
Satellite Filings Cost Recovery

Proposals for implementing new charging powers
under section 28A of the Communications Act 2003 –
Our intended notice of charges

CONSULTATION:

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About this document

A satellite filing provides international recognition of satellite networks/systems under the International Telecommunication Union (ITU) Radio Regulations and Ofcom carries out satellite filing work as the UK notifying administration under the Radio Regulations.

We currently perform our satellite filing work at no charge to the organisations, often satellite operators, that request that work. Recognising that the cost of satellite filings work is currently covered by public money, and wishing to amend this anomaly, the Government initiated legislation to give us new powers in 2017 (under section 28A of the Communications Act 2003) to recover the costs of our satellite filing work from the organisations that request that work.

This consultation document provides our proposed charging approach to recovering the costs of our satellite filings work, and the charges that we propose to apply. If we decide to proceed with our favoured approach, we anticipate publishing a Statement on our charges by the end of 2018, and to introduce those charges from the date of the Statement.

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1. Executive Summary

- 1.1 Satellites provide a diverse range of important benefits and offer a unique ability to deliver communications to many parts of the world not adequately served by other means.
- 1.2 To operate a satellite network or system, it is necessary to obtain access to appropriate spectrum and orbital location(s). The coordination of the frequencies at which a satellite operates and its position in orbit takes place within a framework of international rules administered by the International Telecommunication Union (ITU). A satellite filing is a tool to obtain international recognition of these spectrum and orbital resources under the ITU.
- 1.3 We carry out satellite filing work as the notifying administration for the UK in the ITU, including representing the British Overseas Territories (BOTs), the Channel Islands and Isle of Man. The process for managing satellite filings in the UK is set out in detail in our 'Procedures for the Management of Satellite Filings' (the Procedures).
- 1.4 Our satellite filing work includes the following activities:
 - Submitting new filings;
 - Managing filings (through the ITU process);
 - Notifying filings;
 - Maintaining notified filings;
 - Dealing with ad hoc requests (for filings going through the ITU process); and
 - Undertaking project work related to performing our satellite filing work.
- 1.5 As at 31 March 2018, we were managing 215 active filings plus maintaining 89 notified satellite filings (304 satellite filings in total), on behalf of 25 organisations. This work costs Ofcom approximately £1m per year to manage on average.
- 1.6 To date we have performed this work at no charge to the organisations (often satellite operators) who request that we manage their satellite filings, and the costs of doing so are currently covered by retaining funds received for our radio spectrum functions under the Wireless Telegraphy Act 2006.
- 1.7 Recognising that the cost of satellite filings work is currently covered by public money, and wishing to amend this anomaly, the Government initiated legislation to give us new powers in 2017 (under section 28A of the Communications Act 2003) to recover the costs of our satellite filing work from the organisations that request that work.
- 1.8 We are now proposing to introduce charges to recover these costs. This consultation document therefore sets out our proposed charging approach and the charges that we propose to apply. However, before we decide to introduce such charges, we would welcome stakeholders' views on our proposals set out in this document, including on our specific consultation questions (as summarised in Annex 4).
- 1.9 These proposals do not change how we undertake our satellite filing work. We remain committed to delivering this work efficiently and to a high standard. In addition, as Ofcom's budget is limited by an overall spending cap, introducing charges would simply

change the source of funding for our satellite filing work, rather than making additional funds available for that work.

Proposed charging approach

- 1.10 Any approach to charging for our satellite filing work is framed by the legislative constraints, including the requirement not to charge for filing work requested before we have given notice of our charges, and to annually reconcile aggregate costs and charges so that we do not recover more than our associated costs in a given year (where we do, we must adjust for it in the following year).
- 1.11 In addition, our three core principles, which reflect our general duties, are that our charges should:
- reflect our costs in a transparent and proportionate way. We consider the most significant drivers of our costs are:
 - type of filing activity – such as submitting, modifying, managing and notifying a filing.
 - filing coordination requirements – that is, whether the filing requires coordination or not, or if the coordination is for a geostationary orbit (GSO) or non-GSO filing.
 - filing period - the length of filing process, which can take up to seven (in some circumstances eight) years.
 - be practicable and easy to implement. Our proposed approach should:
 - achieve our aims with the simplest possible approach; and
 - be relatively straight forward and cost effective to introduce.
 - provide clarity and certainty to stakeholders, so far as is practicable. We are mindful of the need to ensure that:
 - stakeholders understand what they would be required to pay and when, so that they can plan for these charges; and
 - we provide a degree of certainty about the level of charges, in so far as it is practicable to do so.
- 1.12 We have identified and assessed four potential charging options in light of the legislative constraints and principles noted above:
- **Option 1: One-off charge per filing** - lifetime cost of filing is charged upfront in a one-off payment.
 - **Option 2: Application fee plus flat annual fee per filing** - charge an application fee for new submission (including modifications) and notification requests, plus an annual management charge per filing until notification. Same annual charge for all filings.
 - **Option 3: Application fee plus weighted annual fee per filing type** - as for option 2, but the annual management charge differs for each type of filing (weighted for effort).
 - **Option 4: Hourly rate** - charge a fixed hourly rate based on average, fully loaded FTE (full time equivalent) resource costs, only for work we do.

- 1.13 Given the legislative constraints, the total costs recovered would be the same under all options.
- 1.14 At this stage, we favour adopting option 3. We consider that this option takes account of the constraints of section 28A and provides the best overall fit against our three core principles. It better reflects costs incurred as it is closer to the drivers of our costs than an upfront charge (option 1). It is the best way to smooth variability in charges over time, which is more difficult to do under an upfront charge given the number of filing requests we receive changes from year to year. This option is also consistent with our existing charging processes for other sectors, so would be relatively administratively simple and cost effective to implement, and provides stakeholders with the best understanding of estimated total charges. We also consider that option 3 would be the most appropriate option when considered in the context of our general duties, as discussed in section 4.

Summary of proposed charges under our favoured option

- 1.15 **When will the charges apply?** - we propose to introduce these charges from the 'implementation date'. That is, the date of our Statement, which we expect to publish by the end of 2018, and which will provide the formal notice of our 2018/19 charges.
- 1.16 **What do our charges apply to?** - we propose to charge for new filing submissions (and activities related to those new submissions) received from the implementation date. Existing filings and those received prior to our implementation date will not incur charges. Filings which are suppressed or cancelled no longer incur charges, from the date of such suppression or cancellation.
- 1.17 **Who would our charges apply to?** – we propose that liability applies to any organisation requesting that we perform satellite filing work for a filing submitted to us on or after the implementation date. This currently includes organisations registered (or headquartered) in the UK, BOTs, the Channel Islands or Isle of Man.
- 1.18 **How will charges be implemented?** – charges will be based on forecast costs and volumes for the year ahead, adjusted against actuals for the previous year (following annual reconciliation as described in paragraph 1.23). We propose to publish the formal notice of applicable charges for satellite filings on our website, on or before 31 March annually from 2019 (although our first notice will be published alongside our Statement). The notice will apply to charges for the financial year following publication:
- For new submissions, modifications and notifications, we propose that these are payable on application.
 - For annual management charges, we propose that organisations receive one invoice annually for their total charges for all filings in the coming year (we normally issue invoices for annual fees and charges in May, and would expect to follow the same process for satellite filing charges).
- 1.19 **What are the charges?** - we propose to charge as follows (and as summarised in Table 1):
- An upfront application fee for new submission (and modification) requests received after the implementation date.

- A notification request fee (where the request relates to a filing also received after the implementation date).
- An annual management charge between the initial request and notification (incurred on 1 April annually), for filings received after the implementation date (unless suppressed or cancelled), with different charges for the following types of filing:
 - API – filings not subject to coordination
 - CR/C GSO – filings for GSO satellite networks subject to coordination
 - CR/C non-GSO – filings for non-GSO satellite systems subject to coordination

1.20 The relative size of the charges proposed reflects our estimate of the average level of effort for different activities and types of filings (measured through an ‘effort weighting’). For example, our judgement is that on average a non-GSO filing takes approximately 50% more effort to manage annually than a GSO filing.

1.21 Table 1 sets out our proposed charges for each filing activity or type in the initial year following implementation (based on 2017/18 data. Figures have been rounded up to nearest £100).

Table 1: Proposed satellite filing charges by filing activity/type (for 2018/19)

Filing activity/type	Effort weighting	Payment due	Proposed charge (2018/19)
New submission/modification request	1.0	On date of request	£1800
API filing annual management	1.0	Q1 annually (May)	£1800pa
CR/C GSO filing annual management	3.0	Q1 annually (May)	£5200pa
CR/C non-GSO filing annual management	4.5	Q1 annually (May)	£7800pa
Notification request	1.3	On date of request	£2300

1.22 As noted earlier, at the end of each financial year, we are required to reconcile our aggregate fees against our actual costs on an annual basis. As a result, the actual charges paid by organisations will vary year by year from those given above to reflect actual volumes and costs. Charges could increase as a result of increased costs or if volumes reduced whilst costs remained relatively constant. Conversely charges could decrease where costs reduce or volumes increase. Changes in filing volumes can affect per filing charges because many of our costs are fixed. However, if there were a significant and ongoing reduction in volumes, resulting in less satellite filing work, then where possible we would consider reallocating colleagues’ time, i.e. from satellite filing work to other projects, to help reduce the impact on charges.

1.23 To implement this annual reconciliation requirement, we propose to adjust our charges in the following year to reflect actual costs and volumes. That is, for the following year’s forecast costs to take account of the adjustment resulting from reconciliation of the previous year’s costs and charges. For example, if we over-recover in one year we would

reduce the total amount to be recovered in the subsequent year by the same amount. As noted in paragraph 1.18, we propose to update our notice of applicable charges annually to reflect changes arising from our annual reconciliation.

- 1.24 To assist stakeholders with budgetary planning, Table 2 provides an illustrative example of estimated charges over the lifetime of the filing for three typical cases, based on the proposed initial year charges from Table 1. Stakeholders should note that for the reasons set out above, actual total charges will vary due to our annual reconciliation.

Table 2: Illustrative example of estimated lifetime charges, by filing type

Filing type	Payments due	Estimated lifetime charges
API uncoordinated filing notified 2 years after initial submission	£1800 initial submission + 2 x £1800 annual management + £2300 notification	£7700
CR/C GSO coordinated filing notified 6 years after initial submission	£1800 initial submission + 6 x £5200 pa for annual management + £2300 notification	£35300
Non-GSO coordinated filing notified 6 years after initial submission	£1800 initial submission + 6 x £7800 annual management + £2300 notification	£50900

- 1.25 **What happens if charges are not paid/received?** – we propose that payment is typically due in advance - when the request is made (for application or notification requests), or by May in every year for annual management charges (with liability incurred from 1 April annually). We do not anticipate processing application or notification requests unless payment is received. Non-payment of annual charges may ultimately result in Ofcom cancelling the filing(s).

Next steps

- 1.26 We are hosting a stakeholder workshop at 10.30am on Friday, 20 July 2018 to provide an overview of our proposals and give stakeholders an opportunity to provide feedback as part of our consultation process. Details for registering interest are set out in section 7.
- 1.27 Our consultation closes on 6 September 2018. If we decide to proceed with our favoured approach, we would anticipate publishing our Statement on our charging approach by the end of 2018. At the same time, we will set out how our Procedures will be updated to reflect our charging approach.

2. Introduction

Purpose of this consultation

- 2.1 This consultation document sets out our proposed approach for charging for our satellite filing work, including our intended notice of charges. We carry out this work as the notifying administration for the United Kingdom (UK) under the International Telecommunication Union (ITU) Radio Regulations, which provide the necessary international recognition of satellite networks and systems.
- 2.2 We currently perform our satellite filing work at no charge to those organisations that choose to file through the UK. Recognising that the cost of satellite filings work is covered by public money under the current regime, and wishing to amend this anomaly, the Government initiated legislation to give us new powers in 2017 under section 28A of the Communications Act 2003 (the 2003 Act), to recover the costs of our satellite filing work from the organisations that request that work.
- 2.3 Our process for managing satellite filings in the UK is set out in our publication entitled 'Procedures for the Management of Satellite Filings', published on 30 March 2016 (the Procedures)¹. This process is described further in section 3.
- 2.4 The proposals in this document do not affect how we undertake our satellite filing work, and we remain committed to delivering that work efficiently and to a high standard. In addition, as Ofcom's budget is limited by an overall spending cap, the proposals simply change the source of funding for our work, rather than making additional funds available.

Scope of consultation

- 2.5 This consultation is relevant to any company or organisation, including satellite operators, registered (or headquartered) in the UK, who submit applications to us to manage and process satellite filings to achieve international recognition under the ITU. This includes companies or organisations in the British Overseas Territories (BOTs), the Channel Islands or Isle of Man), as we also represent these jurisdictions in the ITU.²

Previous consultations on charging for satellite filings

- 2.6 We have previously consulted on introducing charges for our satellite filing work. Our 2005 Statement on Procedures for Authorisation of Satellite Networks³ consulted on the principle of charging fees for satellite filings to recover our costs and the basis for such fees. At that time, we found that the majority of the 16 respondents accepted the principle

¹ https://www.ofcom.org.uk/data/assets/pdf_file/0027/63495/new_procedures.pdf

² The 14 BOTs, Channel Islands and Isle of Man are not sovereign states and cannot become ITU Member States in their own right. We therefore fulfil the role of notifying administration for these jurisdictions under direction from the Secretary of State (under section 22 of the 2003 Act).

