



24 October 2008

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**SUBJECT: CONSULTATION ON APPLYING SPECTRUM PRICING TO THE  
MARITIME AND AERONAUTICAL SECTORS**

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On 30 July 2008 Ofcom published its consultation on applying spectrum pricing to the Maritime and Aeronautical sectors. Since that time IATA has devoted a considerable amount of time, and other resources, attempting to prepare a detailed response. For a number of reasons IATA has found it almost impossible to do so.

IATA supports, in principle, the need for radio spectrum to be used efficiently ensuring that both commercial and public users have the spectrum they need to conduct their businesses; but we strongly oppose the use of Administered Incentive Pricing (AIP) on aeronautical spectrum and we simply do not see how an AIP would improve efficient use of such spectrum.

In our view this consultation process is seriously flawed.

The UK policy for public consultations has not been followed. Of major concern is the lack of the necessary 'Impact Assessment' that is required under the Communications Act 2003 and by the UK Code of Practice on Consultation. Ofcom's own "Better Policy Making" commitment states that:

"To be effective, the process of doing an Impact Assessment should begin right at the start of a project, with the Impact Assessment being developed from then outwards. An impact Assessment should therefore be a core part of the policy making process, *not a bureaucratic add-on*"

On 29 September, half-way into the consultation period, we learned that Ofcom was adding-on an Impact Assessment which will, apparently, be delivered the same day as the consultation ends. Critically the right of stakeholders to make representations to such an Assessment, before any formal consultations are initiated, appears to have simply been ignored by Ofcom.

Just eight days before the end of the consultation period we learned that Ofcom had published an update to this consultation containing a number of new proposals. IATA did not receive the update from Ofcom but we assume that the new proposals, that apparently involve volume discounts, will affect the aviation sector. Clearly we require more information on how the discounts would work and how volume discounts can be reconciled with the UK Government's stated commitment to spectrum efficiency.

Even had IATA been provided with clear detailed proposals it is simply not possible for us to analyse these and consult with our members in eight days. It is impossible for IATA to provide a considered response on this aspect of the consultation.

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This latest confusion comes on top of a lack of clarity in the original proposals. In our view the proposal for an AIP contained in the consultation document:

- Does not adequately consider safety requirements;
- Does not take into account international standards and obligations that aviation is subject to as a safety of life service;
- Does not consider UK Government obligations under international treaties such as ITU World Radio communication Conference (WRC) outcomes;
- Does not consider UK Government commitments to the Single European Sky that requires adequate radio spectrum;
- Does not follow UK policy directives;
- Differs from previous UK policy statements on the use of aeronautical spectrum;
- Rests on a business radio case that is neither appropriate nor applicable to aviation use of spectrum;
- Does not take into consideration how aviation has already achieved efficiency in its spectrum use;
- Would not increase efficiency but is simply a poorly disguised attempt to secure additional revenue to the UK treasury, without any offsetting benefit to aeronautical users. There is simply no value for money in this proposal.

Regretfully the paper is almost silent on safety requirements and, in our view, UK international commitments are either being ignored or simply referred to as being “constraints”. In our view these commitments are much more than this. In the attachment we set out our detailed views however we must reserve the right to amend or supplement these comments.

We are extremely dissatisfied with this process. It is seriously flawed and is certainly not to the quality we have come to expect from UK Government bodies. We strongly believe that this consultation must be withdrawn.

Sincerely



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**UK Ofcom Consultation**  
**“Applying spectrum pricing to the Maritime and Aeronautical sectors.**  
**Initial comments of the International Air Transport Association (IATA)**

In IATA's view this consultation process is seriously flawed due, in part, to the lack of a 'Impact Assessment' that is required under the Communication Act 2003, by the UK Code of Practice on Consultation, and by Ofcom's own "Better Policy Making". Our right to make representations to such an Assessment, before any formal consultations are initiated, has been simply been ignored by Ofcom. However we have devoted significant resources in reviewing Ofcom's paper and we are prepared to share some initial comments on it. However we reserve the right to amend or supplement these comments as we deem appropriate."

IATA is the global trade association for the world's airlines. IATA's membership includes some 230 airlines from 125 countries. Flights by IATA members represent 93% of world's international scheduled traffic IATA members carried 1.6 billion passengers (scheduled) in 2007 and 44.1 million tones of freight. Six IATA members are based in the UK and 130 fly to, from and through UK airspace.

Aviation is a safety of life service; safety is our top priority all the time; not just in times of distress, emergency or conflict. We cannot and will not compromise on the level of safety we need to operate. If it's not safe – we will not fly – we will take whatever measures are necessary to ensure safety possibly resulting in delays with the inherent economic penalties.

**Introduction**

IATA supports the need to use radio spectrum efficiently, to ensure that both commercial and public users have the spectrum they need to conduct their businesses; but we strongly oppose the use of Administered Incentive Pricing (AIP) on aeronautical spectrum and do not see any way AIP would improve efficient use of such spectrum.

**IATA Position**

Our position is that the concept is significantly flawed with regard to its application to aviation and that Ofcom has not respected UK policy or process.

This Ofcom consultation does not clearly define AIP, its true purpose, what it would be based on, how it would be calculated, and how it would have any benefit for aviation or improve efficient use of our spectrum.

We see AIP as a revenue generating exercise only.

In addition Ofcom has not followed UK Government policy with regard to this consultation process and the proposal itself.

The consultation is premature, as an Impact Assessment has not been carried out. IATA wants assurance from Ofcom that a formal, valid Impact Assessment giving stakeholders appropriate advice, time to input and to respond to the results of such an Assessment will be carried out. We believe that this consultation must not be continued until such an Impact Assessment has been carried out.

