



# The Wireless Telegraphy (Licence Charges) Regulations 2005

**Announcement of new regulations and Statement**

**Issued: 23 May 2005**

# Contents

## Section

1	Summary	1
2	Background	2
3	Comments on the Wireless Telegraphy (Licence Charges) Regulations 2005	3
Annex 1	Regulatory Impact Assessment	7
Annex 2	List of respondents to the consultation	16

## Section 1

# Summary

- 1.1 This document announces the making of new regulations – the Wireless Telegraphy (Licence Charges) Regulations 2005 (“the Regulations”) – in the form of a statutory instrument which comes into force on 13 June 2005. Fees prescribed in the Regulations will apply to new applications and renewals on or after that date. Furthermore, this document addresses comments raised in response to the notice of Ofcom’s proposals to make the Regulations, published on 23 February 2005. In total, six responses to that consultation were received by Ofcom.
- 1.2 This document does not contain any new policy proposals. However, it does aim to provide clarity in relation to a number of points highlighted by respondents. These points include:
- some detailed comments regarding the precise drafting of regulation 6 for the definitions in the Bailiwick of Jersey, the extent to which the pricing provisions relating to spectrum trading in the Regulations do not apply to Jersey, and a comment on the Regulatory Impact Assessment (“RIA”) concerning Jersey which accompanied the draft regulations;
  - identification of some missing frequencies in the Business Radio licence classes in Schedule 2 to the Regulations;
  - some comments from respondents reiterating their concerns regarding Ofcom’s policy decisions to maintain current fee levels and the pricing differential in 2G fees (for 900MHz and 1800MHz spectrum);
  - Ofcom’s decision not to introduce charity discounts for PMSE fees; and
  - remarks on the satisfaction of one respondent with Ofcom’s policy decision to amend the fixed link pricing algorithm.
- 1.3 Some of the points raised by respondents have not resulted directly in any amendment being made to the Regulations. However, where any such amendment has been made, this is explained. Section 3 contains the respondents’ comments on the Regulations and Ofcom’s response. The Regulations will shortly be published at <http://www.opsi.gov.uk/si/si200513.htm>. The revised RIA is included in Annex 1 of this document, and Annex 2 contains the list of respondents.

## Section 2

# Background

- 2.1 Under the Communications Act 2003 (“the 2003 Act”), Ofcom has the general duty to promote the optimal use of the spectrum. The Wireless Telegraphy Act 1998 (“1998 Act”) facilitated the use of market mechanisms in spectrum management for the first time in the UK. For non-auctioned spectrum, the 1998 Act enabled ‘Administered Incentive Pricing’ (“AIP”), whereby prices for annual licence fees are set above administrative cost to reflect a range of spectrum management objectives. These wireless telegraphy licence fees must be prescribed by Ofcom in regulations in the form of a statutory instrument. Ofcom is the body now empowered to make such regulations under the 1998 Act. Further explanation of the legal framework is set out in the Ofcom publications mentioned below.
- 2.2 In September 2004, Ofcom published a consultation document on proposals for setting wireless telegraphy licence fees<sup>1</sup>. This document described Ofcom’s approach to setting licence charges for wireless telegraphy licences and the use of AIP in setting these charges. Responses to that consultation document were summarised in the Spectrum Pricing statement, published by Ofcom on 23 February 2005<sup>2</sup>. That statement also set out Ofcom’s policy decisions in the light of the consultation responses.
- 2.3 On the same day, 23 February 2005, Ofcom also published a statutory notice of its proposals to make the Regulations, including a draft of the Wireless Telegraphy (Licence Charges) Regulations 2005<sup>3</sup>. In the notice, Ofcom set out the general effect of the proposed Regulations. We explained in detail the proposed changes in these proposed Regulations, including the new set of fees for certain licence classes, the consolidation of some existing fee levels, and the introduction of some new licence classes. The notice also included a Regulatory Impact Assessment (“RIA”) for the proposed Regulations.
- 2.4 The notice was open for consultation until 24 March 2005. Ofcom received six responses to the notice and the points raised by respondents have been considered by Ofcom. Where appropriate, the regulations have been amended to take account of these comments. This document sets out the main comments raised by respondents and explains Ofcom’s response to each of these points.
- 2.5 The Regulations will shortly be published at <http://www.opsi.gov.uk/si/si200513.htm>. They will come into force on 13 June 2005. The RIA for the Regulations is enclosed to this document at Annex 1, and Annex 2 contains a list of the respondents to the consultation.