³ https://www.ofcom.org.uk/consultations-and-statements/category-3/satellite_networks

of fees, provided these were set on a cost recovery basis, transparent, proportionate and subject to consultation on detail.

2.7 We subsequently consulted on more detailed proposals for satellite filing charges in 2007 (the 2007 Consultation)⁴, assessing four charging options against the criteria of cost causation and ease of implementation.

2.8 The four options were:

- one-off lifetime fee per network - on application for new filings, taking account of the entire lifecycle of the satellite filing;
- fixed hourly charge – with a minimum annual fee;
- annual charge per filing– against each active filing at the start of the financial year (e.g. costs/number of UK satellite filings);
- scaled annual charge per network – as for the annual charge option, but charges are based on the stage in the lifecycle of the filing process (e.g. coordination, notification).

2.9 Our 2007 Consultation recommended adopting the fourth option (i.e. the scaled charge) as we considered at the time that it best met the objectives of transparency and proportionality and was considered a simple and effective method for recovering costs at a sufficiently granular level, whilst also providing clarity and certainty to stakeholders.

2.10 In so far as stakeholders provided a view on a preferred option (of the 11 who replied):

- the advantages and disadvantages of the options we outlined was generally supported;
- most respondents supported a scaled charge as the most balanced option, but sought more detail in order to provide substantive comments, including greater transparency of costs to understand cost drivers and how they are calculated, and improved analysis explaining why the scaled option is preferred over other options.

2.11 Many stakeholders also queried why the charges did not take account of work done by the jurisdictions we represent in the ITU, which they considered should lead to a discount.

2.12 We did not proceed further with our proposals at that time, but have taken them (and stakeholders' views) into account in developing the proposals set out in this consultation. We have previously charged for the costs of international coordination meetings.

Structure of this document

2.13 The rest of this document is structured as follows:

- Section 3 provides background information to support this consultation. It explains the satellite filing process, our role in managing filings, our funding structure and the methodology used to allocate and calculate our total satellite filing costs.
- Section 4 sets out the legal framework underpinning our new powers to set charges.
- Section 5 sets out our proposed approach to charging for satellite filings.
- Section 6 discusses implementation issues.
- Section 7 summarises our conclusions and outlines our next steps.

⁴ <https://www.ofcom.org.uk/consultations-and-statements/category-2/filings>

3. Background information

- 3.1 This section provides background information relevant to the proposals set out in this consultation. It explains the satellite filing process and our role in managing filings.
- 3.2 It also explains our funding structure and the methodology used to allocate satellite filing costs, and presents a breakdown of these satellite filing costs.

Role of satellite filings

Overview

- 3.3 Satellites provide a diverse range of important benefits to UK citizens and consumers – from broadcast TV, broadband connections, positioning, earth imagery and better weather forecasts. They also offer a unique ability to deliver communications to many parts of the world not adequately served by other means.
- 3.4 In addition, the space sector forms an important part of the UK economy, and we note the Government’s objectives to grow the sector, with a target to achieve 10% of the global market by 2030.⁵
- 3.5 To operate a satellite network/system, and realise the above benefits, it is necessary to obtain access to appropriate spectrum - for the uplink (Earth to space) and the return path downlink (space to Earth) from the satellite to stations in the service area. An orbital position in space, which influences the area of the earth’s surface that the satellite can serve (the coverage area), must also be secured. A satellite filing is a tool to obtain international recognition of these spectrum and orbital resources.
- 3.6 Spectrum and orbital positions are valuable and limited resources, and must be managed and planned to allow equitable access to all and mitigate any potential interference.
- 3.7 Currently, the majority of satellites are located in the geostationary orbit (GSO), i.e rotating around the Earth at the same rate as the rotational speed of the Earth and thus appearing to be stationary to an observer on the ground. There are plans for many new non-geostationary orbit (non-GSO) satellite systems which typically operate at a lower altitude than GSO satellites, and can operate in multiple orbital planes.

International Telecommunication Union

- 3.8 The international nature of satellite services requires that coordination of the position in orbit and the frequencies at which satellites operate, takes place within a framework of international rules administered by the ITU.
- 3.9 The ITU is a specialised agency within the United Nations (UN) for coordinating global telecommunications networks and services. It operates under an international treaty

⁵ [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/444918/ SPACE-IGS_report-web-JJF-V2.0.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/444918/SPACE-IGS_report-web-JJF-V2.0.pdf)

governing the use of the radio spectrum to which the signatory ITU Member States (of which the UK is one) are bound.⁶ Its regulations (formalised in the ITU's Radio Regulations) govern the following areas:

- frequency allocations to different categories of radiocommunication services;
- the rights and obligations of Member States in obtaining access to spectrum and orbital resources; and
- international recognition of these rights by recording frequency assignments in the Master International Frequency Register (MIFR), and as appropriate, orbital positions used or intended to be used.

- 3.10 Member states, including the UK, are each represented by their national regulatory authority (NRA), which is the government department or service responsible for discharging the obligations set out in these instruments and for developing appropriate national legislation to implement these obligations.
- 3.11 The Radio Regulations are reviewed and revised every three to four years at the World Radiocommunications Conference (WRC); the next WRC will be held in November 2019. Agenda Item 7 specifically addresses potential changes to the rules and regulations pertaining to satellite filings. In between WRCs, ITU Study Groups conduct studies and prepare global standards/ recommendations for the international community. We represent the UK at these international meetings.

Ofcom's role in managing satellite filings

- 3.12 We act as the notifying administration in the ITU for the UK. Our role ensures that new satellite filings can be brought into service without causing harmful interference to, or receiving harmful interference from, existing or planned services, as required under the ITU Radio Regulations. The process that organisations filing through the UK are required to follow are set out in our Procedures.
- 3.13 As at 31 March 2018, we were managing 215 active filings plus maintaining 89 notified satellite filings (a total of 304 satellite filings), on behalf of 25 organisations.
- 3.14 We undertake several types of activities in dealing with satellite filings. The activities which we consider fall within the meaning of 'satellite filings work' that relates to our new charging powers (see further discussion in Section 4), are as follows:
- Submitting the filing application – as set out in the Procedures, we review the satellite operator's business plan, assess and validate the filing's technical characteristics and ensure we are content with the due diligence requirements (as set out in Table 1 of the Procedures), before submitting the filing to the ITU. This activity includes addressing queries from the ITU before the submission is accepted. For submissions containing frequencies subject to coordination, the date of receipt is vital in securing priority against other satellite filings.

⁶ Information about the ITU and the Radio Regulations is available at <http://www.itu.int>.

- Managing the filing – this is an ongoing part of our satellite filing work following the initial submission until the filing is ready to be notified (see below), which can take up to seven years⁷. The details we submit are circulated to other NRAs (via the fortnightly ITU publication, the BRIFIC⁸), who we then engage with as necessary to coordinate the filing during that period. Specific activities we carry out here are:
 - handling correspondence between NRAs, the ITU and satellite operators/ organisations, arising from the publication of the filing in the BRIFIC (our level of work varies depending on coordination requirements);
 - reviewing the BRIFIC to consider impacts on active UK filings (pre-notification) and drafting of appropriate responses to NRAs;
 - international coordination meetings and ratification of coordination agreements between organisations;
 - due diligence meetings and information (including annual review of progress reports as well as information specified in Table 1 of the Procedures) to ensure satellite operators remain on track with the project (against the original filing); and
 - where a filing requires, reviewing and submitting Power Flux Density Masks.
- Notifying the filing – once we are satisfied that all coordination is complete or carried out to the operator/organisation’s best efforts, we submit the notification information to the ITU. Once the satellite filing has been notified, it then obtains international recognition. This activity covers work we do, until the point that the filing is published as notified and recorded in the MIFR, to:
 - address any outstanding coordination;
 - submit the notification to the ITU;
 - address queries from the ITU before the notification is accepted;
 - confirm the satellite has been brought into use (BIU) with the ITU;
 - review and submit Resolution 49 submissions, which contain information on the satellite filing, spacecraft manufacturer and launch service provider.
- Maintaining notified UK filings – in order to protect the operational characteristics of notified satellite filings from proposals for new/modified filings, we review the BRIFIC, and draft responses as appropriate (between NRAs, the ITU and satellite operators/organisations). This activity may be ongoing in perpetuity following notification, as filings can remain in place indefinitely (subject to extensions), if occupied (and replaced) by a satellite capable of transmitting or receiving on the filed frequency assignments. This includes satellite filings which have been suspended and only ceases when a satellite filing is cancelled/suppressed.

⁷ Or eight years for satellite services using planned bands (under appendices AP30, 30A and AP30B of the Radio Regulations)

⁸ The BRIFIC (BR International Frequency Information Circular (Space Services)) is published every two weeks by the ITU-BR in accordance with provisions 20.2-20.6 and 20.15 of the Radio Regulations. It is official acknowledgement of receipt of frequency assignments, as well as statutory publication of the particulars of frequency assignments recorded in the Master Register - see <https://www.itu.int/ITU-R/go/space-faq-brific/en>.

In addition, although most cases of interference to/from notified satellites are resolved directly by the satellite operators concerned:

- where interference originates in the UK, we may provide advice, investigate and resolve specific sources, and carry out any relevant enforcement action;
 - where interference originates outside the UK, we have the ability to pass issues to other administrations to investigate;
 - where interference arises between satellite networks, we have the ability to investigate and (if necessary and appropriate) request UK operators to stop interfering. For satellite networks filed with other NRAs we can liaise with those other NRAs in order to resolve the case.
- Ad hoc requests from organisations or NRAs which go beyond normal management of the filing (as set out above), for modifying a filing, transfers, suspensions, lodging an appeal to the Radio Regulations Board (RRB), cancellations/suppressions, and bringing a filing back into use.
 - Policy and project work – work we carry out to support satellite filings policy, e.g. international work on Agenda Item 7 at WRCs and updates to the Procedures (see also paragraph 3.34).

3.15 The charges we plan to introduce are intended to recover our costs for performing the range of satellite filing work set out above (subject to paragraph 5.25). The range of work may vary from time to time, for example if new activities result from decisions at a WRC. If we need to carry out such new activities in performing our satellite filing work in the future, we intend to include them within our satellite filing cost base.

3.16 We note the ITU satellite filing process changed on 1 January 2017, following a decision taken at the WRC 2015. This removed the Advance Publication Information (API) requirement for satellite filings subject to coordination. This reduces the number of overall submissions we now receive, as filings follow either an API (no coordination) or a Request for Coordination (CR/C) route.

3.17 Throughout this document, we use the term ‘API filing’ to refer to a filing not subject to coordination and ‘CR/C filing’ to refer to a filing subject to coordination.

Satellite filing charges by others

3.18 While the UK does not currently charge for its own satellite filings work, charges are made by others, including the ITU.

ITU cost recovery charges

3.19 The ITU already charges fees for processing satellite filings on a cost recovery basis.⁹ They apply to satellite filings received by the ITU Radiocommunication Bureau (ITU-BR) which are subsequently published on the BRIFIC.

⁹ In accordance with the provisions of ITU Council Decision 482, as amended. [https://www.itu.int/en/ITU-R/space/Documents/Decision%20482\(C2013\)-E.pdf](https://www.itu.int/en/ITU-R/space/Documents/Decision%20482(C2013)-E.pdf)

- 3.20 The relevant NRA is ultimately responsible for the payment of these charges and any default on payment results in the cancellation of the satellite filing by the ITU-BR. In the UK, as noted in section 10 of the Procedures, the ITU sends its invoices to us, which we forward to the organisations concerned. Organisations then pay the ITU directly. If the ITU does not receive the required payment, the ITU-BR will cancel the filing, after informing us.
- 3.21 ITU charges are based on the type and technical characteristics of the satellite filing.

Other NRA's charges

- 3.22 A number of NRAs, in accordance with their own respective regulations and procedures, charge for the services they provide to establish and maintain satellite networks. Although not all NRAs charge for satellite filing work, NRAs comparable to the UK — with an established satellite sector — generally do.
- 3.23 To enable a comparison to the UK proposals set out in this document, we have set out our understanding of charges from various NRAs including Australia, Germany, the Netherlands and US in Annex 5. We discuss this comparison further in paragraph 5.53.