The proposal for AIP contained in the consultation

- is premature as no Impact Assessment has been carried out
- does not adequately consider safety requirements
- does not take into account international standards and obligations that aviation is subject to as a safety of life service;
- does not consider UK Government obligations under international treaties such as ITU World Radiocommunication Conference (WRC) outcomes and European commitments such as the Single European Sky that will improve aviation's ATC operations and requires adequate radio spectrum to do so.
- does not follow UK policy directives and differs from previous UK policy statements on the use of aeronautical spectrum
- does not identify the problem with how aviation uses its spectrum – what is Ofcom trying to fix
- does not show how AIP would increase efficient use of aeronautical bands
- bases AIP for aviation on a business radio case that is neither appropriate nor applicable to aviation use of spectrum.
- does not take into consideration how aviation has and is already pursuing efficiency in its spectrum use (Single European Sky; the implementation of 8.33 kHz channel spacing, e.g..)

IATA finds the current consultation to be confusing, misleading and invalid, as it does not take international and safety aspects of aviation's operations into account.

### **AIP proposal - in brief**

Ofcom is proposing AIP should be charged first to licensed operators of aeronautical ground stations: this includes airports and ANSPs. (and thus their customers the airlines). Services affected would be VHF communications channels, followed by primary radar bands and perhaps later SSR, ILS, MLS DME, VOR, radio altimeters, weather radar and Doppler aids.

### **I. Consultation Process**

IATA's position is that this consultation is flawed in process, has not followed UK policy, and has not provided stakeholders clear guidance or valid information on which to base their responses to this consultation. We have indicated – as far as possible – direct references to the consultation section after our comments.

#### **1. UK Regulation:**

Under section 3(3) of the Communications Act of 2003 and the Department for Business Enterprise & Regulatory Reform (BERR) principles of good regulation, it is stated that Ofcom must perform its duties in a way that is "transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed."

## **2. UK Consultation Practice**

The UK Code of Practice on Consultation (Criterion 3) state that a consultation itself must be clear and concise with a Regulatory Impact Assessment to be carried out. Section 7 of the Communications Act 2003 also imposes a duty on Ofcom to carry out an Impact Assessment.

This Ofcom consultation paper does not meet these criteria. It is more confusing and contradictory than clear and concise and we provide some illustrations in the section on content below. Due process must be followed.

## **3. Impact Assessment**

An Impact Assessment has not been carried out and we understand is only now being instigated – after this consultation was published. This means that we do not have fundamental information we need to provide a full response. There was no formal advice that an Impact Assessment was beginning, nor how stakeholders could input or respond to it.

According to the BERR, an Impact Assessment is considered a

- “continuous process to help the policy-maker fully think through and understand the consequences of possible and actual Government interventions from the early stages of identifying a policy challenge, through the development of policy options, public consultation and final decision-making and on to the review of implementation”. Stakeholders must “have the right to make representations to such an Assessment before Ofcom can initiate any formal proposals.”

Impact Assessments are meant to “ensure that those with an interest understand and can challenge:

- why the Government is proposing to intervene;
- how and to what extent new policies may impact on them; and
- the estimated costs and benefits of proposed and actual measures.
- they also give affected parties an opportunity to identify potential unintended consequences.”

Ofcom itself states the following in its “Better Policy Making” requirements:

“Impact Assessments form a key part of best practice policy making, which is reflected in our statutory duty to carry them out. They provide a way of considering different options for regulation and then selecting the best option. In selecting and analysing options, the need to further the interests of citizens and consumers is of paramount importance.”(1.2)

“In developing policy proposals, our aim will be to think widely about the possible impacts, taking account of the whole value chain and knock-on effects across the communications sector. By doing so, we will seek to minimise any unintended consequences.” (1.5)

“To be effective, the process of doing an Impact Assessment should begin right at the start of a project, with the Impact Assessment being developed from then onwards. An Impact Assessment should therefore be a core part of the policy-making process, not a bureaucratic add-on”(1.6)

Ofcom claims it is not publishing a full Impact Assessment for this consultation as they are “seeking evidence and views from stakeholders to inform our fee proposals first” (A5.8). They cite the complexity of the aeronautical sector. This is exactly why an Impact Assessment is essential.

The fact that an Impact Assessment has not been done casts doubt on the validity of Ofcom’s findings and denies stakeholders essential, fundamental information they need to respond to this consultation. IATA’s position is that Ofcom should follow UK BERR and its statutory duty policy and carry out a formal, valid Impact Assessment, with clear advice on how stakeholders can input and respond within a reasonable timeframe..

#### **4. Ministerial/Parliament Involvement**

Lastly with regard to consultation process, IATA would seek clarification on how Ofcom’s Proposal and Impact Assessment would be cleared within the Government.

The Code of Practice on Consultation states that the “Minister responsible for the policy is required to sign-off public Impact Assessments”. How is this handled with Ofcom?

We understand the AIP Proposal itself would require approval of the responsible Secretary of State (BERR) section 5(3) of the Communications Act 2006 due to the need for compliance with the international obligations of the UK and in the interests of safety of the public. Parliamentary approval is most likely required as well.

IATA seeks clarification with regard to Ministerial and Parliamentary approval of AIP and insists that such approval is necessary and due process be followed due to safety of life and international considerations.

## **II. Consultation Content**

### **1. The consultation does not state anywhere what the problem is with how aeronautical spectrum is being used.**

IATA does not understand why AIP is aimed at aeronautical bands as there is no reference anywhere to particular problems with how aviation is using those bands. If nothing is broken, why is Ofcom trying to fix it?

### **2. The Consultation does not consider UK Government international obligations**

The radio spectrum that is used by aviation is allocated internationally at the ITU World Radiocommunication Conferences (WRC) and WRC Final Acts have treaty status.