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<sup>1</sup> Spectrum Pricing: A consultation on proposals for setting Wireless Telegraphy Act licence fees, 29 September 2004, [http://www.ofcom.org.uk/consult/condocs/spec\\_pricing/](http://www.ofcom.org.uk/consult/condocs/spec_pricing/)

<sup>2</sup> Spectrum Pricing: A statement on proposals for setting Wireless Telegraphy Act licence fees, 23 February 2005, [http://www.ofcom.org.uk/consult/condocs/spec\\_pricing/](http://www.ofcom.org.uk/consult/condocs/spec_pricing/)

<sup>3</sup> Notice of Ofcom’s proposals to make regulations: The Wireless Telegraphy (Licence Charges) Regulations 2005, 23 February 2005, <http://www.ofcom.org.uk/consult/condocs/wireless/>

### Section 3

## Comments on the Wireless Telegraphy (Licence Charges) Regulations 2005

### Introduction

- 3.1 This section identifies points raised by respondents to the consultation on the Regulations and sets out Ofcom's response to these points. It does not seek to explain how the Regulations will work as this was done in the Spectrum Pricing statement published on 23 February 2005 and, more specifically, in the consultation on the draft regulations published on the same date. This section does, however, explain where any changes have been made to the regulations as a result of the comments received by Ofcom.
- 3.2 In total, six responses were received to the consultation document. Further details of the respondents are provided in Annex 2.

### Enabling spread payment through amendment of Regulation 6

- 3.3 One respondent proposed that Ofcom should insert the words "or sums" after the text "there shall be paid to Ofcom such sum" in regulation 6 to enable spread payment of larger exceptional licence charges over 12 months.
- 3.4 In response, Ofcom would like to point out that section 6 of the Interpretation Act 1978 provides that in enactments words in the singular include the plural and words in the plural include the singular. It is therefore unnecessary to include the plural of the word "sum" as suggested by the respondent. However, Ofcom intends to use regulation 6 only for uses not covered by the Regulations, and the circumstances under which spread payments may be permitted would only be in circumstances similar to where they are permitted under the Regulations.

### Omission in Schedule 2

- 3.5 One respondent pointed out that the 153MHz band in the Business Radio (Public Wide Area Paging) licence class is not in Schedule 2 to the Regulations and should be inserted.
- 3.6 Ofcom is grateful for this observation. A number of frequencies contained in the 2002 (as amended in 2003) regulations for what was previously listed under public mobile operator classes and where licence still remain should have been transferred into the corresponding business radio classes for Public Wide Area Paging and for Public Mobile Data, Non-Voice. Schedule 2 to the Regulations is therefore adjusted to additionally include any licences in the class with frequencies ranged between 137 and 157 MHz for Wide Area Paging, and ranged between 105 and 165 MHz for Public Mobile Data. These ranges are not meant to imply that all the frequency range is for that use, only that the fees for that class of use apply wherever assignments within the range are made. In addition, the 133-147 kHz range was wrongly shown against the paging class rather than against the data class. Schedule 2 to the Regulations has been adjusted accordingly.

- 3.7 In addition, O2/ Airwave stated their expectation that the apportionment of fees for emergency services spectrum will be in line with that retained for other Business Radio classes in Schedule 2. Ofcom notes this comment, but, as it falls outside the remit of the Regulations, we do not propose to deal with this comment here. However, Ofcom would like to emphasise that we aim to ensure comparable treatment of all spectrum users – including the emergency services.