Funding and cost allocation

Our funding structure

- 3.24 This subsection explains how Ofcom is funded and how the proposals set out in this consultation document sit within this funding structure.
- 3.25 Our expenditure is currently funded in three broad ways:
- Fees and charges collected from industry for the costs of regulating the regulatory sectors we oversee. Examples of this funding strand are television and radio broadcasting licence fees, and administrative charges for telecoms networks and services and postal services. The 2003 Act and Postal Services Act 2011 requires that we raise income from each of the sectors we regulate to cover only the costs incurred in regulating that sector, and we do so through setting fees and administrative charges. The costs recoverable from relevant sectors is published annually in our Tariff Tables¹⁰.
 - Retaining sums received for our radio spectrum functions under the Wireless Telegraphy Act 2006 (the WTA 2006) to fund relevant expenditure including spectrum management and those functions for which we cannot levy fees or charges. (Our satellite filings work is currently funded in this way.)
 - Grant-in-aid from the Government to cover the costs for spectrum clearance and awards, including spectrum efficiency grants.
- 3.26 In the 2015 Government Spending Review, our budget cap was set at a flat cash rate (£115.7m) for the period 2016/17 to 2019/20, equating to an approximately 1.7 per cent annual real term reduction (although our budget cap was subsequently increased to meet the costs of new BBC responsibilities). This follows a trend of delivering significant savings

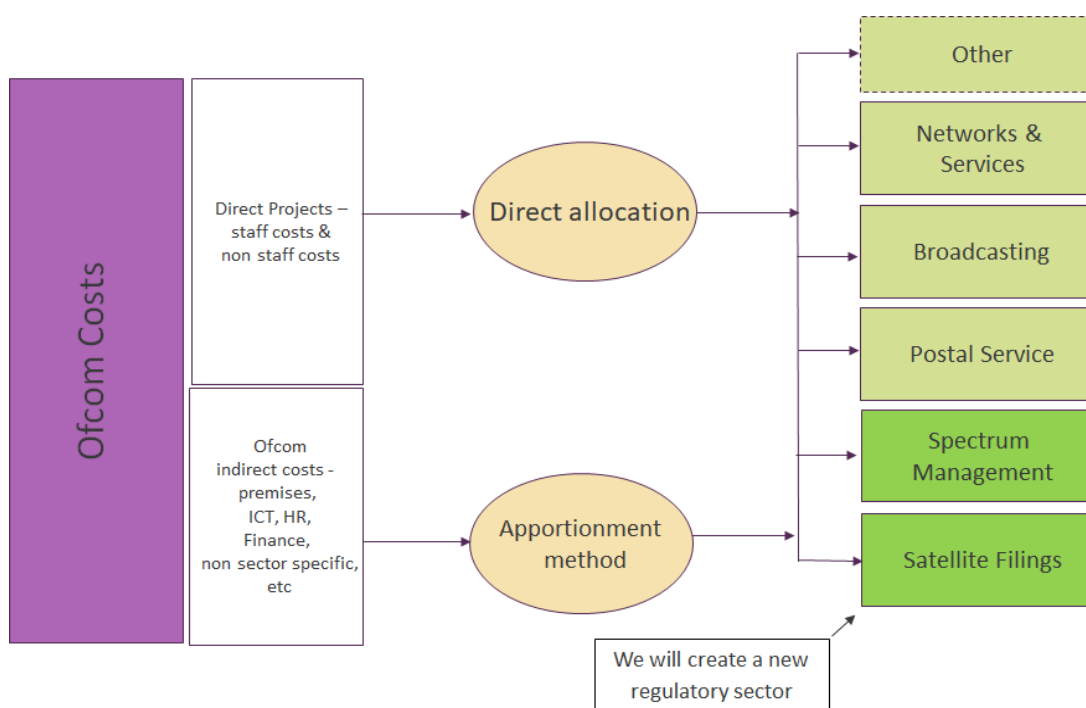
¹⁰ <https://www.ofcom.org.uk/about-ofcom/annual-reports-and-plans/tariff-tables> (see the Annex in particular).

between 2010/11 and 2015/16 and a real term reduction of 1.5% in 2016/17 from 2015/16. This reflects our ongoing commitment to reduce the financial burden on stakeholders and taxpayers, whilst continuing to maintain capability and effectiveness.

Our cost allocation methodology

3.27 Ofcom’s costs are allocated to regulatory sectors (e.g. broadcasting, postal services) following the cost allocation methodology shown in Figure 1. Direct allocations are based on staff time (captured through the regular completion of timesheets) allocated to specific work functions or projects. Indirect costs are apportioned using the number of full time equivalent (FTE) staff where available (e.g. so a function using 6 FTE will be allocated twice the indirect costs of a function using 3 FTE), or other suitable apportionment method. Costs are forecast, and then reconciled against actual costs annually.

Figure 1: Ofcom’s cost allocation methodology



3.28 In addition, our spectrum management cost allocation methodology, developed in 2012, works alongside our organisation-wide cost allocation methodology for allocating costs to regulatory sectors, though this is carried out retrospectively. It provides us with a robust understanding of our total costs for managing spectrum sectors or licence classes, and has improved transparency of our costs with more granular information than was previously available, including for performing satellite filing work.

3.29 Costs are attributed primarily based on effort (FTE staff) in a given year, the key cost driver. Spectrum costs are split among the range of spectrum sectors or licence classes. The methodology, which we consulted on in 2013¹¹, comprises the following cost categories which are attributed to each relevant spectrum sector or licence class:

¹¹ <https://www.ofcom.org.uk/consultations-and-statements/category-1/cbfframework>

- Spectrum projects and programmes – the FTE cost of staff assigned to projects and programmes, relevant to each sector or licence class, plus apportionment (if applicable) of staff costs for other projects which provide a benefit to the sector or licence class;
- Spectrum technology, engineering and enforcement (STE&E) – the FTE cost of staff performing STE&E casework, such as interference investigations and measurements, supporting projects and programmes, plus apportionment of STE&E support staff costs;
- Licensing – cost of staff in our licensing team apportioned based on licence transaction volumes by sector or licence class;
- International – relevant share of annual memberships for the ITU and the CEPT¹²;
- ICT – apportionment of total ICT costs based on relevant FTEs; and
- Property and other common costs – includes cost of buildings plus staff providing other support functions (Finance, HR etc), apportioned based on relevant FTEs.

3.30 Together, this provides an annual cost for each spectrum sector or licence class. Where an annual cost allocation process for spectrum management is carried out, we publish these on our website.¹³

3.31 We note that there are a number of satellite-related spectrum sectors or licence classes, of which satellite filings is currently one. Others include ‘satellite technically assigned’, ‘satellite light’, and ‘satellite licence exempt’. Costs for the satellite filing sector are distinct and calculated separately from these other spectrum sectors/licence classes.

3.32 In order to support the introduction of charges, we intend to create a new *regulatory* sector for satellite filings (see Figure 1), distinct from other spectrum management costs. As discussed in paragraph 6.12, this is an administrative change that will not affect satellite filing costs.

Our satellite filing costs

3.33 By applying our spectrum management cost allocation methodology, we have identified average spectrum management costs for satellite filings of around £1.07m since 2011/12. Annual costs are set out in Table 3 below.

Table 3: Annual satellite filings costs since 2011/12

	2011/12 ('000s)	2012/13 ('000s)	2013/14 ('000s)	2014/15 ('000s)	2015/16 ('000s)	2016/17 ('000s)	Average ('000s)
Satellite filing costs	1051	978	1114	1170	1109	969	1065

3.34 To improve transparency, the relevant cost categories and average cost breakdown for satellite filings since 2011/12 are shown in Figure 2. The relevance of each cost category to satellite filings is summarised below:

- Spectrum projects and programmes – the majority of costs in this category comprise the FTE costs of staff (plus associated direct costs) supporting the satellite filings process. This category also includes a proportion of staff effort and direct costs from

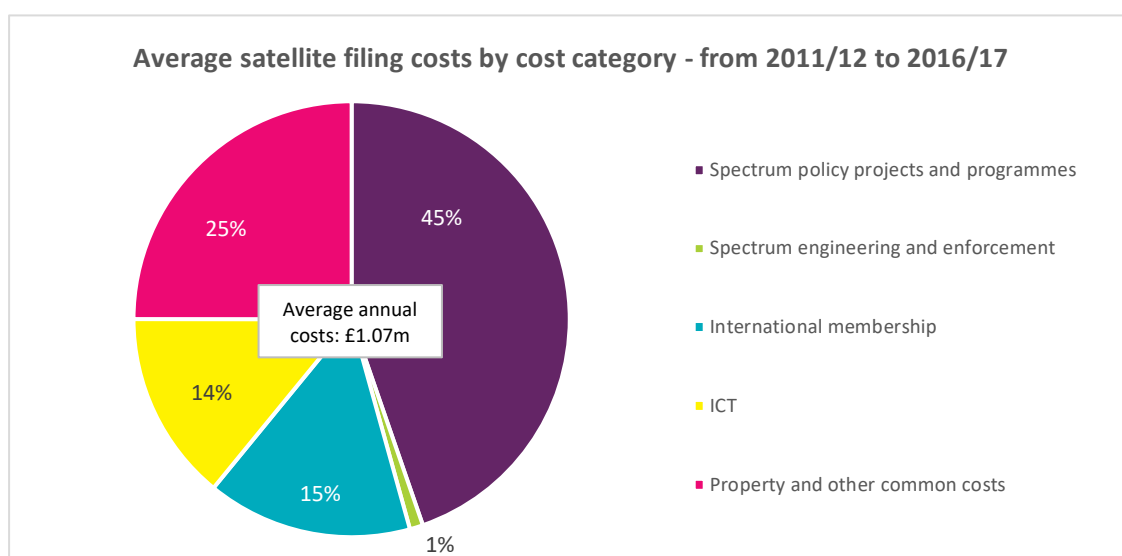
¹² European Conference of Postal and Telecommunications Administrations

¹³ <https://www.ofcom.org.uk/about-ofcom/annual-reports-and-plans/spectrum-management-costs-and-fees>

relevant projects/programmes which support our satellite filing work. For example, it includes a share of the costs of our satellite international work, as some of that work supports Agenda Item 7 at WRCs. Other relevant projects can vary from year to year¹⁴, for example we previously ran a project to update our satellite filing procedures.

- Spectrum technology, engineering and enforcement (STE&E) – not frequently applicable to satellite filings but can occasionally be required. For example, investigation of cases where a UK notified satellite suffers interference.
- Licensing – not applicable to satellite filings as we do not issue licences.
- International – relevant proportion of memberships for the ITU and CEPT.
- ICT and Property and other common costs – both apportioned based on the number of FTEs providing satellite filing effort.

Figure 2: Breakdown of average satellite filing costs by type



3.35 We therefore propose to base our satellite filing charges on average annual costs of £1.07m initially. As shown in Table 3 above, the detailed breakdown of our costs across all relevant cost categories has been shown to be fairly stable over time and we currently expect limited changes in this average. Although fluctuations do occur, we would be able to reflect them in our cost recovery approach.

3.36 Our 2007 Consultation referred to annual satellite filing costs of £400,000, which as we note in paragraph 3.28 above, was before we had the current level of granularity of our spectrum management costs (from the new methodology adopted in 2012). That figure did not capture all relevant cost categories as set out above.

¹⁴ We typically set out our forthcoming projects for the year in our Annual Plan

4. Legal framework

- 4.1 In this section, we set out the legal framework underpinning our new powers to set charges for our satellite filing work.
- 4.2 In particular, we first explain what we can (and what we cannot) charge for under these new powers. We then summarise our general statutory duties and matters to which must have regard in exercising our functions. We conclude by drawing attention to our impact assessment, including equality impact assessment, as required under statute.

Our new charging powers

- 4.3 On 27 April 2017, the Digital Economy Act 2017 (DEA 2017) received Royal Assent. Its section 101(2) amends the 2003 Act by inserting as section 28A a new specific power to charge fees for our satellite filing work at the request of any person who so requires. That provision came into force on 31 July 2017.¹⁵
- 4.4 Section 28A(1) sets out a precondition for these new powers to apply, namely that we have been conferred functions under section 22 of the 2003 Act to act as the administration of the UK under the ITU Radio Regulations. We have explained in section 3 that such functions have been conferred on us by acting as the notifying administration in the ITU for the UK.¹⁶ Thus, this precondition has already been satisfied enabling us to use our new charging powers.
- 4.5 Section 28A(2) of the 2003 Act lays down our new powers by stating that “*Ofcom may require any person to pay them a fee for doing satellite filing work at the request of that person.*” Pursuant to section 28A(3), we may also vary from time to time the amount of any fee set under section 28A.
- 4.6 The concept of “satellite filing work” for these purposes means, according to section 28A(3), “anything connected with obtaining or maintaining international recognition under the ITU Radio Regulations of assignments (or changes in assignments) of radio frequencies to stations in satellite systems or satellite networks.” In that regard, the reference to ‘anything connected with’ is broadly framed in relation to both ‘obtaining’ and ‘maintaining’ satellite filings. However, some further statutory requirements and limitations apply in our exercise of these new charging powers.
- 4.7 Firstly, we may not require a person to pay a fee under section 28A, unless we have taken such steps as we consider appropriate to bring the fact that we charge a fee, and the amount of the fee, to the attention of those persons who, in our opinion, are likely to be

¹⁵ See the Digital Economy Act 2017 (Commencement No. 1) Regulations 2017, S.I. 2017 No. 765 (C. 60). Regulation 2 lists provisions which come into force on 31 July 2017, including our power to charge fees (see regulation 2(cc)).

