



# Spectrum pricing for terrestrial broadcasting: Consultation on implementation

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EE Response

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## Introduction and summary

Everything Everywhere (EE), welcomes the opportunity to comment on Ofcom's consultation: *Spectrum pricing for terrestrial broadcasters: Consultation on implementation*<sup>1</sup> ("the Consultation") and considers that it is important to ensure the efficient use of spectrum in the wider economy and that appropriate incentives are provided to all spectrum users.

The Consultation follows on from the proposals set out in Ofcom's UHF Strategy consultation<sup>2</sup> to support an international process for the harmonised release of 700 MHz for mobile broadband, while ensuring re-planning of the Digital Terrestrial Television (DTT) platform to access 600 MHz (where 700 MHz is made available for mobile broadband). EE provided a detailed response in June 2012<sup>3</sup> to that consultation. This response should therefore be read in conjunction with EE's June 2012 response.

EE does not consider there to be an economic rationale for applying Administered Incentive Pricing (AIP) to tradable, long duration spectrum licences, since trading will promote efficient use. This is especially the case for private sector users operating to maximise profits who will seek opportunities to (make gains from) spectrum trades, which will promote the release of spectrum to higher valued use.

Ofcom has previously acknowledged that applying AIP to tradable spectrum licences runs the risk of undermining incentives for spectrum trading in secondary markets which could distort the efficient long run allocation and use of scarce spectrum.<sup>4</sup>

Given that Ofcom's policy is to apply AIP, EE argues that this should be done consistently across all communications sectors. It certainly provides the wrong incentives to delay the implementation of AIP for broadcasting.

It is important that the overall regime provides appropriate incentives to use what is currently broadcast spectrum in an efficient way and to enable and incentivise release of spectrum where that would create greater benefits to consumers and citizens as a whole.

Ofcom claims that AIP would not achieve its core aim of securing optimal use of DTT spectrum due to a "unique combination of circumstances".<sup>5</sup> Ofcom therefore proposes spectrum charges to recover only Ofcom's administrative costs until 2020, after which AIP would be phased in over a 5 year period.

EE does not consider that the circumstances identified by Ofcom to be either unique or to warrant delay in applying AIP beyond 2015. While EE disagrees in principle with applying AIP to tradable spectrum licences, we provide detailed comments on the basis that one set of regulatory principles must be applied consistently to all sectors.

<sup>1</sup> Ofcom, *Spectrum pricing for terrestrial broadcasting: Consultation on Implementation*, 13 March 2013

<sup>2</sup> Ofcom, *Securing long term benefits from scarce low frequency spectrum*, 29 March 2012

<sup>3</sup> EE response to Ofcom's consultation, June 2012

<sup>4</sup> Ofcom, *SRSP: The revised Framework for Spectrum Pricing: Our policy and practice of setting AIP spectrum fees*: Statement 17 December 2010, pages 71-76

<sup>5</sup> Ofcom, *ibid*, paragraph 1.20

EE therefore does not support Ofcom's proposed delay to introducing AIP to broadcasting beyond 2015 and considers that this proposal is contrary to both Ofcom's statutory duties and economic efficiency.

## Significant spectrum efficiency gains possible for DTT

The consultation document presents "an indicative assessment of the potential efficiency gains" that national DTT users of spectrum might be able to receive. This is exhibited in Figures 4.1 and 4.2 of the consultation document and suggests that both PSBs and commercial multiplex operators would be able to achieve an efficiency gain of:

- 330-660% by switching to DVB-T2 operation with the variance depending on whether DVB-T2 is coupled with MPEG4 or HEVC compression technology; and
- 600% by switching to Single Frequency Networks ('SFNs').

Such efficiency gains are quite astonishing. Given Ofcom's statutory objective to secure "the optimal use for wireless telegraphy of the electromagnetic spectrum", which typically is interpreted by Ofcom to promote the efficient use of spectrum,<sup>6</sup> we think it is imperative on Ofcom to focus on how it can facilitate or drive the mux operators to achieve these efficiencies.