## 2G charges for 900MHz and 1800MHz

- 3.8 Although one respondent expressed its support for Ofcom's proposal to continue the current level of fees for 2G spectrum, other respondents voiced their disappointment in this decision (but with differing views as to whether the future level of fees should be higher or lower than the current level). In the light of these comments, Ofcom has once again reviewed the level of fees for 2G spectrum, and once again decided that the current levels are appropriate for the reasons given in the Spectrum Pricing statement.
- 3.9 In addition, one respondent believes that Ofcom's decision not to remove the asymmetry of cost between 900MHz and 1800MHz spectrum is discriminatory. In its response, this operator stated that in areas of high traffic density, where network dimensioning is determined by busy hour traffic levels per unit area, there is no practical difference between 900MHz and 1800MHz spectrum in terms of the volume of network equipment that would be required to satisfy a given level of demand, for a constant number of channels.
- 3.10 In response, Ofcom would like to point out its fuller explanation of this policy decision from the Pricing Statement in paragraph 3.17:

*"Ofcom also continues to believe that the current differential in fees between the 900MHz and 1800MHz bands is appropriate. This differential reflects differences in the value of spectrum in the two bands, arising from differences in the propagation characteristics of spectrum in the two bands. These differences continue to be relevant, despite the near universal coverage now achieved by the mobile networks, since they continue to affect network design at the margin and hence the value of spectrum in the different bands."*

- 3.11 In the light of the response, it is appropriate to further clarify Ofcom's thinking in this regard. Given the different propagation characteristics of spectrum in the 900MHz and 1800MHz bands, Ofcom is of the view that the capacity per square km per channel of a GSM base-station network operating at 900MHz (that has not been cell split) would be lower than that of one operating at 1800MHz, even if the amount of spectrum available were the same. As a result, GSM networks operating at 900MHz will make use of their full spectrum allocation over a wider geographic area than networks operating at 1800MHz. That is the position even if the amount of spectrum available (MHz) is the same. Spectrum is therefore more valuable at the margin to GSM networks operating at 900MHz than it is to those operating at 1800MHz, since it allows them to avoid a greater amount of additional investment. Accordingly, Ofcom does not therefore consider that a differential in fee between 900MHz and 1800MHz spectrum is discriminatory. Ofcom has therefore decided that it is appropriate to retain such differential in the Regulations.

### **Information disclosure on auctioned Business Radio licences**

- 3.12 One respondent requested further clarification regarding the removal of several Public Operator and Business Radio licence classes from the proposed Regulations, whilst some of these are affected by Ofcom's proposals for spectrum release (see Spectrum Framework Review: Implementation Plan<sup>4</sup>). The main concern of this respondent related to information disclosure with respect to those licence classes which are proposed for release. In particular, the respondent requested clarification on information disclosure of AIP charges once the minimum term of auctioned licences has finished.
- 3.13 Ofcom would like to make it clear that all information regarding auctioned licences will be disclosed in the Information Memorandum ("IM") and the specific auction regulations prior to the award of the licences in question. Both the IM and auction regulations are drafted as part of Ofcom's preparation to auction a block of spectrum, and are consulted upon with the industry. These documents will, amongst other things, cover information regarding any payments related to the licences, including potential AIP charges beyond the minimum term of the licences. It would be premature to make any statements on what payment arrangements may be appropriate for each auction. Therefore, Ofcom considers it unsuitable to put such charges in the Regulations.

### **New algorithm for point to point fixed links**

- 3.14 Significant amendments were made to the proposed fixed links algorithm as a result of responses to the original Spectrum Pricing consultation and further industry consultations. One respondent to the current notice voiced its agreement with the amendments to the algorithm, as these address the operator's concerns with the original proposals. In particular, the respondent was pleased to note that Ofcom had reduced the spectrum price, removed the antenna factor, clarified the value of the availability factor and had decided not to introduce the sharing factor.
- 3.15 Ofcom notes this response. In addition, Ofcom has made some further changes to the Regulations to ensure the fees set for analogue fixed links are in line with other point to point fixed links in this licence class. As a result, the Minimum Path Length factor in Schedule 7 to the Regulations now also incorporates analogue links to ensure an equivalent bandwidth for analogue link matches the bit rate of digital links in calculating this factor.