¹⁶ In January 2004, the Secretary of State and Ofcom entered into a Memorandum of Understanding relating to the Cabinet Official Committee on UK Spectrum Strategy and other matters. That MoU provides that the Secretary of State shall ensure that Ofcom is registered with the ITU as the UK “Administration” as defined in the Annex to the ITU’s Constitution. Then, in October 2007, the Secretary of State and Ofcom entered into another Memorandum of Understanding. That MoU provides that Ofcom will represent the Crown Dependencies and the BOTs in the ITU.

required to pay it (see section 28A(5)). We explain in paragraph 6.3 how we intend to deal with such announcements in practice, if we decide to adopt our proposals.

4.8 Secondly, section 28A(6) imposes on us the following reporting requirement:

“(6) As soon as reasonably practicable after the end of each reporting year, OFCOM must publish a statement setting out—

(a) the aggregate amount of the fees charged under this section that have been received by OFCOM during that year;

(b) the aggregate amount of the fees charged under this section during that year which remain outstanding and are likely to be paid or recovered; and

(c) the total cost to OFCOM of doing the requested satellite filing work they have done during that year.”

4.9 For that requirement, the concept “reporting year” means the period beginning with the coming into force of this section and ending with the next 31 March or any subsequent period of twelve months beginning with 1 April.

4.10 Thirdly, section 28A(7) imposes the following limitation (the application of which is discussed in paragraph 5.16 ff below):

“(7) If the total of the amounts set out in a statement under subsection (6)(a) and (b) exceeds the total cost set out under subsection (6)(c), OFCOM must take this into account with a view to securing that the aggregate amount of fees charged under this section in the following reporting year does not exceed the likely total cost to them of doing requested satellite filing work during that year.”

4.11 Fourthly, section 101(4) of the DEA 2017 provides that section 28A(2) and (6)(c) of the 2003 Act does not apply to any satellite filing work if we received the request to do that work before the coming into force of section 28A. In other words, our new charging powers do not apply to any satellite filing work in respect of requests received before 31 July 2017. Also, our total cost of doing the requested satellite filing work during a reporting year must exclude the costs of us doing satellite filing work, the requests for which we received before 31 July 2017.

4.12 Fifthly, paragraph 8 of the Schedule to the Office of Communications Act 2002 (the OCA 2002) imposes a specific duty on us in relation to our finances. It provides that it is our duty to conduct our affairs so as to secure that our revenues (so far as they derive from the exercise of powers to impose charges or fees in respect of the carrying out of particular functions and do not fall to be paid into the Consolidated Fund of the UK or of Northern Ireland), are at least sufficient to enable us to meet the costs of carrying out the functions to which the revenues relate.

4.13 Sixthly, in carrying out our functions, we must comply with our general duties under the 2003 Act and, to the extent relevant in this context, our duties in the WTA 2006. We discuss these duties below.

Our general duties

- 4.14 In carrying out our statutory functions, our principal duty under section 3(1) of the 2003 Act is to further the interests of citizens and to further the interest of consumers in relevant markets, where appropriate, by promoting competition. This applies to any function conferred on us by or under any enactment, including our exercise of these new charging powers under section 28A.
- 4.15 Section 3(2) requires us to secure particular things in discharging our general duty including, where relevant, the optimal use of the radio spectrum and the availability throughout the UK of a wide range of electronic communications services. In performing our general duties, we are also required under section 3(4) to have regard to a range of other considerations, which appear to us to be relevant in the circumstances, such as having regard to the different needs and interests, so far as the use of the radio spectrum is concerned, of all persons who may wish to make use of it.
- 4.16 Pursuant to section 3(3), we must have regard, in all cases, to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent, and targeted only at cases in which action is needed, and any other principles appearing to us to represent the best regulatory practice. In this regard, we also note our general regulatory principles, such as always seeking the least intrusive regulatory mechanisms to achieve our policy objectives.¹⁷
- 4.17 We also have additional duties under section 3 of the WTA 2006 when we carry out functions under the enactments relating to the management of the radio spectrum. In so doing, we must have regard, in particular, to the extent to which the radio spectrum is available for use, or further use; the demand for use of the radio spectrum; and the demand that is likely to arise in future for the use of the radio spectrum. We must also have regard, in particular, to the desirability of promoting certain things, such as the efficient management and use of the radio spectrum; and the economic and other benefits that may arise from the use of wireless telegraphy.
- 4.18 We have borne these duties in mind in setting out our framework for determining our charging approach, including our proposed charging principles, together with our assessment of the charging option that we propose best meets our principles. We discuss those matters in Section 5.

General impact assessment

- 4.19 The analysis presented in the whole of this consultation represents an impact assessment, as defined in section 7 of the 2003 Act.
- 4.20 Impact assessments 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. This is reflected in section 7 of the 2003 Act, which means that generally we have to carry out impact assessments where its proposals would be likely to have a significant

¹⁷ See <https://www.ofcom.org.uk/about-ofcom/what-is-ofcom>

effect on businesses or the general public, or when there is a major change in our activities. However, as a matter of policy we are committed to carrying out and publishing impact assessments in relation to the great majority of its policy decisions. For further information about our approach to impact assessments, see our guidelines, '*Better policy-making: Ofcom's approach to impact assessment*'.¹⁸

- 4.21 Specifically, pursuant to section 7, an impact assessment must set out how, in our opinion, the performance of our general duties (within the meaning of section 3 of the 2003 Act) is secured or furthered by or in relation to what we propose.

Equality impact assessment

- 4.22 In carrying out our functions, we are also under a general duty under the Equality Act 2010 to have due regard to the need to:
- eliminate unlawful discrimination, harassment and victimisation;
 - advance equality of opportunity between different groups; and
 - foster good relations between different groups.
- 4.23 This assessment is in relation to the following protected characteristics: age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex and sexual orientation. Such equality impact assessments (EIAs) also assist us in making sure that we are meeting our principal duty under section 3 of the 2003 Act discussed above.
- 4.24 We have therefore considered what (if any) impact the proposals in this consultation may have on equality. Having carried out this assessment, we are satisfied that our proposals are not detrimental to any group defined by the protected characteristics set out in paragraph 4.23 above.

¹⁸ See <https://www.ofcom.org.uk/consultations-and-statements/better-policy-making-ofcoms-approach-to-impact-assessment>

5. Proposed charging options for satellite filing cost recovery

5.1 This section sets out our analysis of charging options, our preferred charging option and the charges we propose to apply.

Framework for determining our charging approach

5.2 The framework we have used to determine our charging approach is to:

- define a set of principles to assess our charging options against;
- understand the costs and cost drivers for our satellite filing work;
- confirm the activities we will charge for (with reference to relevant cost drivers);
- consider whether there are wider policy considerations to take into account;
- identify and assess charging options within the context of our new powers; and
- consider how charging might work in practice under our preferred approach.

Charging principles

5.3 Any approach to charging for our satellite filing work is framed by the legislative constraints of section 28A (as discussed in section 4), including the requirement not to charge for filing work requested before we have given notice of our charges, and to annually reconcile aggregate costs and charges so that we do not recover more than our associated costs in a given year (where we do, we must adjust for it in the following year).

5.4 Consistent with our previous work and previous responses from stakeholders and taking account of these limitations, we propose to assess our charging approach against the following three core principles:

- our charges should reflect our costs in a transparent and proportionate way;
- our charges should be practicable and easy to implement (i.e. simple and cost effective) for us and stakeholders; and
- our charges should provide clarity and certainty to stakeholders, so far as is practicable.

5.5 We consider that those principles appropriately address the fundamental aspects of our new charging powers, together with our general duties, as discussed in section 4.

Factors underpinning our charging approach

5.6 Having set out our average costs for satellite filing work in section 3 and established a set of principles to assess our charging approach against above, we now consider the range of factors that we propose should underpin our charging approach.

Identifying our cost drivers

5.7 As shown in Figure 2 in section 3, our costs are primarily driven by the effort (i.e. colleague's time) required to undertake satellite filing work, along with associated

overheads. One key determinant of our satellite filings workload is clearly the volume of filings that we manage. We have also considered the extent to which the following factors drive our workload and hence our costs:

- type of satellite filing activity;
- coordination requirements (filing type);
- length of filing process (the filing period);
- size of satellite;
- type of spectrum frequency band;
- number of spectrum frequency bands;
- number of orbital planes (non-GSO) or orbital locations (GSO, including 'batch' submissions);
- type of satellite service;
- intended coverage area; and
- size of business/turnover.

5.8 There are some factors above which we do not believe have an effect on our costs. These are: size of satellite (e.g. cubesats), intended coverage area, and size of business/turnover. Furthermore, while it may be the case that some satellite filings contain similar information (e.g. so called 'batch' submissions), each individual filing in such batches does require comparable levels of effort for us to manage overall.

5.9 We consider that the three most significant drivers of our costs per filing, which account for most of our effort, are:

- Type of filing activity – e.g. filing submission, modification, notification. The activity type directly affects the level of work we are required to perform.
- Filing coordination requirements – e.g. whether the filing requiring coordination (i.e. is following a CRC/C route) is for a GSO non-GSO network /system¹⁹, or requires no coordination at all (i.e. is following an API route). The type of filing and degree of coordination it requires directly affects the level of work we are required to perform.
- Filing period – e.g. the length of filing process, which can take seven (or eight) years (the ITU regulatory period). How long we work on a filing directly affects our workload.

5.10 The remaining factors listed above affect our effort in a less significant way, and we consider that the complexity of accounting for these more granular differences in our charging approach would be disproportionate. In other words, any additional benefit from charges being more closely aligned to underlying costs would not be worth the additional complexity, and corresponding administrative overhead, introduced.

5.11 Therefore, we propose that a charging approach that takes account of the three cost drivers identified above, in addition to satellite filing volumes, is likely to be the best way of balancing our objectives of reflecting costs and being practicable to implement.

5.12 Recent volumes of satellite filings by type of activity and year are shown in Table 4.

¹⁹ Noting that non-GSO satellites typically require an additional level of coordination above GSO (and is something the ITU are currently considering revising their charges for).

Table 4: Current volumes of satellite filing activity for 2017/18

Satellite filing activity	Volumes		
	In 2017/18	In 2016/17	In 2015/16
Total satellite filings being coordinated at end of year (31 March), of which:	215	200	215
Current 'active' filings (API or CR/C) – at beginning of year (1 April)	200	164	175
New submissions received during year	15	36	40
Total notified filings at end of year (31 March), of which:	89	73	70
New notifications requested	16	5	5
Total suppressions at 31 March	18	53*	27
Total satellite filings being managed at end of year (31 March), i.e. total filings being coordinated plus notified filings	304	273	286

*Note: 20 of these suppressions followed the ITU change brought in on 1/1/2017 that removed the API requirement for satellite filings subject to coordination.

Question 1: Do you agree we have identified the most relevant cost drivers to take account of in our charging approach?

Scope of charges

5.13 With reference to the legislative framework and cost drivers identified above, we now consider what we can and cannot charge for, as well as the activities we propose to introduce separate charges for.

Recoverable and non-recoverable costs

5.14 We consider that all the satellite filing activities we have identified (see paragraph 3.14) fall within the meaning of 'satellite filing work' (as discussed in section 4). However, as also explained in section 4, we are only permitted under the legislation to charge for new requests once we have given notice of our fees. This means that a proportion of our costs will be attributed as legacy, non-recoverable costs (e.g for filings already submitted or notified), and this is summarised in Figure 3.

Figure 3: Summary explanation of costs we can recover

Recoverable costs = Satellite filing work requested after 31 July 2017 *and* after Ofcom has given notice of its fees

Non-recoverable costs = Satellite filing work requested before 31 July 2017 *or* before Ofcom has given notice of its fees

- 5.15 Any such non-recoverable costs will be excluded from the total costs (£1.07m) we recover through our charges in a given year, although this will reduce over time as new satellite filings are submitted and existing (legacy) filings complete the ITU process.²⁰
- 5.16 In addition, we must only recover our costs – not more or less. This reflects:
- the requirement under s28A(7) of the 2003 Act to not over-recover our aggregate costs in a given year by ensuring that fees do not exceed costs annually, and
 - our wider duty not to under-recover under the OCA 2002, which requires we set charges at a level sufficient to meet the costs of that work (see paragraph 4.12).
- 5.17 As our costs for satellite filing work and the volume of filings we manage vary from year to year, this means that there will inevitably be some variations in the charges paid by organisations from year to year. We discuss this point further below (see paragraphs 5.35-5.36). We also address how the reconciliation requirement of section 28A will work in practice in paragraph 6.14, so we do not over-recover our costs.