The UK *Forward Look 2007* points out that any change to the management of services covered by specific international agreements (e.g. WRC) “needs to take full account of the UK’s international treaty obligations.” and ICAO Standards and Recommended Practices (SARPS). (p.17)

It also states that: “The UK is a key participant in the *European Single European Skies* programme, which is aimed at coordinating and harmonizing the airspace and Air Traffic Management arrangements for the region. Within this programme legislative instruments such as *Interoperability Rules* are coming into force. These are directly applicable by law and will therefore influence aeronautical spectrum use in the UK.” (p.38)

These obligations are not being seriously considered in the Ofcom consultation.

Ofcom must consider the UK international obligations in a serious, appropriate manner in its development of the AIP proposal)

### **3. The consultation is not consistent with UK Government policy.**

The UK Government's *Forward Look 2007* accepts the recommendations of the Cave Audit 2005 and supports the development of an efficient spectrum market in the UK that provide access opportunities for the commercial sector. However it emphasizes that:

- "The public sector will source its spectrum needs from the market, with exceptions where objectively justifiable for reasons of safety and security." ... (p. 4).
- "In implementing changes to public sector spectrum policy the Government will ensure that sufficient spectrum remains available for national security, defence and essential public services. It will also seek to minimise harmful interference and ensure continued compliance with international obligations, including international spectrum management." (p. 5)

The consultation does not in process or content, respect UK Government international obligations. The findings are thus unfounded and invalid. IATA position is that it must respect these obligations.

### **4. The consultation provides confusing information on the intent of applying AIP to aeronautical bands.**

According to the AIP Consultation document, charging AIP is intended to:

- "ensure that the holders of spectrum recognise the costs that they impose on society by holding spectrum, when taking decisions about spectrum use or when seeking to acquire additional spectrum. It is not our (Ofcom's) objective to achieve any specific change in the use of spectrum"
- "ensure that the opportunity costs of holding spectrum are fully and accurately reflected by decision makers when decisions are made that could affect future spectrum use"
- "to create clean incentives for decision makers (users, government and society at large) to use spectrum efficiently. In particular, we seek to ensure that users can determine their need for spectrum in light of the cost which this imposes on society"
- "be a signal about the cost of spectrum (that) will improve the information available to users and regulators in discussing those changes.
- "not ... to encourage any specific choice over the others, but simply to ensure that in making that choice, the regulators and policy makers take spectrum costs into account alongside other costs and benefits."
- "apply market disciplines to the holding and use of spectrum rights by requiring users to consider their spectrum needs in light of the AIP fees payable."

IATA seeks clarification from Ofcom on what specifically is the intent of AIP for the aeronautical sector.

## **5. The logic behind AIP is significantly flawed since there is cost but no benefit.**

The Ofcom Consultation document sets out the following explanations of what AIP is and the market based principle.

“Ofcom believes that this (application of market forces) will encourage efficiency in spectrum use, by increasing the likelihood that spectrum will be held by those who can make best use of it, and by creating more freedom for spectrum to be used for more valuable applications. (2.3)“

IATA seeks clarification – what is the best use and what are the most valuable applications; and what criteria will be used to decide.

“Because spectrum is finite and because transmission by more than one user in the same part of the spectrum at the same time will generally result in interference, use of the spectrum for one purpose will generally impose costs on other users. In many cases, users require exclusive access to part of the spectrum in order to avoid interference. There is then an opportunity cost to use of the spectrum for one purpose arising from the forgone value of the other uses which are prevented as a result”. (2.13)

Much of aviation’s spectrum is already shared. IATA requests Ofcom clarify how it determines who is NOT using spectrum but could use it better. Sharing of spectrum is an efficient use and one that aviation already practices.

“All decisions affecting current and future spectrum use should be made with a full and accurate reflection of these opportunity costs if those decisions are to lead to the socially optimal allocation of resources in the short and long term. If the opportunity costs of spectrum use are ignored or discounted by those able to influence allocation decisions, socially sub-optimal decisions may be made.”(2.14)

IATA would be very interested to know what is considered a socially sub-optimal decision with regard to spectrum. What does this mean, how is it determined and who determines it?

One of Ofcom’s explanations of how it would determine price refers to:

“(Smith Nera approach) to use estimates of the marginal value of spectrum as proxies for the opportunity cost to a representative spectrum user in those bands where AIP fees were to be charged. The opportunity cost represents the benefits forgone from assigning spectrum to one use instead of another. Or opportunity cost as the cost of the least cost alternative to using spectrum that would enable the same output to be produced. This could be achieved via an alternative technology, such as by moving to a less congested spectrum band or, in the case of fixed wireless links, using fibre cables.” (2.18 - 19)

Aviation’s technologies and systems are highly standardized through ICAO and harmonised through the WRC process due to safety of life and global interoperability requirements. IATA would appreciate Ofcom’s explanation of how this approach could therefore relate in any way to our operations?

“It is important to emphasise that Ofcom, in applying AIP or other market mechanisms, is not taking a view on what these decisions would be. We do not have in mind that any particular user, or group of users, should reduce their spectrum use, or allow sharing by other users, or change the frequencies they use in response to spectrum fees and payments. Our intention is, simply, but crucially, that they should take any such decision in light not only of the non-spectrum costs, and all the benefits, of a decision, but of the impact of the opportunity cost imposed on society, where this decision involves the use of scarce spectrum.”(3.3)

“That is because we consider that Ofcom is not the best judge of the value that a use has to any sector or individual users. In the aeronautical and maritime sectors, users know how much value they individually place on the use of radiocommunications, and radionavigation, both in terms of their operational usefulness and their contribution to safety. The CAA and MCA likewise assess how valuable, or important, spectrum use is in terms of meeting their own objectives to secure safe operations, for operators, their passengers, the economy, and the public at large. Both users and regulators will be better placed to assess their need for spectrum, now and in future, if they have information about the opportunity cost of spectrum that they can consider alongside the benefits of use.”(3.4)