### **Discount for non-profit making PMSE users**

- 3.16 One respondent re-submitted its request for a discount for PMSE users that were non-profit organisations (hospital radio), on the basis that these organisations are self funding and have to raise extra funds for the increase in fees.
- 3.17 Ofcom has decided not to provide such a discount, for the reasons set out in the original Spectrum Pricing Statement, namely (at paragraph 3.84):

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<sup>4</sup> Spectrum Framework Review: Implementation Plan, 13 January 2005, <http://www.ofcom.org.uk/consult/condocs/sfrip/>

*“Ofcom has considered the issue, and decided that it will not implement discounts for hospital radio as this would have a detrimental effect on a class where Ofcom is not currently covering costs. JFMG licence a number of such customers on Ofcom’s behalf, and introducing a charity status for these would result in an even greater gap in cost recovery. Ofcom is committed to applying economic principles to all licence classes across the spectrum and therefore considers it inappropriate to charge below-cost fees in this particular instance. Furthermore, at the beginning of this consultation representatives of the Hospital Broadcasting Association indicated to Ofcom that the proposed increases would be unlikely to affect the provision of these valuable services.”*

- 3.18 Furthermore, Ofcom would like to point out that the Regulations only set out an average fee increase of 20% for PMSE spectrum for this time and will require further regulations to make further proposed changes to PMSE fees for next year (2006). As explained in the Spectrum Pricing statement, PMSE fees may be further reviewed for April 2006 in the light of updated costing information if so, this will require a further round of consultation.

### **Legal position of States of Jersey**

- 3.19 The States of Jersey have written to Ofcom to point out their specific legal position with regards to the Regulations. In particular, they note that:
- The provisions relating to spectrum trading have not been extended to the Bailiwick. Consequently, the Wireless Telegraphy (Spectrum Trading) Regulations 2004 do not apply to the Island.
  - The States of Jersey remind Ofcom that regulations 4(9) and 4(10) cannot apply to the Bailiwick.
- 3.20 Ofcom recognises Jersey’s position in these respects. The Spectrum Trading Regulations themselves make it clear that they do not apply to the States of Jersey. Also, Ofcom agrees that regulations 4(9) and 4(10) do not apply to the States of Jersey – as indeed they do not apply to a lot of other licences. The Regulations, taken with the Spectrum Trading Regulations, adequately deal with this point. Therefore, no revision of the Regulations is needed.

### **Amendment to the Regulatory Impact Assessment**

- 3.21 One respondent commented on the Regulatory Impact Assessment (“RIA”) which accompanied the proposed Regulations. The States of Jersey pointed out that, in applying AIP within the Bailiwick, Ofcom should have regard only to the market demand for spectrum within the Bailiwick and not to any other level of demand that might exist in the other jurisdictions. The States of Jersey make this statement as a consequence of its ownership of the spectrum in Jersey which it considers to be a national resource.
- 3.22 In response, Ofcom has adapted the RIA as suggested by the States of Jersey. Paragraph A1.6 of the RIA has been amended with an additional sentence to read ‘Ofcom notes that market developments within the States of Jersey and any other islands are distinct because of the specific legal status of these jurisdictions.’ The revised complete RIA is included in Annex 1 of this document.



## Annex 1

# Regulatory Impact Assessment – Wireless Telegraphy (Licence Charges) Regulations 2005

## Introduction

- A1.1 Except for minor amendments, the Regulatory Impact Assessment (“RIA”) set out below is in substance identical to the one contained in section 4 of the notice of Ofcom’s proposals to make the Regulations<sup>5</sup>, published on 23 February 2005. The main amendment addresses the response to this notice considered at paragraphs 3.21 to 3.22 of this document. When read in conjunction with the rest of this notice, the analysis represents a RIA, as defined by section 7 of the 2003 Act.
- A1.2 RIAs provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making and are commonly used by other regulators. This is reflected in section 7 of the 2003 Act, which means that generally we have to carry out RIAs where our proposals would be likely to have a significant effect on businesses or the general public, or when there is a major change in Ofcom’s activities. In accordance with section 7 of the 2003 Act, in producing the RIA in this document, Ofcom has had regard to such general guidance as it considers appropriate, including related Cabinet Office guidance.