Activities we propose to introduce separate charges for

- 5.18 We noted above that type of filing activity is a key cost driver and in section 3 we outline the six main types of activities, as well as various sub activities, that we perform in carrying out our satellite filing work (see paragraph 3.14). However, we do not propose to introduce separate charges for all of these different activities in keeping with our aim to implement a simple and cost effective approach.
- 5.19 We therefore propose to introduce separate charges for the three activities which make up the vast majority of our effort and therefore costs:
- submitting the new filing (whether API, CR/C GSO²¹ or CR/C non-GSO)
 - managing the filing for the period until notification (including ongoing coordination activity); and
 - notifying the filing.
- 5.20 We do not propose to introduce separate charges for most of the remaining activities - Ad hoc requests, maintenance of filings after notification and policy work - with two exceptions (modifications requests and exceptional cases) which are discussed below.
- 5.21 Ad hoc requests relate to the following activities: i) suspensions, ii) suppressions, iii) bringing back into use, iv) modifications, v) transfers, and vi) appeals to the Radio Regulations Board (RRB). We propose to treat these activities as part of ‘managing a filing and its coordination’ and providing such assistance will be included within the service we provide, and therefore the charge we set for it. The exception is modifications - which we propose to treat the same as a new filing submission (with associated charges) because the work required is comparable to submitting a new filing application.

²⁰ Non-recoverable costs will be funded via retention of WTA 2006 receipts.

²¹ CR/C GSO filings also include submissions which fall under Appendices AP30, AP30A, and AP30B of the ITU Radio Regulations.

- 5.22 We are not proposing to introduce a separate charge for the remaining ad hoc activities (other than those exceptional cases discussed below) because:
- They relate to limited effort per request, usually one or two letters, which total only a small cost when they arise and are by their nature irregular and one-off. We consider that charging for the cost of managing separate requests as they arise are not appropriate in light of the effort it would take.
 - Some requests (such as suspensions and suppressions) can lead to more efficient use of orbital resources and reduce our workload in the future. Charging for such requests might reduce the incentive of organisations to make those requests.
- 5.23 We also do not propose to introduce a separate charge for ongoing maintenance of notified filings (other than those exceptional cases discussed below) for the following reasons:
- There are already a significant number of notified filings (89) which we would not be able to charge for. This would create a two-tier approach where some organisations would be charged in perpetuity for maintaining their filings, increasing uncertainty, while others are provided the same benefit at no charge.
 - We estimate the effort involved in maintenance per filing per year relates to a very small proportion of our overall work in a given year (there may be no activity or very limited activity such as one or two letters). It would increase the complexity of our approach considerably for a small cost per filing per year.
- 5.24 Lastly, we do not propose to introduce a separate charge for policy work which supports our satellite filing work (we discuss in section 3 how filings submitted to us benefit from this policy work). These costs are not attributable to specific filings and so would be recovered through other charges we propose to introduce, as set out below.

Exceptional cases

- 5.25 There may be exceptional cases where a significant cost arises from a specific organisation's request to perform satellite filing work that is directly and solely applicable to that organisation, and which requires work which goes beyond the typical satellite filing activities as described in section 3. That is to say, in cases where we perform work that is extraordinarily time consuming and/or involves exceptional costs for us (e.g. taking external advice from consultants) to deal with the satellite filing work request in question. We therefore propose to charge a fee for such exceptional cases, determined on a case-by-case basis. The amount of any such charge would be based on cost recovery and notified to the organisation in advance of us undertaking the requested work.

Other relevant policy considerations

- 5.26 We have examined whether there are any other policy considerations relevant to satellite filings which could influence our proposed charges.

Smaller satellites

- 5.27 We looked at whether a different approach for smaller satellites (e.g. cubesats) could be necessary in light of their potentially smaller scale, but consider that a different approach is not appropriate. The three cost drivers we propose above already address the lower level of effort these types of satellite filing can require. At present, operators of cubesats often file for bands which are not subject to coordination and aim to notify sooner than larger projects. This means less effort for us, therefore resulting in lower charges.
- 5.28 Nonetheless, these organisations can also file for bands requiring coordination and, in that case, their physical size would not reduce the amount of effort required for us to manage the filing. Reducing charges for cubesat operators would effectively require a cross-subsidy from other organisations based on physical size, which we do not consider appropriate.

Smaller businesses / new entrants

- 5.29 We considered whether allowances were needed to support smaller businesses or new entrants. These factors also would not reduce the amount of effort required for us to manage the filing, and could again lead to a cross-subsidy from other organisations.
- 5.30 Further, we believe that in the vast majority of cases, our proposed charges as set out later in this section, would be a small proportion of overall satellite project costs, typically less than 1% for most commercial projects, and less than 4% for a low cost cubesat project²².

Implications for BOTs, the Channel Islands and Isle of Man

- 5.31 As explained earlier in this document, our powers under section 28A of the 2003 Act extend to the BOTs, the Channel Islands and Isle of Man. Therefore, where regulators in these jurisdictions request Ofcom to do satellite filing work on behalf of an organisation based within their jurisdiction, our proposed charges would also apply. The fact that such regulators may have decided to set their own fees does not restrict us from recovering our own costs in doing the requested satellite filing work.
- 5.32 In our 2005 Statement, we indicated that we were minded to reduce fees if work carried out by these jurisdictions relieved Ofcom of certain responsibilities and functions. However, after carefully considering our satellite filing activities (as described in section 3), we found no corresponding reduction in our workload where work is carried out by those regulatory bodies. This is because:
- We are ultimately responsible for deciding whether to process a satellite filing application based on the criteria set out in the Procedures and ensuring its conformity with respect to the Radio Regulations.
 - While we understand that such applications (for new submissions, modifications, and notifications) may have had prior due diligence carried out, our workload typically remains the same, undertaking the same checks as for organisations working directly with us to ensure the filing is correctly managed within the international framework.

²² Assuming that a low cost cubesat project is around £200,000, our total regulatory charges under these proposals would be around £7,700 (4%) for uncoordinated filings if notified after 2 years.

- Our work to check applications typically only relates to a few days of work in any case and is a small proportion of our overall activity (with corresponding lower charges), as reflected in the weighting and proposed charges set out later in this section.

5.33 We therefore propose to adopt the same charging approach for all satellite filings, independent of any role played by BOTs, the Channel Islands or Isle of Man to support the work of organisations operating within their jurisdictions.

5.34 We also note that our proposed charges apply to the organisation requesting the satellite filing work. As a result, we will review arrangements with the BOTs, Channel Islands and Isle of Man (as set out in section 13 of our Procedures) to ensure that liability to pay for charges correctly falls to the organisation operating from those jurisdictions, to whom the satellite filing is authorised.

Controlling for variability of charges

5.35 Variable charges for satellite filings are unavoidable under the legal framework because of the requirement for us to reconcile our costs and charges annually. This means that organisations will pay different charges over the lifetime of the filing depending on when they lodge their filing. Charges could increase as a result of increased costs or if volumes reduced whilst costs remained relatively constant. Conversely charges could decrease where costs reduce or volumes increase arising from increased activity in the sector.

5.36 In particular, the volume of filings we receive and manage in a given year is variable, and changes in filing volumes can affect per filing charges because many of our costs are fixed. However, if there were a significant and ongoing reduction in volumes, resulting in less satellite filing work, then where possible we would consider reallocating colleagues' time, i.e. from satellite filing work to other projects, to help reduce the impact on charges.

5.37 In line with our principle to provide clarity and certainty to stakeholders, we consider below to what extent different charging options help smooth any such variability.

Question 2: Are there any other factors you consider we should take account of in our charging approach? Please explain why in your response.

Our proposed charging options

5.38 We have identified the following four charging options, building on our previous options from the 2007 Consultation. Examples show illustrative figures assuming costs of £1m, with 200 active filings, 15 new submissions and 15 notifications.

Option 1: One-off charge per filing - lifetime cost of filing is charged upfront in a one-off payment. In this example, all filings are charged the same, although a variation of this option would be to charge according to the type of filing:

$$\text{e.g. } \frac{\text{total costs per year}}{\text{number of new submissions in that year}} = \frac{\text{£1m}}{20} = \text{£50,000}$$

Option 2: Application fee plus flat annual fee per filing - charge an application fee for new submission (including modifications) and notification requests, plus an annual management charge per filing until notification. Same annual charge for all filings:

$$\text{e.g. Total filing charge} = \text{Submission fee} + \text{Annual charge} \times \text{number of years until notification} + \text{Notification fee}$$

Assuming the new submission and notification application fees, and annual management charge are the same, the fee for each would be calculated as:

$$\frac{\text{£1m}}{170+15+15} = \text{£5000}$$

Option 3: Application fee plus annual fee per filing type - as for Option 2, but the annual management charge differs for each type of filing (weighted for effort). This refines the 2007 Consultation option by also taking into account difference in the coordination effort required for different filing types:

$$\text{e.g. Total filing charge} = \text{Submission fee} + \text{Annual fee (weighted)} \times \text{number of years until notification} + \text{Notification fee}$$

Each of these charges could be different, and the approach to determining them is described in more detail below as our preferred option (see from paragraph 5.45).

Option 4: Hourly rate - charge a fixed hourly rate based on average, fully loaded FTE costs, only for work we do. This option would no longer include a minimum annual fee, as proposed in the 2007 Consultation, given the requirement for us to annually reconcile costs and fees.

5.39 For all charging options, the total costs recovered would be the same.

Question 3: What comments, if any, do you have on our charging options 1-4?

Question 4: What other charging options, if any, do you believe we should consider?

Assessment of options

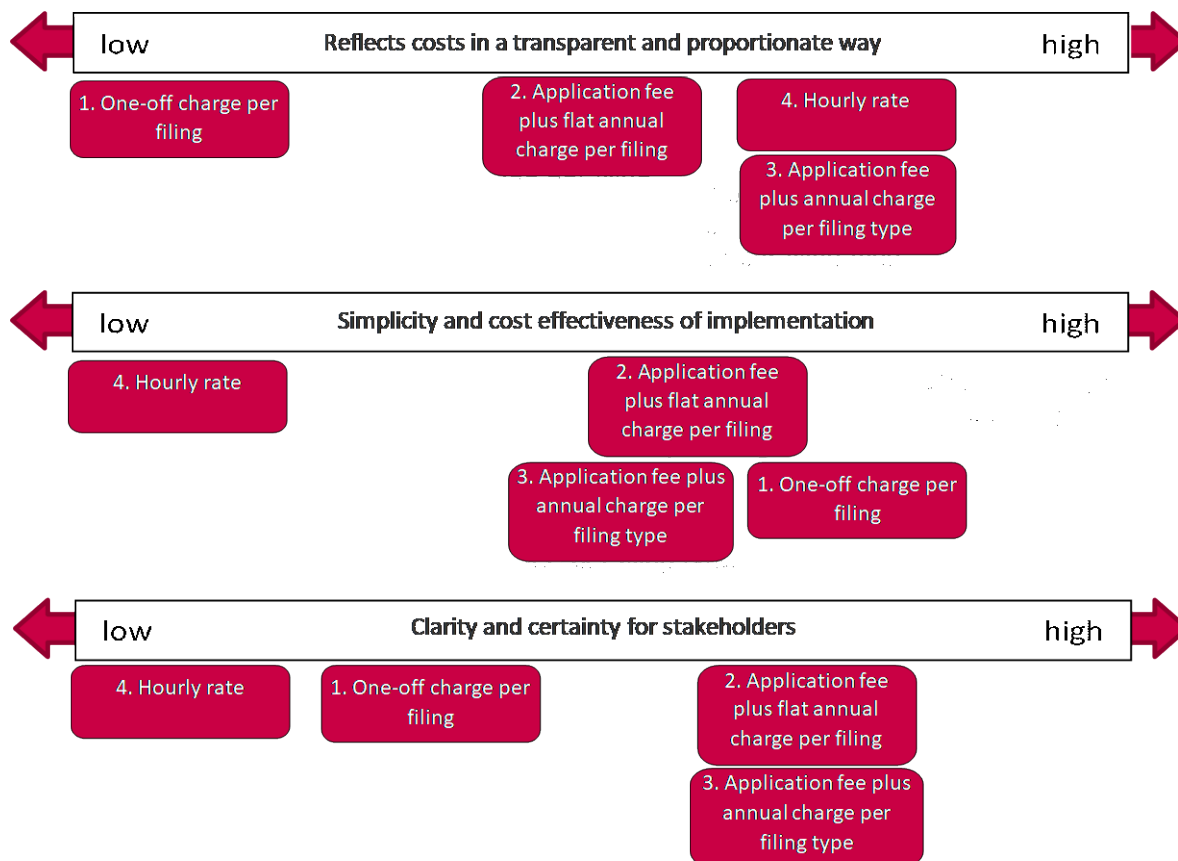
5.40 The four options above provide a variety of ways in which we could approach recovering our costs. We have carried out a qualitative assessment of these options against the three principles we established earlier (see Annex 6). A high-level summary of this assessment is provided below and in Figure 4.

5.41 While an hourly rate (option 4) scores highly on transparency and proportionality, we do not consider it would be as simple or cost effective to implement as other options because:

- a significant proportion of costs are shared (e.g. fortnightly review of the BRIFIC) and are not organisation specific, so it is not always simple to apportion costs to particular organisations;

- it would require a new way of managing and tracking our work with associated increased administrative costs due to more frequent invoicing and increased risk of non-payment given charges would need to be made retrospectively;
- the retrospective nature of charges also provides limited certainty of overall charges for stakeholders.