“In the case of the aeronautical and maritime sectors, several factors mean that the CAA and MCA are necessarily very closely involved in many decisions affecting aeronautical and maritime operation. These include:

- the importance of interoperability within the UK and internationally;
- related to this, the need to agree many changes of use internationally;
- the existence of a large number of disparate users, which makes co-ordinating decisions costly and time-consuming; and
- crucially, the public interest in safe and sustainable operations, over and above any operator’s own interests in safety.”(3.5)

“From the perspective of spectrum management, this means that not only the users, but the sectoral regulators, are the decision-makers when it comes to use, or changes to use, of spectrum. These decision makers, taken together, are much better placed than Ofcom to judge the value of any particular use. The CAA and the MCA are entrusted to safeguard the public interest not only in safety in their sectors, but in other aspects such as general efficiency and availability of services to the economy. They are therefore the best judges, alongside individual operators, as to whether a new use of spectrum, or changing an existing use, would be justified in terms of all of the consumer and citizen benefits potentially available from that decision.”(3.6)

With regard to these points, IATA would like to understand why, if the CAA and individual operators are the best judges of spectrum decisions- should AIP be considered by Ofcom? Is the goal of AIP only to make aviation aware of the fact that there could be other users and thus they have to pay for something that is not clear?

Would it not make more sense for UK CAA and the sector to continue to seek the best, most efficient use of spectrum through cooperation and international collaboration – as is the case now? What will AIP add to the equation? .

All of the above points would be considered already had there been a valid impact assessment.

## 6. Safety

The consultation paper seeks to distinguish between “safety of human life” and “safety of human life in an emergency”.

Aviation uses its radio spectrum for safety of life purposes, regardless of situation, and should not be charged AIP.

“Much of the spectrum considered in this consultation document is currently used to provide safety critical applications. It is essential, therefore, that the introduction of AIP does not disrupt the operation of these services. The aeronautical and maritime sectors already have to purchase, on the commercial market, most of the other resources needed to support safety critical facilities, including ground based and airborne and seaborne radar, communications and other radionavigation equipment. Spectrum is an exception. (3.46)

“Ofcom does not believe that market disciplines in themselves threaten the future of safety critical facilities. Industry usually has a legal duty to provide such facilities, stemming either from general health and safety legislation or from prescriptive sector specific obligations. The cost of supporting safety critical services will generally be passed on to customers or, where this is not feasible or desirable from the perspective of sector regulators and funders, subsidised by charities or Government. (3.47)

IATA finds these paragraphs very confusing. It’s fact that interference cannot be tolerated in bands used by safety critical applications. What, however, is the link between this requirement and pricing – why would pricing improve anything. IATA opposes AIP and stresses exactly that passing the costs on to the airlines or their customers who can do nothing to change the way spectrum is used is totally invalid.

## 7. Ability of aviation (airlines) to change the way it uses spectrum

Ofcom states “We appreciate that many holders of spectrum are not in a position to make rapid changes to their use of spectrum in response to the application AIP. The use of AIP is none the less justified by the benefits that should materialize in the longer term, as better decisions are made in light of increased awareness and appreciation of the value of spectrum – better decisions that should lead to more efficient use of the spectrum and economic resources more generally. (3.2)

Ofcom is in effect admitting that we could not change our spectrum use in the short term. This is fact. Again IATA believes the appropriate fora for such decisions are the WRC and ICAO. AIP is not justifiable in this instance.

## 8. Basis for determination of Opportunity Cost,

### International “constraints”

Ofcom proposes that the best way to determine the opportunity cost of spectrum is basically to ignore what they call international “constraints” – for example their comment:

Ofcom chooses to:

- “not take account of these (policy) constraints (i.e. international) but considers all alternative uses that are technically feasible, ignoring constraints imposed by regulatory policy or international agreement.” (3.21)

The following, somewhat contradictory statements are made by Ofcom with regard to international obligations (constraints):

“In taking these decisions, (i.e. application of AIP) we (and Government as appropriate) need to understand the full economic potential of each band, that is the best use it might be put to if current restrictions were changed or lifted.”(3.21)

“international constraints, like any other policy constraint, can ultimately be changed. They are not completely fixed and spectrum users, Ofcom and other policy makers including DfT should understand the impact of these decisions in order to understand the true cost of policy decisions, and to assess the potential benefits of changing these decisions” (3.22)

“concern that if we were to take account of these constraints in defining the opportunity cost and setting fee levels we would create an undesirable incentive for spectrum users to lobby international fora for exclusive allocations, with potential costs to society from the loss of excluded services, to gain access to spectrum at a lower rate than would apply otherwise” (3.22)

Ofcom extends this to include international agreements that exclude other uses of the spectrum, oblige operators to use certain spectrum or constrain how they use it; or guarantee access to spectrum to any operator from any signatory country. Note the following:

“ International agreements can affect either regulatory authorities, or individual users in a sector, or both. Internationally conferred exclusive rights constrain the ability of national spectrum authorities (in the UK, Ofcom) to permit other uses in the relevant bands. Such exclusions deny access to spectrum for potential alternative uses. The opportunity cost to society of keeping these alternative users out of the spectrum is the value of the services they might provide, taking into account the existence and availability of alternative frequencies they might use instead.” (3.25)

”International obligations tend to limit the autonomy of the UK government ... (3.33)

This is a seriously flawed attitude. IATA is very concerned and surprised that Ofcom considers international agreements to be a “constraint” to efficient spectrum use; despite the fact that the UK Government is a signatory to such agreements. Such obligations do not limit the autonomy of the UK government but ensure that UK airlines can operate safely in the entire world and that international airlines can fly in UK airspace. There is no acknowledgement here of the vital role such agreements play in safety and international harmonization for services such as aviation. In addition, there is no mention of the value of these agreements and what they facilitate for society. IATA would draw Ofcom’s attention to the need to take international obligations and global harmonization into account, reflect the value they have for society and the importance of not applying AIP to such bands.