## Proposal, purpose and intended effect

- A1.3 As part of Ofcom’s spectrum management objectives (as explained in the Spectrum Pricing statement), Ofcom is updating the annual fees for spectrum not acquired through auction.
- A1.4 Ofcom has considered the recommendations of the Review of Radio Spectrum Management 2002 undertaken by Professor Martin Cave and the Government’s response of November 2002 and also the Economic Study to Review Spectrum Pricing by Indepen, Aegis and Warwick Business School, published in February 2004. Ofcom agrees that there is a continuing role for AIP, although its use should primarily be to complement and support wider policy objectives rather than be applied in isolation of them.
- A1.5 In light of the Indepen review, Ofcom intends to amend the methodology for determining AIP. Currently, AIP fees are only set in relation to the value of spectrum in existing uses (the approach recommended by Smith NERA). Ofcom now intends that each AIP fee should be set in relation to both the value of the spectrum in existing uses and its value in other potential uses for each band. Thus, AIP will give incentives for spectrum to move to the most valuable uses.
- A1.6 Ofcom believes that AIP should continue for the foreseeable future following the advent of spectrum trading. This is because AIP can promote greater efficiency. Provided AIP fees are set conservatively, trading should not be

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<sup>5</sup> Notice of Ofcom’s proposals to make regulations: The Wireless Telegraphy (Licence Charges) Regulations 2005, 23 February 2005,  
<http://www.ofcom.org.uk/consult/condocs/wireless/>

impaired. Therefore, in line with this policy, Ofcom intends initially to set AIP fees towards the bottom of the range defined by the value of spectrum in existing uses and its value in alternative uses. AIP fees will then be adjusted towards the equilibrium level at regular review points, on the basis of market developments so that AIP fees will attach to the spectrum itself, rather than the existing use of the spectrum. Ofcom notes that market developments within the States of Jersey and any other islands are distinct because of the specific legal status of these jurisdictions.

- A1.7 In Ofcom's Spectrum Pricing consultation, Ofcom presented two options for updating fees for different licence classes: Option 1 was Ofcom's intended proposal and Option 2 was an alternative. Ofcom has received responses to these proposals from interested parties. These are discussed in detail in Ofcom's Spectrum Pricing statement. A summary of the proposed changes to annual fees is outline in section 3. In this RIA, we set out the risks, benefits and costs of Ofcom's intended changes to annual fees.

## Risk assessment

- A1.8 The key risks associated with the proposed fee changes, or the proposal to maintain fees at current levels, are set out below, along with the compensating factors which Ofcom believes will minimise the likelihood of the risks occurring.

Application	Proposal	Risk	Compensating factor
Aeronautical and maritime communications	No change to fees	The VHF aeronautical communications band will become congested in near future.	Ofcom, together with Civil Aviation Authority ("CAA"), is closely following developments in both new technologies and the demand for VHF spectrum. Ofcom has also carried out initial work on the scope for introducing AIP and other measures to improve spectrum efficiency. One option is to promote recognition of efficiency issues in international fora that may coordinate important future developments such as the introduction of digital and data communications in the VHF band.
Aeronautical and maritime radar	No change to fees	Civil and military organisations will have little incentive to improve efficiency.	Co-operation between Ofcom, CAA and Maritime Coastguard Agency ("MCA") may be better at achieving efficiency improvements than pricing, because the long lead times for installing and replacing radar limits the scope for short term efficiency gains.
Business radio (PBR, PAMR,	No change to fees	Potential efficiency gains	Ofcom can delay making changes to these fees until