Figure 4: Summary of charging options assessment



5.42 A one-off charge per filing (option 1) appears to meet our objectives for a simple and cost effective approach, and stakeholders would have clarity about total charges. However, there are a number of disadvantages which we consider would apply, irrespective of whether the one-off charge varies according to the type of filing:

- it would not be proportionate for satellite filings that do not complete the ITU process, as filings would be charged the full cost upfront, regardless of whether they resulted in a notified filing or not (to date around 12% of all UK filings have been notified);
- it would be difficult to reconcile the upfront charges to aggregate costs incurred in a particular year, as required by section 28A of the 2003 Act;
- it is more difficult for us to manage the potential variability in charges from year to year (as discussed in paragraphs 5.35-5.36), because the volume of new submissions per year is likely to be much more variable than the total active filings we are managing (for example, note the variability in the number of new submissions in Table 4 above).

5.43 At this stage, we therefore favour an approach with an application fee paid for new requests (submissions, modifications and notifications) plus an annual management charge until notification (unless suppressed or cancelled) – that is, option 2 or 3. We consider that this approach:

- better reflects costs incurred as it is closer to the drivers of our costs than an upfront charge (option 1);
- is the best way to smooth variability in charges over time, which is more difficult to do under other options given the number of filing requests we receive changes from year to year;
- is consistent with our existing charging processes for other sectors, so will be relatively simple and cost effective to implement;
- provides stakeholders with the best understanding of estimated total charges; and
- creates better incentives than an upfront charge, because it will encourage organisations to drop filings they no longer need as the coordination process progresses (they would cease incurring further annual management charges from that point) freeing up frequencies and orbital locations for new filings.

5.44 We consider that option 3 (where the annual charge is based on filing type), better reflects how our costs are incurred than option 2 (flat rate annual charge), given we have identified the type of filing coordination as a key cost driver. Therefore overall, we propose to adopt option 3 as our preferred charging approach because it provides the best overall fit against our three objectives:

- to reflect our costs in a transparent and proportionate way – i.e. are sufficiently granular to ensure that the charges we set are proportionate to the effort we carry out.
- is simple and cost effective to implement (and is an approach consistent the requirements set out in section 28A of the 2003 Act); and
- provides clarity and certainty to stakeholders over their satellite filing charges, so far as is practicable.

Question 5: Do you agree that our preferred charging option, option 3, is the best way to meet our objectives? If no, please state your preferred charging option and explain why.

Our preferred charging approach

5.45 In summary, we propose that our charging approach will be based, per filing, on an application fee (for new submissions, modifications or notifications) plus an annual management charge for each filing between submission and notification (unless suspended or cancelled). Our proposal takes account of:

- the type of filing activity – whether a new submission, part of the active filing’s ongoing management, a notification or modification;
- the level of coordination for managed filings (i.e. filing type) - whether API, CR/C GSO, or CR/C non-GSO;
- how long we manage the filing (until notified or suppressed/cancelled) – noting filings over the past 10 years have taken on average 5.5-6 years to complete the ITU process.

Proposed satellite filing charges

5.46 Under our charging approach, we propose to apply a weighting per filing which aligns with our level of effort for that filing, by activity or level of coordination (an effort weighting, based on our best judgement). For example, a filing with effort weighting of 3.0 is three times the effort of a filing weighting of 1.0. We then multiply this effort weighting with the volume of filings to give weighted units (of effort). Table 5 shows these figures for the most recent year, 2017/18.

Table 5: Satellite filing volumes and weighted effort by filing activity/type in 2017/18

Filing activity/ type	Volume	Effort weighting	Weighted units of effort
New submission/modification requests	15 (during 2017/18)	1.0 per request	15
API filings annual management	10 (at 31/3/18)	1.0 per financial year filing is active	10
CR/C GSO filings annual management	185 (at 31/3/18)	3.0 per financial year filing is active	555
CR/C non-GSO filings annual management	5 (at 31/3/18)	4.5 per financial year filing is active	22.5
Notification requests	16 (during 2017/18)	1.3 per request	20.8
			623.3

5.47 Total costs are then apportioned based on the weighted units of effort. For example, if total costs are £1m and 500 weighted units of effort, each unit of effort will have a charge of £2000. At 31 March 2018, there were 623.3 weighted units of effort (see Table 5).

5.48 If we decide to proceed with our proposed charging approach, we expect to publish our charges (along with effort weightings) for each filing activity/type in our notice of applicable satellite filing charges annually on our website. Table 6 sets out our proposed charges for each filing activity or type in the initial year following implementation i.e. 2018/19 (based on 2017/18 data. Figures have been rounded up to nearest £100²³).

Table 6: Proposed satellite filing charges by filing activity/type (for 2018/19)

Filing activity/type	Liability incurred	Payment due	Proposed charge (2018/19)
New submission/modification request	On date of request	On date of request	£1800
API filing annual management	1 April annually	Q1 annually (May)	£1800pa
CR/C GSO filing annual management	1 April annually	Q1 annually (May)	£5200pa
CR/C non-GSO filing annual management	1 April annually	Q1 annually (May)	£7800pa
Notification request	On date of request	On date of request	£2300

²³ We round up to ensure we are able to fully recover our costs. In cases of over-recovery, costs would be reduced by the same amount in the following year (see paragraph 6.14).

- 5.49 We have provided illustrative examples for estimated charges over the lifetime of the filing for three typical cases in Figures 5-7 in section 7, based on the proposed initial year charges from Table 6. Stakeholders should note that actual total charges will vary due to our annual reconciliation, as explained in paragraph 6.14.
- 5.50 Annual management charges are not charged on a pro rata basis; that is, if a filing is active on 1 April the full annual amount for that filing type is due.
- 5.51 The first annual management charge does not apply until 1 April in the financial year following a submission. In the final year of the filing, organisations will be charged for both annual management and notification activities, because we incur the costs of carrying out both tasks in that year. To balance this, organisations will receive a period of coordination management in the initial year before the first annual management charge is due.

Question 6: Do you have any comments on our proposed charging approach (as set out above)?

Comparison of our proposed charges with other NRA charges

- 5.52 Having considered the estimated charges of our proposals per filing activity/type over the filing's lifetime, they are mostly lower than comparable NRAs' charges (as set out in Table 8 in Annex 5). They are also lower, in most cases, than the current ITU charges organisations must pay.
- 5.53 Notably, some NRAs charge fees which are considerably higher than our proposed charges. We also note that Germany charges in a similar way to our proposed charging approach, by type of filing and coordination level.

6. Implementation issues

- 6.1 Our charging approach seeks to minimise costs, including implementation costs. We propose to implement our charging approach as set out in this section.

Notice of charges

- 6.2 This document starts the process of informing organisations of our proposed charges for our satellite filing work. We have informed all organisations with current filings of this consultation and have also contacted other stakeholders with an interest in the sector.
- 6.3 If we decide to proceed with our favoured approach, we propose to confirm our charging approach in our Statement, to be published by the end of 2018 following the completion of this consultation process. For the purposes of section 28A(5) of the 2003 Act, we also propose to confirm the amounts of any charges arising from these proposals in our notice of applicable satellite filing charges published alongside our Statement, and annually on our website thereafter (on or before 31 March). The notice will apply to charges for the financial year following publication.
- 6.4 Our proposed charges apply to organisations that request that we perform satellite filing work. We also propose to review current arrangements to ensure that liability to pay for charges correctly falls to the organisation to whom the satellite filing is authorised.

Timetable for introducing charges

- 6.5 We expect to begin charging from the implementation date, the date of our Statement (expected by the end of 2018), following the giving of notice in that Statement as follows:
- from the implementation date for the application fee for new submissions, modifications, and notifications; and
 - from May 2019 for annual management charges, for new satellite filings submitted from the implementation date.
- 6.6 We do not consider it necessary to phase-in these charging proposals because:
- Stakeholders have been made aware that charges are expected to be implemented since the legislation was introduced in early 2017.²⁴
 - Charges will not apply to any existing satellite filings submitted before the implementation date, only new filing submissions.
 - Charges for new submissions (the initial charges that will be due) are low (£1800) compared to the costs of manufacturing and launching satellites.
 - Annual management charges apply only from the 2019/20 financial year, allowing sufficient time for budgetary planning.

²⁴ For example, see paragraph 3.88 of our [Space Spectrum](#) strategy published in January 2017.

Payment terms and compliance

- 6.7 Ofcom requires payment to be made in advance. Payment should be made to Ofcom using the account details shown on the invoice.
- 6.8 Payment for new submissions, modifications and notifications are due on application.
- 6.9 We expect to send out annual invoices for satellite filing annual management charges at the same time as our annual invoices for other sectors (we normally issue invoices for annual fees and charges in May, and would expect to follow the same process for satellite filing charges). We propose that organisations receive one invoice annually for their total charges for all filings in the coming year. Payment will be due on receipt of the invoice as for our other fees and charges.
- 6.10 We do not wish to incur additional costs to cover the costs of managing non-payment of charges (as we may require additional resources to address payment issues). To ensure we minimise any costs for satellite filings work which we are unable to recoup from the organisation concerned, we therefore propose to adopt the following approach:
- New submission, modification and notification requests - we would not consider a request complete and work would not typically start without the accompanying application fee. There may sometimes be exceptional circumstances where we would carry out work before receiving payment (e.g. to meet regulatory timeframes), though we would assess this on a case-by-case basis and would need to agree to it in advance. Non-payment may ultimately result in Ofcom cancelling the filing(s).
 - Annual management charges - we do not anticipate continuing to perform work on filings where the annual management charge is not received by the due date, unless arrangements have otherwise been agreed by us in advance. Non-payment may ultimately result in Ofcom cancelling the filing(s).
- 6.11 Other NRAs (e.g. Germany, and the US) have introduced a bank guarantee/bond to avoid payment defaults. While we do not currently propose to do so, we reserve the right to introduce one in future (for example, to cover the estimated charges over the lifetime of a filing) if our costs for managing non-payment rise. This is in keeping with our intention to minimise the costs of implementation.

Allocation of costs

- 6.12 We will create a new regulatory sector for satellite filings within our existing cost allocation methodology, as shown in Figure 1 in section 3. This model is audited annually and our annual report is laid in front of Parliament. Currently, satellite filing costs are captured within the Spectrum Management regulatory sector and costs are recovered through retention of WT Act receipts. This proposed change is an administrative adjustment that will not affect the costs of satellite filing work but is necessary to enable us to forecast satellite filing costs and support the annual reconciliation requirement (see below).

End of year reconciliation and adjustments

- 6.13 Our notice of charges (published annually on or before 31 March) will be based on forecast costs and volumes for the year ahead. As noted earlier, we have a legal requirement to adjust charges following end of year reconciliation. This is to ensure we do not recover more than the total costs to us in any given year of carrying out our satellite filing work. We already carry out a cost reconciliation process as part of our annual reporting process and we intend to apply the same approach to reconcile satellite filing costs and charges.
- 6.14 We propose to adjust our charges in the following year to reflect actual costs and volumes for the previous year. That is, for the following year's forecast costs to take account of the adjustment resulting from reconciliation of the previous year's costs and charges. For example, if we over-recover in one year we would reduce the total amount to be recovered in the subsequent year by the same amount. As noted in paragraph 6.3, we propose to update our notice of applicable charges annually to reflect changes arising from our annual reconciliation.

Records, reporting and review

- 6.15 We will publish the notice of applicable satellite filings charges on our website, on or before 31 March annually (although our first notice will be published alongside our Statement).
- 6.16 We are currently examining whether creating a set of templates / checklists / guidance will assist organisations to submit the necessary paperwork to support their satellite filing requests, by improving the consistency and quality of information we receive. This would include guidance on charges and how to pay.
- 6.17 We are also adapting our internal satellite filing management database to account for invoices and the receipt of charges.
- 6.18 We intend to meet the reporting requirements of section 28A(6) of the 2003 Act (publishing a statement of our total costs, fees received and fees outstanding each year) in our annual report (the information will be provided in Note 2 to the accounts). We will also publish this information as part of our Tariff Tables (see footnote 10).
- 6.19 The annual reconciliation process we carry out means that charges will always reflect the current status of costs and volumes. We expect there will be always be adjustments to charges on a year by year basis.
- 6.20 Where a significant change to the ITU's procedures occurs, we may undertake a review of our satellite filing charges to take account of it. Stakeholders will be notified of any change to our satellite filing charges.

Amending the Procedures document

- 6.21 Following our review of responses received to this consultation, and our forthcoming Statement where we anticipate confirming our approach, we propose to update the Procedures to ensure they reflect our charging approach.

Satellite Filings Cost Recovery

6.22 We intend to consult on draft amendments alongside the publication of our Statement later this year.

6.23 Based on the proposals set out in this consultation, we currently expect to amend the following sections of the Procedures:

- Section 10 and specifically paragraph 10.4 which deals with charges to recover our costs for satellite filing work.
- Section 12 which deals with the cancellation of satellite filings, to reflect the case where we may cancel a filing due to non-payment.
- Section 13 which deals with the BOTs, Channel Islands and the Isle of Man, and how the charges would apply in their jurisdictions.
- A new Annex outlining our cost recovery process.