“The *Forward Look 2007* states that the UK’s “international obligations for maintaining interoperability within the global aviation community” means it “has limited scope for unilateral action in regard to changes to the management and use of aeronautical allocations since as noted earlier most aeronautical spectrum is allocated globally by the ITU.” Whilst the UK is a key participant in developing regional and global policy on navigation, it cannot easily act in isolation concerning the navigation infrastructure as it would undermine the ability to discharge international obligations. Furthermore, if the UK proceeded with uncoordinated mandatory requirements for navigation systems, it could result in restricting access to UK airspace, which would have a subsequent impact on the UK economy. A very significant proportion of users would need to be equipped for a new system in order for it to be operationally viable.” (p.40)

The Ofcom consultation states that “Changing international exclusive allocations can often be a very slow process, and neither UK authorities nor their affected stakeholders can impose change unilaterally. However, deciding not to set fees in the UK on these grounds would reduce or eliminate incentives on national sectoral regulators (in this case, the CAA and/or the DfT) to consider the case for pursuing such changes, with potentially distorting outcomes at the international level.” (3.27)

These statements confirm that neither the UK nor its stakeholders (here airlines and their passengers) can unilaterally impose change. How then can applying AIP on aviation result in better efficiency? This is the entire flaw in their argument - AIP would not increase efficiency but only revenue to the UK.

## **9. Methodology for setting opportunity cost**

**Ofcom puts forward a number of ways that opportunity cost can be calculated but it is unclear exactly which way they would be considering.**

Ofcom concludes that it “intends to set AIP fees conservatively, initially towards the bottom of the opportunity cost range defined by the value of spectrum in existing uses and its value in alternative uses. AIP fees may then be adjusted towards emerging opportunity cost levels at regular review points, on the basis of market developments. AIP fees will therefore be set by reference to the long run opportunity cost value of the spectrum in any use, rather than being potentially defined by the existing use alone, in the way that would be anticipated to be signalled in a fully developed spectrum market”. (2.31)

IATA welcomes Ofcom clarification of this proposal, although it believes such details are mandatory in a valid Impact Assessment and will wait until that appears to comment.

### **a. Cave Audit – Zero Opportunity Cost**

In the process of taking advice, Ofcom should ensure that users, regulators and government are fully aware of the recommendations of the Cave Audit and confirm that it is minded to respect these recommendations.

“The Cave Review of March 2002 stated that “for some spectrum uses, though, the opportunity cost will be zero. This will occur where use of a particular band in the UK has been exclusively defined through international agreements and incumbents have no scope to change their spectrum use”. (3.17)

The zero opportunity cost is justified, as the Cave Audit recognises, because of international constraints.

Ofcom appears to support the argument that no congestion means zero opportunity cost. This suggests that underutilisation of aeronautical spectrum should be rewarded by zero opportunity cost ratings.

IATA’s position is that Ofcom must follow the description in the Cave Audit for zero opportunity cost. AIP is thus not applicable to aeronautical spectrum

## **b. Opportunity cost based on Business Radio Case**

Ofcom is proposing that aviation pays fees on VHF channels comparable to fees charged to users of Business Radio.

“In the case of aeronautical VHF channels, which can have near UK-wide coverage, we propose that the pricing algorithm should be similar to that which applies to Area Defined Business Radio licences. Under these arrangements, a range of standardised AIP rates would apply, which seek to reflect relative levels of congestion at different locations (in the case of localised maritime channels), the overall popularity of the frequency band (for example whether internationally harmonised), the area covered by transmissions and whether the channel is shared or provided for exclusive use. We also propose that account should be taken of whether simplex or duplex operation is deployed.” (4.34)

“Fees for Area Defined Business Radio licences take into account the overall popularity of the frequency band and the geographic coverage”(4.35)

“Our initial view is that, given the current levels of congestion, internationally harmonised maritime and all aeronautical VHF channels should each be considered, for pricing purposes, would be classified to be in “Highly Popular” bands, and UK maritime channels, which are on the whole less congested, would be considered, for pricing purposes, to be in “Medium Popular” bands.”(4.36)

This is a flawed decision for the following reasons:

The aviation sector is significantly different from the business radio sector. Whilst radio spectrum is essential to safe and efficient operations, it is not our principle service as is the case for Business Radio.

Implementing the AIP proposals for aviation won't lead to more efficient use, greater flexibility to change use, or extended rights to buy and sell spectrum, as it was argued to do for business radio. In addition a fee structure for aviation must consider the impact on all users, particularly general aviation and the military. IATA does not consider this model would be an appropriate one for the aviation sector.

## **10. Cost and Competition**

Ofcom's mandate only covers charges to Wireless Telegraphy (WT) licences.

“AIP is usually applied directly to the WT Act licence holder or Crown user, as the direct user is often best able to respond to the price signals presented by AIP. Ofcom has legal powers to require WT Act licensees to pay AIP. The Crown enjoys immunity from the provisions of the WT Act and, therefore, has no need of licences and cannot be legally required to pay AIP fees. However, in its response to the Cave Audit, Government reiterated its commitment to public sector users of spectrum nevertheless paying AIP on a basis, which is comparable to the basis on which AIP is paid by the private sector. It is Ofcom's expectation, therefore, that Crown users will agree to pay comparable charges. “ (3.8)

This means, according to Ofcom, that DfT, for example, would be willing to pay AIP because of Government's commitment to the Cave Audit. If this is the case, DfT would most likely pass charges to the CAA, then to NATS and then to airlines – either through airport charges or more likely through en-route charges. En-route charges would affect all carriers operating in UK airspace.