There will be a considerable amount of effort put into the consideration of a significant re-organisation of the DTT muxes in order to release 700 MHz for mobile over the coming years. This has already begun with Ofcom's consultation on the Future of the UHF bands last year, the resultant UHF strategy statement and the current consultation on Future use of the 700 MHz band and how to implement Ofcom's UHF strategy. Given Ofcom's statutory objective and the very significant efficiency gains that could be achieved from mux operations, we cannot see how the work to prepare and clear 700 MHz can go ahead without also actively pushing the transition to DVB-T2 and better compression and ultimately, the adoption of Single Frequency Networks. Ofcom's 'if' and 'when' attitude to DVB-T2 must be replaced by a proactive 'why not' stance, and equally so for SFNs.

Naturally a small proportion of viewers may need to upgrade their antennas if the DTT plan is re-organised,<sup>7</sup> estimated to be approximately 0.1% for PSB services. Whilst a larger proportion of households may need to upgrade their antenna to continue watching services from commercial muxes, it seems reasonable to expect that DTT viewers have to undertake a minimum effort to receive a free-to-air multi-channel platform and that this may need to be

<sup>6</sup> 'Efficient' is an economic term which means the use of spectrum maximises the total economic welfare that can be derived from its use, where welfare is consumer (and producer) surplus, i.e. value but potentially much more value than the amount paid to purchase a service.

<sup>7</sup> Ofcom estimates that 0.1-0.3% of households would need to upgrade their aerial with initial results of an audit suggesting it is towards the lower end of the range. Ofcom, "Future use of the 700 MHz band", call for input published 24 April 2013, para 5.8

upgraded from time to time, when satellite and cable multi-channel services are subscription based, even for non-premium content. There may also be a proportion of viewers, possibly 20%, who have to upgrade their TV receiving equipment to receive DVB-T2<sup>8</sup> but with the very significant spectrum efficiency gains at stake, it is plausible that the costs of facilitating a transition to DVB-T2 as well as SFNs would be far outweighed by the benefits.

However, if the suggestion that DTT viewers may have to pay to upgrade their aerial or reception equipment is unpalatable it can be considered whether public funding should be ploughed in to improve DVB-T2 take up and aerial improvement. That is a distributional question, which does not detract from Ofcom's statutory duty to promote a very significant efficiency gain in the use of broadcasting spectrum.

## A consistent application of AIP across sectors

Given that Ofcom's policy is to apply AIP, EE argues that this should be done consistently across all communications sectors. This section explains why EE disagrees with Ofcom's claim that broadcasting is subject to a unique set of factors that warrant a delay in implementing AIP. Specifically EE addresses the following claims for delaying the introduction of AIP:

- Change of user vs. change of use
- Managed migration
- International agreements
- Public service broadcasting
- DTT's 'unique circumstances' will remain

### Change of user vs. change of use

There are two principal ways to improve an inefficient use of spectrum: one is to change the user of the spectrum, the other is to change the use. The first is relatively straightforward and has indeed occurred for several of the muxes: for example mux A was previously owned by S4C but is now owned by ITV plc and muxes C and D were previously held by National Grid Wireless but, following the merger between National Grid Wireless and Arqiva, are now held by Arqiva. Broadcasting slots on individual muxes can and have also changed hands. The second way to remedy inefficient use, to change the use, as for example was the case with 800 MHz which changed from DTT use to mobile use following Digital Switchover, is more difficult to implement and typically requires international coordination and agreement. Ofcom acknowledges these two alternative routes to improved efficiency in para. 3.22 when it explains how the AIP methodology considers both the opportunity cost in 'own use' as well as the opportunity costs in 'alternative use'.