Question 7: Do you have any comments on our proposals for implementing our charging approach?

Question 8: Do you have any other comments on matters arising from this consultation?

7. Conclusions and next steps

Summary of charging approach

- 7.1 At this stage, we favour (out of all of the options) adopting charging option 3 – an application fee plus annual management charge based on filing type, to reflect the different levels of effort they require to manage. We consider this option best meets our three core objectives for a charge which reflects our costs in a transparent and proportionate way, which is simple and cost-effective to implement and provides greater clarity and certainty to stakeholders. As such, we also consider that charging option 3 would be the most appropriate regulatory outcome consistent with our general duties, as discussed in section 4.
- 7.2 In particular, for reasons explained in section 5, we consider that by applying our three core objectives, charging option 3 overall appropriately reflects regulatory principles which are transparent, accountable, proportionate, consistent and targeted only at cases where action is needed.
- 7.3 Our proposed charging approach is summarised as follows:
- **When will the charges apply?** - we propose to introduce these charges from the ‘implementation date’. That is, the date of our Statement, which we expect to publish by the end of 2018, and which will provide the formal notice of our 2018/19 charges.
 - **What do our charges apply to?** - we propose to charge for new filing submissions (and activities related to those new submissions) received from the implementation date. Existing filings and those received prior to our implementation date would not incur charges. Filings which are suppressed or cancelled no longer incur charges, from the date of such suppression or cancellation.
 - **Who would our charges apply to?** – we propose that liability applies to any organisation requesting that we perform satellite filing work for a filing submitted to us on or after the implementation date. This includes organisations registered (or headquartered) in the UK, BOTs, the Channel Islands or Isle of Man.
 - **How will charges be implemented?** – charges will be based on forecast costs and volumes for the year ahead, adjusted against actuals for the previous year (following annual reconciliation). We propose to publish the formal notice of applicable charges for satellite filings on our website, on or before 31 March annually from 2019 (although our first notice will be published alongside our Statement). The notice will apply to charges for the financial year following publication.
 - For new submissions, modifications and notifications - we propose that these are payable on application.
 - For annual management charges - we propose that organisations receive one invoice annually for their total charges for all filings in the coming year (we normally issue invoices for annual fees and charges in May, and would expect to follow the same process for satellite filing charges).

- **What are the charges?** - we propose to charge as follows:
 - An upfront application fee for new submission (and modification) requests received after the implementation date.
 - A notification request fee (where the request relates to a filing also received after the implementation date).
 - An annual management charge between the initial request and notification (incurred on 1 April annually) for filings received after the implementation date (unless suppressed/cancelled), with different charges for different types of filing.

We propose to revise charges annually to reflect changes arising from our annual reconciliation (published on or before 31 March). Table 7 sets out our proposed charges for the initial year following implementation (i.e. 2018/19).

Table 7: Proposed satellite filing charges by filing activity/type (for 2018/19)

Filing activity/type	Payment due	Proposed charge (2018/19)
New submission/modification request	On date of request	£1800
API filing annual management	Q1 annually (May)	£1800pa
CR/C GSO filing annual management	Q1 annually (May)	£5200pa
CR/C non-GSO filing annual management	Q1 annually (May)	£7800pa
Notification request	On date of request	£2300

- **What happens if charges are not paid/received?** – we propose that payment is typically due in advance - when the request is made (for application or notification requests), or by May in every year for annual management charges (with liability incurred from 1 April annually). We do not anticipate processing application or notification requests unless payment is received. Non-payment of annual charges may ultimately result in Ofcom cancelling the filing(s).

7.1 To assist stakeholders with budgetary planning, Figures 5-7 provide illustrative examples of estimated charges over the lifetime of the filing for three typical cases, based on the proposed initial charges from Table 7 and average time taken to notify. Stakeholders should note that actual total charges will vary due to our annual reconciliation.

Figure 5: Illustrative example of estimated charges for an uncoordinated API filing, 5 years to notify

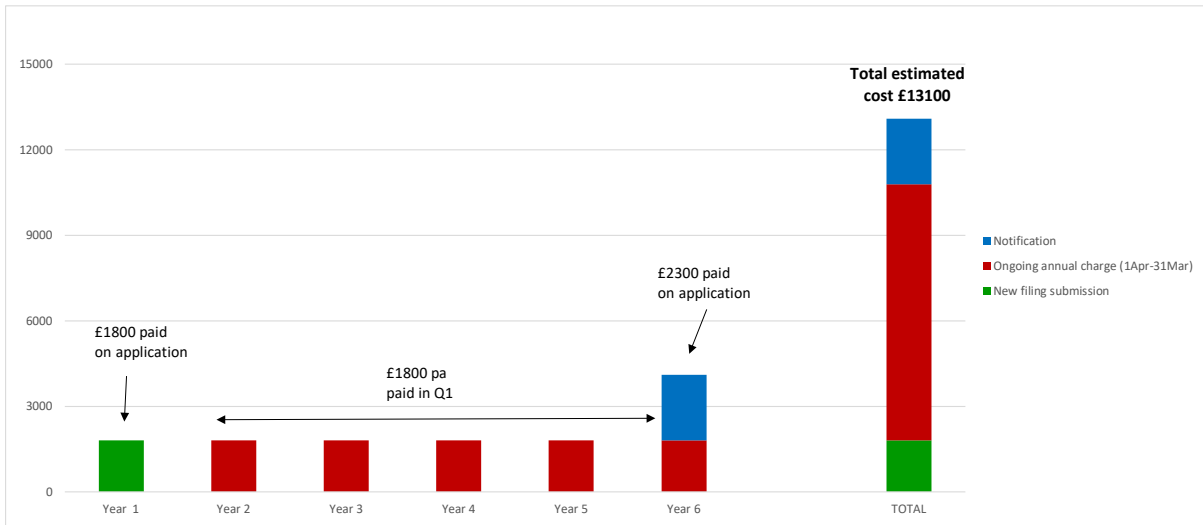


Figure 6: Illustrative example of estimated charges for a coordinated GSO filing, 6 years to notify

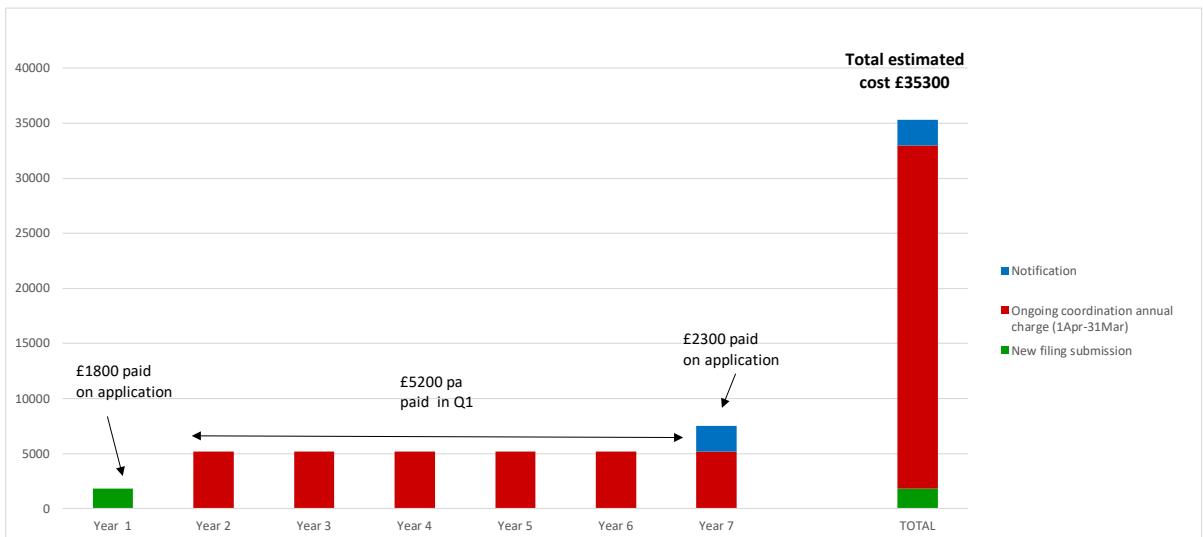
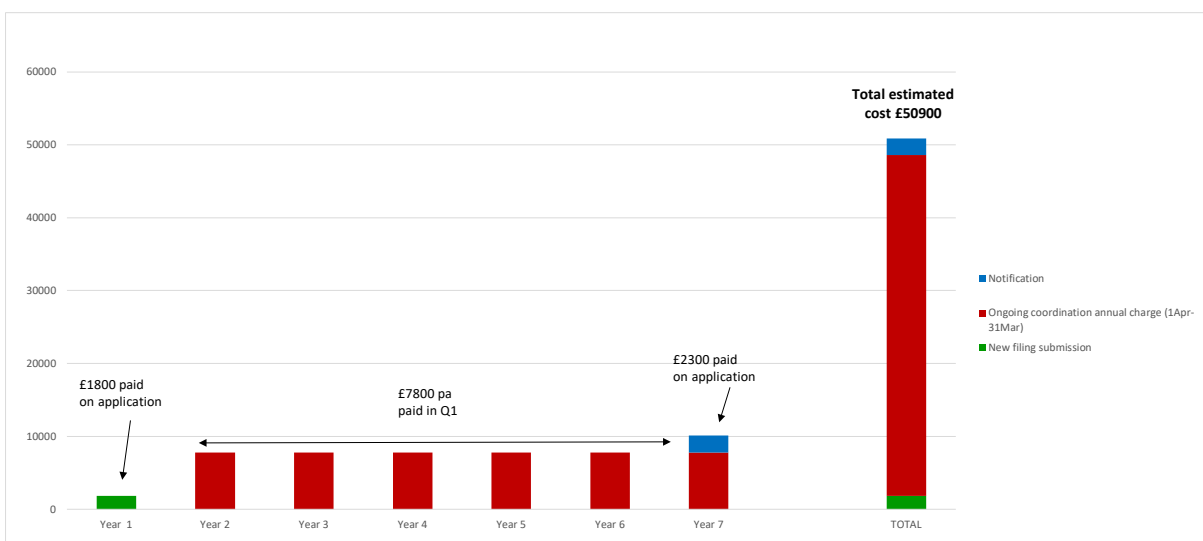


Figure 7: Illustrative example of estimated charges for a coordinated non-GSO filing, 6 years to notify



Next steps

- 7.2 We will host a stakeholder workshop at 10.30am on Friday, 20 July 2018 to provide an overview of our proposals and give stakeholders an opportunity to provide feedback as part of our consultation process. Please register your interest at sfcr@ofcom.org.uk using the subject heading '*SFCR stakeholder workshop*'. The venue will be Riverside House, located at 2a Southwark Bridge Road, London SE1 9HA, and attendees will need to be registered in advance.
- 7.3 Our consultation closes on 6 September 2018. If we proceed with our favoured approach, we expect to publish our Statement on our charging approach by the end of 2018.
- 7.4 We intend for the Statement to include our proposals for reflecting our charging approach in the Procedures.

A1. Responding to this consultation

How to respond

- A1.1 Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 6 September 2018.
- A1.2 You can download a response form from <https://www.ofcom.org.uk/consultations-and-statements/category-1/satellite-filings-cost-recovery>. You can return this by email or post to the address provided in the response form.
- A1.3 If your response is a large file, or has supporting charts, tables or other data, please email it to sfcr@ofcom.org.uk, as an attachment in Microsoft Word format, together with the cover sheet (<https://www.ofcom.org.uk/consultations-and-statements/consultation-response-coversheet>). This email address is for this consultation only, and will not be valid after the closing date for responses.
- A1.4 Responses may alternatively be posted to the address below, marked with the title of the consultation:
- Satellite Filing Cost Recovery
Spectrum Group
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- A1.5 We welcome responses in formats other than print, for example an audio recording or a British Sign Language video. To respond in BSL:
- Send us a recording of you signing your response. This should be no longer than 5 minutes. Suitable file formats are DVDs, wmv or QuickTime files. Or
 - Upload a video of you signing your response directly to YouTube (or another hosting site) and send us the link.
- A1.6 We will publish a transcript of any audio or video responses we receive (unless your response is confidential)
- A1.7 We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt if your response is submitted via the online web form, but not otherwise.
- A1.8 You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.
- A1.9 It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex 4. It would also help if you could explain why you hold your views, and what you think the effect of our proposals would be.

- A1.10 If you want to discuss the issues and questions raised in this consultation, please contact the team by email to sfcr@ofcom.org.uk.

Confidentiality

- A1.11 Consultations are more effective if we publish the responses before the consultation period closes. In particular, this can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish all responses on our website, www.ofcom.org.uk, as soon as we receive them.
- A1.12 If you think your response should be kept confidential, please specify which part(s) this applies to, and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.
- A1.13 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.14 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to us to use. Our intellectual property rights are explained further at <https://www.ofcom.org.uk/about-ofcom/website/terms-of-use>.