The economic theory related to opportunity cost assumes that the user has a choice. Imposing a charge where there is no choice is simply a form of taxation.

Therefore, AIP would be a tax rather than a charge and that is counter to ICAO policy.

IATA's position is that charging AIP would result in a tax on airlines and their customers. IATA opposes taxes as they have no benefit for improved operations create competitive distortions, and could reduce economic benefits that aviation brings to the UK.

## **11. Precedent**

Moreover, if the UK introduced AIP it is reasonable to assume that other States would follow. Hence the cost burden on airspace users, particularly UK airlines, could be substantial without any added value.

This is contrary to the UK Government commitment to the Single European Sky programme that seeks to simplify air traffic management over Europe, not make it more complex.

In addition, if there is impact on international carriers, the potential is there for other States to reciprocate and tax UK carriers in their airspace.

IATA believes UK national application of AIP opens the door to other individual State actions and is contrary to the UK international commitments and regional efforts to produce more efficient use of ATC and spectrum.

## **12. Charging for aeronautical VHF radiocommunications channels.**

Ofcom is proposing to charge AIP on Aeronautical VHF radiocommunications channels in the first instance.

Ofcom claims its objective is to promote efficient use of radio spectrum.

With respect to VHF communications the consultation paper may be considered to oppose this objective.

The reality in Europe is that the VHF communications radio spectrum supports over 10,000 assignments. It is an excellent example of maximising value within the international constraints imposed on aviation. Also, these assignments substantially exceed the envisaged number when the spectrum, that has not been increased, was originally allocated.

However, the consultation paper argues that because the spectrum is efficiently used it is denying non-aviation users. International obligations of the United Kingdom would not allow non-aviation users so, by definition, no other users can be denied. In other words, the economic opportunity cost is zero. Indeed the Cave Audit, referred to in the consultation paper, supports a zero opportunity cost.

The consultation paper also argues that if spectrum is underused then there is no opportunity cost. Indeed this could imply that under-utilisation of spectrum is financially advantageous.

The paper does not consider the fact that ground transmissions are subject to different protection levels. En-route transmissions require a large protected volume while some services have no protection. If AIP were imposed then all license holders could reasonably demand protection that would make frequency planning in Europe impossible.

The consultation paper is silent on whether pricing would be a function of transmitter bandwidth or receiver (front-end) bandwidth. Some radar front-ends have wide bandwidths that would need protecting which would be expensive for users. Failure to do so could result in unwanted interference reducing the sensitivity of the radar thereby impairing performance.

IATA believes application of AIP to VHF bands would be inappropriate, unacceptable from a spectrum management point of view and runs counter to Ofcom arguments for efficient use of spectrum. The zero opportunity cost indicated in the Cave Audit should be applied.

### **13. Pricing Levels**

Aviation is a global industry that can only function if there is global interoperability. This is ensured through international standards agreed through the International Civil Aviation Organization (ICAO).

Manufacturing industry does not commit to the production of equipment without there being standards in place.

Hence, in the vast majority of cases, users have no choice and so opportunity costing is inappropriate.

IATA does not want to consider pricing propositions until a valid Impact Assessment has been carried out. Our general position is pricing without any benefit is a tax. We continue to oppose taxes that are revenue generating tools and not beneficial

### **14. Disregard of aviation efforts underway to improve efficiency**

International air transport has grown from 5 million passengers in 1945 to 1.6 billion passengers today. Despite this, we have not asked for more spectrum.

Aviation – as a sector – has been and is actively seeking to improve efficient use of radio spectrum within the international and safety considerations – which we – by the way- consider enablers rather than constraints.

We are already sharing many of our bands - the primary radar is one very pertinent example where maritime and defence also have primary radar.

The last WRC agreed to the sharing of a number of our bands, such as the 5 GHz for other aeronautical systems such as telemetry and security systems. This band is now being considered for WRC 11 with respect to Unmanned Aerial Systems and the aviation sector works closely together and with national radio regulators to find sharing solutions.

In the U.S. and Europe, NextGen and Single European Sky programmes and implementation of 8.33 kHz channel spacing are all examples and States have invested much time and resources to ensure they achieve their goals.

All of these initiatives are of importance to all airlines as those not based in one area may fly over it and thus will benefit.

The Ofcom consultation does not take into account all the work being done in the aviation sector, mostly at governmental level and with the commitment of the UK Government, to improve air traffic management and efficient use of radio spectrum. An Impact Assessment must consider all these issues.

## **15. Timing of implementation**

Should Ofcom continue with their plans to impose AIP on aeronautical bands, they are considering a phasing-in period.

“Ofcom recognises, in taking all its fee decisions, that a sudden change in spectrum costs could have unexpected and detrimental impacts in the short term if this was to disrupt the provision of goods and services. It will be important, therefore, to consider what impact a change in spectrum costs would have on the services which depend on access to spectrum, and to understand those businesses’ cost profiles and other aspects that affect their ability to manage input price changes”(4.105)

“Ofcom recognises that a phasing in period may be appropriate particularly in cases where users need time to adjust to paying AIP for spectrum that previously had a zero valuation and zero (or low) price.”(4.107)

“We do not propose to delay the implementation of licence fees, where these are proposed, specifically in respect of the timetables needed to conclude international negotiations. In the first instance, this is because AIP is not aimed at securing or promoting any particular change of use. If it is efficient, in terms of the benefits to users and any wider benefits desired by the CAA, DfT or the MCA, for any use to remain unchanged, then there is no need for any changes to international agreements so the timing of international negotiations is not relevant.”(A6.93)

“Further, the judgment by users and their regulators about whether to prioritise the pursuit of an internationally-agreed change in relation to a particular use, in preference to making changes that can be implemented nationally in one band or another, or to consider band-sharing in any band, is one for them. The length of time taken to secure any international agreement, as well as the likelihood of securing support from other countries, affects such cost: benefit judgments”. (A6.94)

