applications in July 2015 and conduct an auction in Q4 2015; Finland and Sweden have set respective end-dates of 1 January 2017 and 1 April 2017 for DTT and PMSE in the 700 MHz band; and the UK is moving to make the 700 MHz band available for mobile use by the start of 2022 and earlier if possible.¹³
- 1.15 In Ireland, DCENR and ComReg have begun considering the future of the 700 MHz band.¹⁴ This includes ComReg working, in collaboration with the BAI and 2RN, on a revised UHF band plan to migrate DTT below the 700 MHz band. ComReg is also engaging in co-ordination discussions with neighbouring administrations, particularly Ofcom and the WEDDIP group. The UHF band plan will be revised having regard to the requirements for Irish DTT services specified in the Broadcasting Act 2009, so that when the 700 MHz band is repurposed in Ireland it will be done in such manner that the UHF plan can accommodate all existing DTT services and provide for any expansion of DTT.

1.5 Key Considerations

- 1.16 To realise the benefits of the 700 MHz band, and facilitate a competitive award process, it is necessary that incumbents be migrated and, as the report points out this will inevitably result in some additional upfront costs for them. The early consideration of the mechanism by which these cost issues can be addressed and the detailing of the actual costs with the affected parties would facilitate a timely 700 MHz band repurposing to the benefit of the economy overall.
- 1.17 Separately ComReg is aware that a number of the responses to ComReg Consultation Document 14/01 expressed the view that given its attractive

¹¹ Western European Digital Dividend implementation Platform (WEDDIP): a multi-lateral group of spectrum planners from Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom.

¹² Information is available on the respective websites of BNetZa (Germany), ARCEP (France), Ofcom (UK), PTS (Sweden) and FICORA (Finland)

¹³ For example, the UK Budget 2015 will allocate up to STG£600m to support the delivery of the change of use of 700 MHz band. As indicated [DCMS Digital infrastructure statement of 18 March 2015](#), these “funds will support the infrastructure costs of clearing the spectrum frequency, including support to consumers where appropriate, and retuning broadcast transmitters to enable broadcasters to move into a lower frequency. This will free up 700MHz spectrum for 4G mobile communications use through an auction next Parliament.”

¹⁴ See the DCENR’s [spectrum policy consultation](#) and its [report on the future of UHF spectrum for broadcasting in Ireland](#).

propagation characteristics and its advancement in terms of international harmonisation, the 700 MHz band would be a preferable focus of the next multi-band spectrum assignment process. This is likely to be a key consideration for ComReg in assessing the spectrum bands for inclusion and the timing of that award process.