CBS, National Paging, 5.8GHz)		are not achieved	broader spectrum liberalisation considerations have been investigated. This may avoid the disruption to the industry of making changes to these fees on more than one occasion within a relatively short period of time.
Point to point fixed links	New algorithm	AIP fee is overestimated for some users and underestimated for others leading to inefficient use of spectrum	Ofcom's methodology for applying AIP has been exposed to considerable external scrutiny through stakeholder consultations, on both the general opportunity cost and the application of the general cost to different fixed link licence classes.
Fixed Wireless Access	No change to fees	Potential efficiency gains are not achieved.	Ofcom is intending to make additional spectrum available for FWA and the opportunity cost of this spectrum should become much clearer once this has happened.
Programme making & special events	All fees amended	The level of costs recovered may be excessive.	The costs of managing this spectrum can be precisely identified since Ofcom uses a contractor as band manager. Moreover, the contract for managing the band was awarded through competitive tender and the best value for money bidder was selected.
Public wireless networks (2G public mobile networks)	No fee changes	Potential efficiency gains are not achieved	Uncertainty over the values of key inputs in the opportunity cost calculation over the next few years leads to a wide range of possible values for AIP fees. Setting AIP fees on today's information risks potentially disruptive swings in AIP levels in future years. Given this uncertainty, the costs of this disruption may exceed the efficiency gains that can be achieved. Ofcom can wait until it has sufficiently accurate information to set AIP fees and this may lead to greater economic efficiency in the longer term.

Satellite	Minimum fees to increase	Greater efficiency may be foregone.	The fees will be reviewed in 2005 offering the chance to set AIP fees more accurately.
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## Conclusion

A1.9 The risk assessment shows that all major risks associated with the changes to the annual fees can safely be mitigated by Ofcom. On the other hand, if Ofcom does not make the intended changes Ofcom will bear the risk of damaging the effectiveness of spectrum trading and not acting consistently with overall objectives concerning efficient spectrum management.

## Equity and fairness

A1.10 Ofcom has considered the fairness of its proposals and is confident that they are fair to users of spectrum, businesses and consumers. First, in some cases, Ofcom is removing inconsistencies in annual fees eg between business radio and public networks which have the potential to distort competition.

A1.11 Second, Ofcom believes that AIP will create the incentive and alongside spectrum trading will enable the opening of access to spectrum to a wider range of potential uses. In time it should help to address the problem of bandwidth scarcity in certain parts of the radio frequency spectrum, increasing competition and, for example, help to reduce inequity from spectrum allocated on a first come first served basis.

## Benefits

### Identification of Benefits

A1.12 The table below sets out the major benefits of the proposed changes to annual fees or the proposal to maintain fees at current levels.

Application	Proposal	Benefits
Aeronautical and maritime communications	No change to fees	Maintaining current fees avoids disruption to the aviation industry recovering from external shocks, and means international maritime vessels will not be pressurised to buy multi purpose radio in order to operate in UK and other waters.
Aeronautical and maritime radar	No change to fees	Maintaining current fees avoids reducing the safety of life element of radar services
Community Radio	New class. Fees as per national and regional radio	Extending the current fees for Independent National and Regional Radio to the new licence class of Community Radio ensures that there is equal treatment across broadcasting analogue radio and therefore that the benefits of economic efficiency can be realised consistently.
Business Radio (PBR, PAMR, CBS national paging, 5.8Ghz)	No change in fees (Delaying removal of 'choice and	Maintaining current fees allows Ofcom to take a longer term view on re-structuring this class of licence and to undertake a single re-structuring exercise.