<sup>8</sup> With equipment replacement cycles becoming shorter, Ofcom cites industry forecasts that suggest by 2018, 80% of primary sets relying on DTT will be able to receive DVB-T2/MPEG4. Ofcom, "Future use of the 700 MHz band", call for input published 24 April 2013, para 5.20

Ofcom's notion of 'a unique set of circumstances' warranting the delay in the introduction of AIP seem to refer to change of use only, i.e. efficiency improvements that require a change in transmission technology or reorganisation of the DTT band plan. Ofcom notes that "there is a risk that an uncoordinated transition to more efficient transmission technologies would leave significant numbers of consumers with obsolete receiver equipment" and that "broadcasters' use of particular spectrum frequencies in the UK is dependent on internationally agreed co-ordination". This ignores completely the first way to improve efficiency whereby if the current spectrum allocation is inefficient, there are immediate efficiency gains that can be had by those mux licences (or slots) being transferred to a different user whilst still being used for DTT with the current transmission technologies. We don't believe there is evidence of any such inefficiencies and would suggest that if there were, they could be ironed out by the secondary market. This should be the case for mux licences as it is the case for mobile spectrum licences. However, since AIP is nonetheless applied to mobile spectrum licences to seemingly promote these kind of efficiencies (as there is currently no suggestion that mobile spectrum bands could be subject to change of use in the future), AIP should also be applied to mux licences to ensure efficiency.

## Managed migration

Ofcom notes in the consultation document that it is generally 'challenging' for the mux operators to achieve efficiency gains in response to AIP because any changes to the platform require coordination and in some cases international co-ordination. Ofcom further concludes that a clearance of 700 MHz with 600 MHz given to DTT as par compensation "may well require a managed process"<sup>9</sup> and a "managed process is likely to deliver significant efficiency benefits regardless of any application of AIP. Indeed, it is unclear that any additional efficiencies could be realised as a direct consequence of the imposition of AIP in the short to medium term."<sup>10</sup>

The relevance of the ability of mux operators to respond in the short term is somewhat contradictory to the methodology used by Ofcom for setting AIP, which is about the long term responses that spectrum users can make to AIP.<sup>11</sup>

We understand that there are limitations to the efficiency gains mux operators can achieve by individual action also in the long term. However, Ofcom has not substantiated why AIP, if applied to all muxes, would not serve a purpose in incentivising the mux operators to coordinate and cooperate in a 'managed process' to produce the very significant potential efficiency gains that are possible in the longer term (whether this is to clear 700 MHz or create more capacity for DTT SD or HD channels by a switch to DVB-T2).

<sup>9</sup> Consultation, para. 4.23

<sup>10</sup> Consultation, para. 4.24

<sup>11</sup> Consultation, para. 3.23, which quotes from the 2010 consultation on spectrum pricing to explain that the Least Cost Alternative method is "generally based on a study of the cost of long-term alternative network designs or technology choices that would be made in response to a small reduction in spectrum held by a user."

This omission is particularly relevant when there is evidence that the mux operators have been able to coordinate around a managed process to improve the efficiency of a DTT mux. There are four entities who directly or indirectly hold mux licences (BBC, ITV, Channel 4 and Arqiva) and they demonstrated clearly by the transition of mux B to an HD mux that they can indeed come together and agree changes that produce efficiency gains.

## International agreements

Ofcom argues that because the use of particular frequencies by individual muxes is determined by international agreements, it is more difficult for mux operators to respond to AIP. This is of course true in the short term. However, the introduction of AIP should give mux operators an incentive to lobby for such international agreements to be brought forward and to cooperate with national administrations engaged in international negotiations if, given the level of AIP, the mux operators would prefer to reduce or reorganise the spectrum being used for DTT in the longer term.

We note also that in the specific case of the potential release of 700 MHz, Ofcom has not taken an official view as to whether clearance would require renegotiation of the Geneva-06 agreement. The changes required for DSO and clearance of 800 MHz were achieved through a series of bilateral negotiations. Although bilateral negotiations would be time consuming, Ofcom would presumably be able to influence the timing of bilateral discussions to a greater degree than it could influence the timing of an ITU Regional Radio Conference. Hence it is important that Ofcom gets the right level of support from the mux operators to its international work. Ofcom may also currently underestimate the appetite for releasing more UHF spectrum for mobile in other European countries (either because DTT is less popular than it is in for example UK, Spain and France, or because there is greater push for a change to SFNs). If the mux operators are not paying AIP and hence potentially have a distorted incentive to use more spectrum than is efficient, the mux operators could influence the UK Government and Ofcom to be the delaying party in international discussions about DTT frequency arrangements where that would not be appropriate from an efficiency point of view.