“That is, if there are savings potentially available from a change of use, or from band-sharing, that outweigh the costs of making such a change, the value to users and their regulators of that change is affected by how quickly it can be implemented. Early benefits are typically worth comparatively more than benefits of the same financial value that would be available later on. Setting prices for spectrum should ensure that these costs and savings are reckoned in the same way with all other costs and savings, including how quickly benefits or savings can be expected to arise.”(A6.95)

“However, if there is an international agreement expected in the very near future, or one has been taken but not implemented that will allow for a planned technology change, there may be justification for planning the implementation date for pricing such that we are not creating unnecessary or redundant incentives. That is, if users are in the process of planning and implementing a firmly-decided change that will release spectrum, and are incurring costs associated with that change, and that spectrum is not currently subject to AIP, it might not achieve anything in terms of long term spectrum efficiency benefits to charge for the spectrum they are vacating. Any such decision to postpone pricing would need to be reviewed if for any reason the planned change was materially delayed, or cancelled. (A6.96)

“Indeed, we appreciate that many holders of spectrum are not in a position to make rapid changes to their use of spectrum in response to the application of AIP. The use of AIP is none the less justified by the benefits that should materialise in the longer term, as better decisions are made in light of increased awareness and appreciation of the value of spectrum – better decisions that should lead to more efficient use of the spectrum and economic resources more generally.” (3.2)

IATA requires a valid Impact Assessment before consideration can be given to these opinions. On the one hand, Ofcom recognises the need for long-term international decisions, on the other it is proposing to impose VHF pricing by 2009. IATA welcomes Ofcom clarification of these points.

### **Conclusion**

IATA’s view is that there is nothing to be gained to the UK economy or the aviation sector by charging AIP on aeronautical spectrum. To the contrary, we feel it would create an economic burden, competitive distortions, affect all carriers flying through UK airspace, set precedents for other national activities in contradiction of international safety obligations and even create an environment where international repercussions could impact on UK aviation and its economy.

The process and content of this consultation are flawed and an Impact Assessment in accordance with UK policy is required before this consultation should proceed.

## Response to the Ofcom Consultation Questions

IATA is providing answers to the following questions on the basis of information Ofcom provided in the consultation. IATA believes that such information is insufficient and unfounded without a proper Impact Assessment.

### **RESPONSE**

*Question 1: How should Ofcom manage the process of taking advice from users, regulators and government on efficient apportionment of AIP fees in the maritime and aeronautical sectors? Are any new institutional arrangements needed?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate. In any case Ofcom must follow the UK Code on Practice of Consultation. Ofcom should respect this Code of Consultation and adhere to its requirements as well as satisfying its statutory obligations.. Among other things an Impact Assessment should be undertaken should include safety, airspace efficiency and economic aspects.

International regulation, that is essential for global aviation, must be respected.

In addition, Ofcom should confirm that any proposals will be within the scope of the UK Government's commitments to aviation as formulated in the recent 2007 Forward Look.

In the process of taking advice, Ofcom should ensure that users, regulators and government are fully aware of the recommendations of the Cave Audit and confirm that it is minded to respect these recommendations.

*Question 2: If you consider that our proposals for pricing ground station users for any spectrum would be likely to have a detrimental impact on safety, please let us know. In order for us to understand your assessment fully, it would be helpful if you could outline the mechanisms whereby this might happen.*

This is not a question. Aviation's top priority is safety. Sharing of aeronautical radio spectrum that is used for safety of life will likely have a negative impact on safety.

These aspects must be included in a valid Impact Assessment.

*Question 3: Do you have any evidence which indicates that AIP charged to ground stations could have a material detrimental impact on UK competitiveness?*

This question assumes that AIP, if implemented, can simply be passed from NATS to the airlines and then to their customers. This is not the case. Airlines operate in highly competitive markets with the UK being particularly so. Airfares and rates need to be related to the willingness and ability of the customer to pay and cannot simply be increased in lockstep with increased costs. As the imposition of AIP will not deliver any added value to the airlines and as it is unlikely that AIP could simply be passed on to consumers, this additional cost would have to be absorbed by the airlines.

Moreover, if the UK introduced AIP it is reasonable to assume that other States would follow. Hence the cost burden on all airspace users, including UK airlines, could be substantial without any added value.

*Question 4 : Taking into account the information available in this document, including that set out in Annex 5, our initial views on VHF radiocommunications licence fees and on the reference rates for bands in other uses, and any information you have about the organisations to whom we are proposing to charge fees, please provide any evidence that you think is relevant to us in considering the financial impact of the fees we intend to propose for VHF radiocommunications, or for other uses.*

This is not a question. Ofcom's objective is to promote efficient use of radio spectrum. With respect to VHF communications the consultation paper may be considered to oppose this objective.

The reality in Europe is that the VHF communications radio spectrum supports over 10,000 assignments. It is an excellent example of maximising value within the international constraints imposed on aviation. Also, these assignments substantially exceed the envisaged number when the spectrum, that has not been increased, was originally allocated.

However, the consultation paper argues that because the spectrum is efficiently used it is denying non-aviation users. International obligations of the United Kingdom would not allow non-aviation users so, by definition, no other users can be denied. In other words, the economic opportunity cost is zero. Indeed the Cave Audit, referred to in the consultation paper, supports a zero opportunity cost.

The consultation paper also argues that if spectrum is underused then there is no opportunity cost. Indeed this could imply that under-utilisation of spectrum is financially advantageous.

The paper does not consider the fact that ground transmissions are subject to different protection levels. En-route transmissions require a large protected volume while some services have no protection. If AIP were imposed then all license holders could reasonably demand protection that would make frequency planning in Europe impossible.