	diversity' and "step-in" fee modifiers)	
Point to point fixed links	New algorithm to estimate fees	The changes to the fixed links algorithm lead to the estimation of an AIP that better reflects the opportunity cost of spectrum for the operator that would value the spectrum the highest and therefore the incentive for the spectrum to be used more efficiently.
Public Wireless network (2G public mobile networks)	Current fee levels maintained	<p>Maintaining current fee levels for the next three years (including the 900Mhz/1800Mhz asymmetry) avoids potential fluctuations in AIP which would be disruptive to the cellular industry, as a result of uncertainty over the true opportunity costs of the 2G spectrum and the potential for Ofcom therefore to be required to frequently adjust the AIP level.</p> <p>Ofcom believes that there remains a difference in opportunity cost between 900Mhz/1800Mhz spectrum. Differences in the propagation characteristics of spectrum in the two bands give rise to differences in the capacity per square km of un-cell-split networks and hence to the density of traffic at which additional investment is required to meet demand. The current differential in fee therefore reflects a difference in opportunity cost.</p>
Fixed Wireless Access	No change to fees	<p>Although AIP fees could result in economic efficiency gains on balance the uncertainty of the opportunity cost for spectrum in this industry at a time of significant development, including the possibility of further tranches of spectrum, implies that it is more appropriate to maintain current fees at this time.</p> <p>The option of basing AIP fees on auction prices for similar spectrum is not appropriate because it may be seen as setting a precedent for how Ofcom will adjust AIP in relation to prices paid in auctions. It may therefore have the dis-benefit of distorting bidding in future auctions. In addition, given Ofcom's intention to set AIP rates conservatively, it is not clear whether AIP based on auction prices would affect future trading incentives.</p>
Programme making & special events	All fees change	AIP will not be applied to PMSE. Ofcom believes that AIP is only beneficial where the value to other uses is higher than for PMSE. However, if there is no viable alternative demand for PMSE spectrum, given the constraints placed on its

		<p>usage, the efficiency foregone will be small. Therefore the benefits of introducing AIP are low when compared with the risk that if AIP levels were too high, PMSE users might give spectrum back. That would impair broadcasting without giving rise to other benefits from the alternative use of the spectrum.</p> <p>Ofcom intends to update annual fees to reflect administrative costs which would ensure that the current band manager can fulfil its duties properly.</p>
Satellite	Minimum fees to increase	<p>Increasing the minimum fee for a permanent earth station is required to ensure that fees cover the administrative costs of licensing this spectrum and its use. Delaying AIP ensures that coordination with the introduction of Recognised Spectrum Access can occur, thereby avoiding further market distortions and disruption if AIP fees needed to be changed.</p> <p>Extending the current differential pricing for network licences to new ESV and AES classes gives rise to a minor benefit.</p>

### Quantification of benefits

- A1.13 The benefits derived from the changes to annual spectrum fees discussed above are difficult to quantify. In some cases, no change to annual fees is intended and, in other cases, fees are to be increased. It is believed that these changes will promote economic efficiency in the use of spectrum.
- A1.14 The benefits that flow from better use of spectrum primarily stem from first, the extent to which AIP imposes a discipline on current users to optimise production of their good or service based on a market price for all inputs; and second, the extent to which spectrum is transferred to those users that value it the most.
- A1.15 It is difficult to quantify these benefits because the extent to which spectrum is currently not being used efficiently is not known. What is known is that there is excess demand for different spectrum frequencies. The level of this excess demand is difficult to measure before prices have been adjusted. Going forward, as the impact of updated spectrum fees takes effect it may be possible to make an ex post assessment of the value of benefits.

### Business sectors affected

- A1.16 The business sectors affected by the changes made to the annual fees may be broken down into two classes. First, those for whom spectrum is essential for offering the end-user service: mainly telecommunications and multimedia service providers, and broadcasters. Second, those for which spectrum is a non-essential, although valuable input to providing their end-user service:
- telecommunications and broadcasting equipment suppliers
  - transport and logistics

- aviation
- shipping
- local government
- public safety services
- utilities including gas, water and electricity
- entertainment.

## Costs to business and the economy

A1.17 Businesses may incur additional annual costs in relation to increased fees (estimated at £3 million over last year's total payments of £103 million by licensees; the total payments may rise to around £109 million per year if growth continues over the next two years) and the cost of a delay in the benefits for improved economic efficiency. The main cost arises from the potential welfare losses as a result of not setting AIP accurately, but this only means that part of the benefits is not achieved. These costs are outlined in the table below.