## Public service broadcasting

Ofcom states that multiplex operators have limited scope to respond to AIP and realise efficiency gains because they are subject to a set of licence conditions, in particular obligations underpinning PSB.<sup>12</sup>

We note that other spectrum licensees are subject to licence obligations as well, for example mobile network operators are subject to coverage obligations stipulated in their spectrum licences. The fact that spectrum licensees are

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<sup>12</sup> Consultation, para. 4.18

subject to a set of licence obligations does not provide a valid argument for exempting them from AIP but the cost of providing such licence obligations may need to be taken into consideration when the level of AIP is set.<sup>13</sup>

In relation to the PSB content obligations, we note the relevance of the methodology for determining the financial terms for the Channel 3 and 5 licences, which Ofcom recently consulted on.<sup>14</sup> Ofcom's proposed methodology for determining the financial terms for those PSB licences considered the costs and benefits compared to commercial broadcasting licences, i.e. it assessed the incremental costs and benefits by assessing what the costs and benefits a PSB broadcaster has over and above a commercial DTT broadcaster. This has two important implications:

- a) The financial terms of Channel 3 and 5 licences are agnostic to the level of AIP imposed on mux operators because both commercial and PSB DTT broadcasters would have to buy mux capacity: In the case where the same AIP was imposed on both PSB and commercial muxes, and the costs were passed through to broadcasters, the incremental costs and benefits of a PSB licence over a commercial licence would remain unchanged.
- b) By accepting the renewed Channel 3 and 5 licences, the PSB broadcasters would agree that the additional benefits of the PSB licence outweigh the additional cost compared to a commercial broadcasting licence at the given financial terms. If they did not accept that, they would opt for a commercial broadcasting licence instead. This means that no further compensation for PSB content obligations can be due. It is certainly not the case that mux operators need to be exempt from AIP to compensate for PSB content obligations.

## DTT's 'unique circumstances' will remain

The factors that Ofcom argue "collectively make it more challenging"<sup>15</sup> for mux operators to deliver efficiency spectrum improvements currently are going to be present in 2020 as today. In 2020 it will still be the case that:

- mux operators are subject to regulatory obligations through licence conditions;
- changes to the platform needs to be coordinated; and
- the use of particular frequencies depend on internationally agreed coordination.

The DTT platform has now been subject to planning or implementation of coordinated change for the past 10 years to deliver DSO, 800 MHz clearance and to create a new HD mux within existing spectrum. Aside from the discussions around potentially clearing 700 MHz for mobile, CEPT is starting

<sup>13</sup> Equally, a mobile operator bidding for spectrum licences with and without coverage obligations may decide to bid less for the licence with a coverage obligation.

<sup>14</sup> Ofcom, "Methodology for determining the financial terms for the Channel 3 and Channel 5 licences", Published 21 February 2013.

<sup>15</sup> Para. 4.18

work to develop a strategy for UHF spectrum from 470-790 MHz. The work is being scoped at the moment but we understand it will address questions such as whether to continue with high power broadcasting at all and whether/how to promote convergence between mobile and broadcasting networks. The RSPG is also likely to recommend that the European Commission develops “a long-term strategic policy on the future use of the UHF band (470-790 MHz).”<sup>16</sup> It is therefore far from clear that a ‘managed process’ around 700 MHz clearance over the next five to 10 years will be ‘unique’<sup>17</sup> and that it will be the end of changes to the DTT platform.

In fact, given the desire to consider a long term strategy in various international groups it seems highly unrealistic to assume that come 2020, when it is clear whether 700 MHz will be cleared for mobile or remain DTT spectrum, DTT will enter a long period of stability where mux operators can respond to AIP by seeking to deliver efficiency improvements. More changes may be required. Indeed Ofcom seems to already be warming up to another delay to the implementation of AIP for this spectrum come 2020 when it notes that it “cannot be guaranteed” that there is a “more stable environment for the DTT platform” around 2020.<sup>18</sup>

We would therefore suggest that it is inconsistent to insist that AIP is still relevant to broadcasting whilst continuing to find reasons why it is has to be delayed.