Next steps

- A1.15 Following this consultation period, we plan to publish a statement by the end of 2018.
- A1.16 If you wish, you can register to receive mail updates alerting you to our new publications; for more details please see <https://www.ofcom.org.uk/about-ofcom/latest/email-updates>

Ofcom's consultation processes

- A1.17 We aim to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex 2.
- A1.18 If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how we could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.

Satellite Filings Cost Recovery

A1.19 If you would like to discuss these issues, or our consultation processes more generally, please contact Steve Gettings, our consultation champion:

Steve Gettings

Ofcom

Riverside House

2a Southwark Bridge Road

London SE1 9HA

Email: corporationsecretary@ofcom.org.uk

A2. Ofcom's consultation principles

We have seven principles that we follow for every public written consultation:

Before the consultation

- A2.1 Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

- A2.2 We will be clear about whom we are consulting, why, on what questions and for how long.
- A2.3 We will make the consultation document as short and simple as possible, with a summary of no more than two pages. We will try to make it as easy as possible for people to give us a written response. If the consultation is complicated, we may provide a short Plain English / Cymraeg Clir guide, to help smaller organisations or individuals who would not otherwise be able to spare the time to share their views.
- A2.4 We will consult for up to ten weeks, depending on the potential impact of our proposals.
- A2.5 A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Our Consultation Champion is the main person to contact if you have views on the way we run our consultations.
- A2.6 If we are not able to follow any of these seven principles, we will explain why.

After the consultation

- A2.7 We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish all the responses on our website as soon as we receive them. After the consultation, we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A3. Consultation coversheet

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing

Name/contact details/job title

Whole response

Organisation

Part of the response

If there is no separate annex, which parts? _____

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

A4. Consultation questions

A4.1 This consultation addresses the following questions:

Question 1: Do you agree we have identified the most relevant cost drivers to take account of in our charging approach?

Question 2: Are there any other factors you consider we should take account of in our charging approach? Please explain why in your response.

Question 3: What comments, if any, do you have on our charging options 1-4?

Question 4: What other charging options, if any, do you believe we should consider?

Question 5: Do you agree that our preferred charging option, option 3, is the best way to meet our objectives? If no, please state your preferred charging option and explain why.

Question 6: Do you have any comments on our proposed charging approach (as set out above)?

Question 7: Do you have any comments on our proposals for implementing our charging approach?

Question 8: Do you have any other comments on matters arising from this consultation?

A5. Satellite filing charges of other NRAs

A5.1 This Annex shows what we understand other NRAs with prominent Space sectors charge for satellite filings (see Table 8). This is separate from any charges required by the ITU. In most cases, our proposed charges are lower than corresponding ITU charges for various satellite filing types, based on a random sample of each type (see Table 9).

Table 8: Comparison of other NRA charges

NRA	Charging approach	Amount
Australia	- Application fee and hourly rate for satellite filing, coordination and notification activities	<i>Application fee</i> A\$35,956 <i>Hourly rate</i> A\$202 p/hr
Cyprus	- Initial fee based on the total number of satellite filings an operator has submitted and type/size of the filing. - Additional variable fee charged based on small % of revenues generated post launch from use of filing	<i>Initial admin fee</i> €100,000 – €200,000
France	- France does not charge for its own ITU filing costs. - To operate a satellite with a French filing, operators must be licensed by law. A fixed (one-off) fee is charged for the cost of processing the request, regardless of whether the licence is issued or not.	€20,000 <i>licence application fee</i>
Germany	- Charges set by Germany's Telecom Act, which vary depending on type of filing and coordination. Also made for assignments of orbit and frequency usage rights. - There is a separate, lower cost charge for a non-commercial non-GSO single satellite issued on a non-interference basis, which includes assignment. - Operators are required to refund any expenses incurred in connection with their filing i.e. for coordination meetings. - Liability for charges is incurred on application. If fees are not paid, applications are rejected and rejection fee levied. A bank guarantee is part of the application and used to cover any unpaid fees.	<i>Fee by filing types:</i> 1 Non commercial NGSO - €4760 2 NGSO no coordination - €27970 3 NGSO with coordination - €57480 4 GSO (except 5 and 6) - €53820 5 GSO under RR app 30/A - €68810 6 GSO under RR app 30B - €65510 <i>Assignments:</i> Satellites under type 2 - €11900 Satellites under type 3-6 - €17210
Luxembourg	- Satellite filing fees are defined by the Lux Admin – have fixed and variable components and are paid directly to the Luxembourg Government. Concessions may be negotiated by operators on a case by case basis. - Fixed charges take account of type of filing and coordination required - Variable charges take the number of technical characteristics in the filing into account, such as orbital positions/planes and unique frequency bands. This is always calculated as: $N \times \text{€}10^{25}$	Coordination NGSO - €350 + var. fee Coordination GSO - €1750 + var. fee Notification NGSO - €350 + var. fee Notification GSO - €1750 + var. fee Plans GSO - €1500 + variable fee

²⁵ where $N = N_{\text{sat1}} * N_{\text{freq1}} + N_{\text{sat2}} * N_{\text{freq2}} + \dots + N_{\text{satn}} * N_{\text{freqn}}$;

Nsat - For GSO = the number of different orbital positions. For NGSO = the number of different planes occupied; and

Nfreq - For GSO and NGSO = number of unique frequency bands used

Satellite Filings Cost Recovery

Netherlands	<ul style="list-style-type: none"> - Approach is based on cost recovery - Annual lumpsum is paid <u>per operator</u> based on estimated effort and company size (reviewed annually). Operator receives annual invoice in Q1 (in advance) - Variable hourly rate (based on FTE cost) for coordination activities are calculated every quarter (to be paid within 4 weeks). 	<p><i>Annual lumpsum:</i></p> <p>Small, approximately €5K; Medium, approximately €75K-€100K; Large, approximately €150K</p> <p><i>Variable charges per quarter</i></p>
Norway	<ul style="list-style-type: none"> - Approach is based on cost recovery - Charged at the same amount as per the ITU invoice (they have used this method for several years) 	As per ITU basis
US	<ul style="list-style-type: none"> - Charges based on a two stage process – licence application fee plus a bond - Fees are also charged for a replacement satellite, or a modification (to a licence) - An additional bond must be paid by new licensees. Operators must meet set milestones for satellite construction/launch or bond is forfeited - Once the satellite is operational, an annual fee (for the operating licence) is paid 	<p><i>Licence application fees (US\$):</i></p> <ul style="list-style-type: none"> - Application bond \$500,000 - GSO application \$98,645; - NGSO application \$339,730 - Replacement satellite \$98,645 - Modification \$24,270 Bond for new licensees - GSO \$3m/NGSO \$5m <p><i>Ongoing annual licence fee:</i> GSO \$138,475; NGSO \$151,950</p>

Table 9: Summary of ITU v proposed Ofcom charges

Satellite filing	Filing type	ITU (£)	Ofcom (£)
Filing A	API	5802	7700 to 13100
Filing B	API	5802	7700 to 13100
Filing C	GSO	89528	35300
Filing D	GSO	66876	35300
Filing E	GSO	37362	35300
Filing F	NGSO	37717	50900
Filing G	NGSO	60316	50900
Filing H	NGSO	60316	50900

*NB ITU are currently examining whether to increase their charges for non-GSO due to increased workload

A6. Assessment of charging options

Rating key: Low, Medium, High reflect rating against each Principle

Charging option and description	Principle 1 - Reflects our costs, in a transparent and proportionate way	Principle 2 - Simple and cost effective (to implement)	Principle 3 - Clarity and certainty for stakeholders	Overall assessment
<p>1. One-off charge per filing</p> <p>Lifetime cost of filing charged upfront in one-off payment. All filings are charged the same</p>	<p>Low</p> <ul style="list-style-type: none"> - May be considered unfair to charge full lifetime costs for all filings, as some stages of work would not be relevant to all e.g. many filings do not reach notification. - Fee does not accurately reflect costs of the type of work we perform based on our most significant cost drivers (e.g. API filings are less resource intensive than CR/C filings requiring coordination and therefore lower cost for us to manage). 	<p>Medium/High</p> <ul style="list-style-type: none"> - Lowest administration costs of charging (e.g. invoicing). - However, raises additional complexity because the option does not readily allow us to reconcile aggregate 'recoverable' costs to fees each year. - Simple to enforce as we would not perform the filing work if fee not paid. 	<p>Medium/Low</p> <ul style="list-style-type: none"> - Although on the face of it one-off charges do provide clarity and certainty, the legal requirement to reconcile costs and fees annually is more likely to drive uncertainty and variability over time. - More difficult to maintain consistent charges year on year because we cannot control for variable filing volumes. Has the potential to lead to highly variable charges per filing in different years. 	<p>Medium/Low</p> <ul style="list-style-type: none"> - Although simplest to implement, there could be significant variability and some unfairness in charges.
<p>2. Application fee plus flat annual fee per filing</p> <p>Charge an application fee for submission, modification and notification requests. Plus an annual management charge per filing until notification (same annual charge for all filings)</p>	<p>Medium</p> <ul style="list-style-type: none"> - Annual approach likely to be more proportionate for operators who suppress some of their filings during the process (e.g. where they have submitted multiple filings due to congestion of slots). - As for option 1, is not linked to the most significant drivers of our costs. 	<p>Medium</p> <ul style="list-style-type: none"> - Charges can be clearly set out in a notice revised and published annually. - Minimises administration costs by incorporating within existing Ofcom processes and enables reconciliation on annual basis. - Organisations with filings receive one invoice issued annually for their total annual charges for all filings in the coming year. (Note: application fees are paid on application, not invoiced). - Creates an incentive for operators to review need for each filing before year end, freeing up frequencies and orbital locations for new filings. 	<p>Medium/High</p> <ul style="list-style-type: none"> - Approach provides stakeholders with best understanding of likely total charges. - Some stakeholders (e.g. smaller operators) may prefer smaller, regular payments, compared to an upfront lumpsum. - Variability in charging year on year is smoothed and significantly less variable under an annual approach. 	<p>Medium</p> <ul style="list-style-type: none"> - More cost reflective than option 1, and reduces variability in charges, but does not take account of other significant drivers of our costs.

Satellite Filings Cost Recovery

Charging option and description	Principle 1 - Reflects our costs, in a transparent and proportionate way	Principle 2 - Simple and cost effective (to implement)	Principle 3 - Clarity and certainty for stakeholders	Overall assessment
<p>3. Application fee plus annual fee per filing type</p> <p>As for Option 3, but the annual management charge differs for each type of filing (weighted for effort)</p>	<p>Medium/High</p> <p>- As for option 2, but has a clearer link to the main drivers of our costs (principally our effort for the different types of work we perform).</p>	<p>Medium</p> <p>- As for option 2, although will require some updates to our internal database to report volumes by filing type.</p>	<p>Medium/High</p> <p>- As for option 2.</p>	<p>Medium/High</p> <p>Recommended Option</p> <p>- Considered the most proportionate, simplest and certain charging option for stakeholders.</p>
<p>4. Hourly rate</p> <p>Charge fixed hourly rate based on FTE costs, only for work we do</p>	<p>Medium / High</p> <p>- Potentially provides most transparency for stakeholders, linking fees to actual work their filing generates.</p> <p>- However, it will provide less transparency when we need to split what are often shared costs, as it is not always simple to attribute work covering multiple (or all) satellite filings to specific stakeholders (e.g. reviewing the BRIFIC and attending international meetings).</p>	<p>Low</p> <p>- Would require operational changes to Ofcom’s internal processes, likely to add material costs because:</p> <ul style="list-style-type: none"> • Invoicing process likely to be more regular, and in arrears, and therefore more complex to implement. • We do not currently hold data (or record our effort) at this level of granularity so adds complexity. • Requires more complex time and case management system with ongoing staff costs to track and maintain. 	<p>Low</p> <p>- Makes it difficult for stakeholders to plan lifetime charges for their filing, the total scale of which may increase considerably depending on the amount of work that their filing generates.</p>	<p>Medium/Low</p> <p>- Although appearing to be a more granular and transparent charging option, likely to lead to higher implementation costs and uncertainty for stakeholders.</p>

A7. Glossary

2003 Act	Communications Act 2003
API	Advance publication information
BIU	Brought into use
BOTs	British Overseas Territories
BRIFIC	Radiocommunication Bureau International Frequency Information Circular
CEPT	European Conference of Postal and Telecommunications Administrations
CR/C	Coordination Request
DEA 2017	Digital Economy Act 2017
EIA	Equality impact assessment
FTE	Full time equivalent
GSO	Geostationary orbit
HR	Human resources
ITU	International Telecommunication Union
ITU-BR	ITU Radiocommunication Bureau
MIFR	Master International Frequency Register (Master Register)
MOU	Memorandum of Understanding
NGSO	Non-geo stationary orbit
NRA	National Regulatory Authority
OCA 2002	Office of Communications Act 2002
RRB	Radio Regulations Board
STE&E	Spectrum technology, engineering and enforcement
UK	United Kingdom
UN	United Nations
WRC	World Radiocommunications Conference
WTA 2006	Wireless Telegraphy Act 2006