Application	Costs
Aeronautical and maritime communications	No additional cost to users but potential gains in economic efficiency are foregone.
Aeronautical and maritime radar	No additional cost to users but potential gains in economic efficiency are foregone. Due to international restrictions on spectrum use efficiency gains may be low.
Community Radio	The users of the new licence class, Community Radio, will pay the same rate as for national and regional radio broadcasting licences.
Business Radio (PBR, PAMR, CBS, national paging, 5.8Ghz)	<p>Given the delay in the potential removal of fee modifiers, actual fees are unchanged in the near term and therefore firms do not incur additional costs.</p> <p>Potential gains in economic efficiency are delayed, maintaining the distortion to competition between business radio and cellular. The extent of this cost will depend on whether spectrum liberalisation, as yet uncertain, would result in the requirement to make further changes to business radio licences in future.</p>
Point to point fixed links	<p>It is expected that the changes to the fixed links algorithm will result in an average 15% increase in AIP fees, although as some respondents have pointed out, this may be higher or lower for some operators. This figure is Ofcom's best estimate of the impact of the changes but summates to about £3 million extra each year. Ofcom is not currently in a position to be able to estimate this exactly since the actual fees payable by different operators depend upon the fixed links they hold at the time of invoicing, which may not be the same as those currently held.</p> <p>The additional information required by the algorithm is minimal and hence additional resource costs are low.</p>

Public Wireless network (2G public mobile networks)	<p>Given that actual fees are unchanged firms do not incur additional costs.</p> <p>Given the current uncertainty in the market, economic efficiency gains may be delayed dependent on whether fees over the next three years are too high or too low, as outlined by respondents to the consultation.</p>
Fixed Wireless Access	No additional costs to affected firms. However, this may mean that gains from economic efficiency are foregone where current fees do not reflect opportunity costs.
Programme making & special events	The increase in annual fee is 20% on average equating to about £225,000 each year. Ofcom will hold any further increases pending a more detailed assessment of actual administrative costs during 2005. However, it is likely that further increases will be required as originally proposed.
Satellite	<p>Affected firms (holding about half the total number of licences) will incur on average 100% higher costs as minimum fees are increased to reflect the high administrative cost of co-ordinating and issuing each licence. Other licensees (who currently pay much larger sums) will not pay more.</p> <p>The potential gains in economic efficiency from the introduction of AIP introduction are delayed.</p>

### Other costs

A1.18 Other costs include those associated with additional information required to estimate fees. This only applies to the new algorithm for fixed point to point links. Ofcom notes that the additional information required is minimal.

A1.19 In addition, there are relatively minor costs (a one-off cost of about £40,000) associated with the updating of Ofcom's licensing and billing systems to take into account the updated fees.

### Conclusions

A1.20 There are significant benefits from the changes Ofcom intends to make to these Regulations. The benefits have been described in the Spectrum Pricing statement. Although they are difficult to quantify, Ofcom believes that these benefits are likely to exceed the costs (see details above). Moreover, if Ofcom did not update its annual spectrum fees, it might harm the effectiveness of trading. Ofcom would not be acting consistently with its wider spectrum management objectives, which would have repercussions in terms of economic efficiency.

### Monitoring and compliance

A1.21 Ofcom will monitor the success of spectrum pricing in the wider context of its spectrum management objectives. These include ensuring that AIP levels are



not a restriction on spectrum trading. As part of this monitoring process Ofcom will be considering ways in which to measure spectrum congestion levels. Ofcom would expect these to reduce if spectrum were either handed back to Ofcom or was traded.

### **Declaration**

**I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs.**

**Signed:**

***Kip Meek***  
**Senior Partner Content and Competition**  
**For and by authority of the Office of Communications**

**Date: 19 May 2005**

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## Annex 2

# List of Respondents

Ofcom received six responses to the consultation on the notice of Ofcom's proposals to make regulations. One response was confidential.

- Hemel Hempstead Hospital
- O2
- Orange
- States of Jersey
- Vodafone