## Conclusion

Noting that Ofcom has made a commitment to retain the DTT platform until 2030, we believe it is Ofcom’s primary duty, to focus on how it can facilitate the very substantial spectrum efficiency gains available from DVB-T2/MPEG and in turn a transition to SFNs - regardless of whether it implements AIP or not. We do not agree in principle that AIP has a role to play in promoting efficiency when licences are sufficiently long and tradable. However, since Ofcom has implemented AIP to most other spectrum users, it should do so consistently across all spectrum users and stop making invalid excuses as to why mux operators should be exempt when the incentive and ability to respond to such AIP should be present.

<sup>16</sup> Radio Spectrum Policy Group, “Draft RSPG Opinion on Strategic Challenges facing Europe in addressing the Growing Spectrum Demand for Wireless Broadband”, 20 Feb. 2013

<sup>17</sup> Para 4.25

<sup>18</sup> Paras. 4.29-4.30

## Answers to specific Consultation questions

*Question 1: Do you agree that the principle of applying AIP remains relevant to spectrum used for broadcasting?*

EE does not consider there to be an economic rationale for applying AIP to tradable, long duration spectrum licences, since trading will promote efficient use. Where a change of use is required to promote efficiency, for example change from DTT use to mobile use, Ofcom intervention is required regardless of whether AIP are imposed or not. However, given that Ofcom's policy is to apply AIP across the communications sectors, EE argues that this should be done consistently across all communications sectors.

The Analysys Mason report uses the least cost alternative method for estimating the opportunity costs of DTT spectrum in current broadcasting use and alternative mobile use to assist Ofcom set AIP levels for terrestrial broadcasters (from 2020). EE continues to examine the Analysys Mason report in detail and therefore is not in a position to comment on the substantive analysis in this consultation response. EE wishes to clarify that this should not be interpreted as necessarily providing support for the analysis

See EE's detailed comments in the main section to this response.

*Question 2: Do you agree with our revised proposals to delay the introduction of AIP based on opportunity cost for national DTT multiplex operators until we have materially progressed our proposals for the future use of the UHF spectrum?*

EE does not agree with Ofcom's revised proposals.

The factors that Ofcom argue "collectively make it more challenging" for mux operators to deliver efficiency spectrum improvements currently are going to be present in 2020, hence these arguments do not support the delay in introducing AIP to the broadcasting sector until 2020. Moreover, the 'unique' circumstances around the potential clearance of 700 MHz are likely to be followed by another set of unique circumstances meaning that it is inconsistent to argue that AIP is still relevant to broadcasting spectrum but only at a later date. If AIP is relevant to broadcasting, it should be relevant to broadcasting from 2014 as envisaged.

See EE's detailed comments in the main section to this response.

*Question 3: Do you agree with our proposals to apply a fee for spectrum used for national DTT, in the meantime, based on the cost of administration instead?*

EE does not agree with Ofcom's revised proposals.

See EE's response to Question 1 and detailed comments in the main section to this response.

*Question 4: Do you agree that charges based on the costs of managing the spectrum should be applied to DAB radio and to local TV broadcasting?*

EE has no comment to make on this proposal.

*Question 5: Do you agree that when full AIP is applied for spectrum used for national DTT broadcasting (once we have materially progressed our proposals for future use of the UHF spectrum) it should be applied gradually, rising over five years.*

Phasing in may be warranted. However, EE notes the broadcasting sector has had since 2007 to prepare for the introduction of fees and hence the need to pay for the cost of spectrum will have been factored in by broadcasters. If proposals to phase in AIP for broadcasting over a number of years are accepted, it should be similarly considered whether the phasing in of increases in AIP for mobile licences at 900 and 1800 MHz over a number of years is warranted.

See EE's detailed comments in the main section to this response.