*Question 5: Do you agree that there is little to be gained, in terms of economic efficiency, from charging AIP to WT Act licences for aircraft?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate. IATA's view is that there is nothing to be gained to the UK economy or the aviation sector by charging AIP to the aviation sector. To the contrary, we feel it would create competitive distortions, affect all carriers flying through UK airspace, set precedents for other national activities in contradiction of international safety obligations and even create an environment where international repercussions could impact on UK aviation and its economy.

*Question 6: Do you consider that we should discount fees for any particular user or type of user? Specifically, do you consider that there should be a discount for charities whose object is the safety of human life in an emergency?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate. The consultation paper seeks to distinguish between "safety of human life" and "safety of human life in an emergency". Aviation uses its radio spectrum for safety of life purposes, regardless of situation, and should not be charged AIP

*Question 7: Do you agree that Ofcom should apply AIP to ground stations' use of maritime and aeronautical VHF radiocommunications channels, to help manage growing congestion in current use and to ensure that the cost of denying access to this spectrum by potential alternative applications is faced by current users?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate.

No. The economic theory related to opportunity cost assumes that the user has a choice. Imposing a charge where there is no choice is simply a form of taxation.

Aviation is a global industry that can only function if there is global interoperability. This is ensured through international standards agreed through the International Civil Aviation Organization (ICAO).

Manufacturing industry does not commit to the production of equipment without there being standards in place.

Hence, in the vast majority of cases, users have no choice and so opportunity costing is inappropriate.

With regards to VHF communications there is a choice between 25 kHz and 8.33 kHz systems. However, the propagation characteristics of VHF mean that transmissions from the UK can impact neighbouring States. For this reason frequency management is co-ordinated at international level. A UK provider may wish to convert to 8.33 kHz but the international ramifications may not permit it. AIP charging could not force the provider to change and so is inappropriate.

*Question 8: Do you agree with our initial view that it would be appropriate to apply a pricing system similar to that already existing for Business Radio licences to maritime and aeronautical VHF communications? If not, what are your reasons for proposing that we should develop a fee structure for maritime and aeronautical VHF channels which is distinct from that already established for Business Radio?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate.

No, IATA considers that there should not be any fee structure for aeronautical VHF channels. The business radio sector is significantly different to the aeronautical sector and its proposed application is inappropriate. A fee structure should not be developed without first assessing the impact on all users, particularly general aviation and the military.

*Question 9: Are there any short term reasons specific to the sector(s) why it would be inappropriate to apply fees from April 2009?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate. The imposition of fees where users have no choice is not in accord with the economic theory behind incentive pricing.

It is noted that the broadcasting industry's conversion from analogue to digital television has been given an extended timescale to allow users to re-equip. Digital televisions are available today unlike new aviation equipment that is constrained by international agreements.

*Question 10: Ofcom would welcome stakeholders' views on the factors which should be taken into account when apportioning fees between individual users of radars and racons.*

This is not a question. IATA requires the opportunity to carefully review a valid Impact Assessment before serious consideration can be given to these issues.

The question presumes the application of fees. A key question is the degree to which the United Kingdom requires radar coverage for security purposes. Any radar providing information to the military and/or security services should not be considered. Any fees should be levied on new users who must also be entirely responsible for the costs of demonstrating compatibility.

*Question 11: Do you agree with our initial view that a reference rate of £126k per 1 MHz of national spectrum for L band and S band radar spectrum would achieve an appropriate balance between providing incentives to ensure efficient use of spectrum while guarding against the risks of regulatory failure in setting the reference rate too high? If you consider a different rate would be more appropriate, please provide any evidence that you think we should take into account.*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate.

No. We have not had the opportunity to carefully review a valid Impact Assessment. We have nothing to base our decision on.

The consultation paper is silent on whether pricing would be a function of transmitter bandwidth or receiver (front-end) bandwidth. Some radar front-ends have wide bandwidths that would need protecting which would be expensive for users. Failure to do so could result in unwanted interference reducing the sensitivity of the radar thereby impairing performance.

*Question 12: Do you agree with our initial view that a reference rate of £25k per single MHz of national spectrum would be appropriate for deriving fees for licences to use X band radar?*

This question presumes that AIP fees will be applied to the aeronautical sector. IATA believes that this assumption is inappropriate.

No. We have not had the opportunity to carefully review a valid Impact Assessment. X-band radar is sensitive to unlicensed UWB transmissions. Hence any fees levied would not guarantee protection from interference. Such interference could reduce the performance of the radar leading to a reducing in air traffic capacity.

*Question 13: Do you agree that, generally, spectrum used by aeronautical radionavigation aids is currently uncongested? Do you believe that this may change during the next few years and, if so, approximately when?*

No. The majority of spectrum used for aeronautical radionavigation is congested. For example, DME and military use of L-band. This situation is not expected to change during the next few years.

*Question 14: Do you agree with the basis on which Ofcom has arrived at its initial view on reference rates for aeronautical radionavigation aids?*

No. Ofcom appears to support the argument that no congestion means zero opportunity cost. This suggests that underutilisation of aeronautical spectrum should be rewarded by zero opportunity cost ratings.

The zero opportunity cost is justified, as the Cave Audit recognises, because of international constraints.

### **CONCLUSION**

AIP should not be applied to aeronautical bands. Sharing of aeronautical radio spectrum that is used for safety of life could have a negative impact on safety.

Ofcom did not follow due consultation process nor seriously consider safety, international obligations and standards. Nor did it consider the current efforts to improve efficiency through the WRC and Single European Sky.

The UK is bound by or committed to these obligations and Ofcom cannot pretend that they are not applicable in the case of aviation.

A valid, formal Impact Assessment must be carried out before Ofcom continues with this consultation process.