Arqiva Response to Ofcom Consultation on Non-geostationary satellite systems - Licensing updates

21st September 2021

Overview

Arqiva welcomes the opportunity to respond to Ofcom's consultation on non-geostationary satellite systems licensing updates, setting out our views on how the licence changes proposed will impact agreements between non-geostationary satellite systems network operators and non-geostationary satellite earth station service providers and whether the resulting processes will be able to function quickly and effectively.

Arqiva is keen to support the development of this sector and the innovation and opportunities that new services and operators will create. As an established earth station uplink provider with ambitions to expand its business in this area, Arqiva wants the sector to develop fully and operate efficiently. Arqiva wants the satellite community and operators of all systems to see the UK as an attractive place to invest and base services. We encourage Ofcom to adopt a licensing process which supports the development of the sector, attracts investment into the UK and enables consumers to benefit fully from services.

In general, Arqiva recognises the challenges Ofcom has identified in its consultation and the need for it to make changes to its licensing process to enable the full development of the sector. Arqiva supports the distinction made in the consultation between the licensing of the network operator and the NGSO gateway provider, recognising that Arqiva and others provide ground station services and play an important role in the value chain. The requirement for an NGSO gateway licence holder to be required to ensure that the system it supports has a network licence is sensible and is a practical model for enabling Arqiva and other gateway providers to continue to develop and support the sector.

Arqiva also supports the objective of ensuring that systems can co-exist and interference can be managed. We do not want to see the development of any one NGSO system unnecessarily preventing the operation of other systems and we also do not want to see the development of the NGSO sector overall either impact or harm the ongoing operation of fixed Geostationary Satellite Operator systems.

Whilst supportive of Ofcom's objectives and the high-level approach, Arqiva has some concerns that it would like Ofcom to consider and take into account as it develops its new licensing approach. These issues are highlighted below.

The risk of delays to the development of the sector

Arqiva has been developing its business currently supporting the NGSO sector. As highlighted in the consultation, this has included Arqiva already operating as an existing uplink licence holder. It has been investing in infrastructure to support services and is in dialogue with providers to build and grow its business. This has included submitting licence applications which have now been put on hold as a result of this consultation process.

Arqiva is concerned that Ofcom's approach and new proposals will have a chilling effect on the development of the sector. Ofcom's consultation runs until 20th September and Ofcom will then need to evaluate responses and refine its approach. Given the lack of clarity in the process, which we touch on below, it is possible that further thinking will be required before Ofcom issues its statement and commences with the new licensing process.

The stated timetable and steps in the evaluation process suggest an indicative 10-week licence evaluation process, but if the approach is made too complex, there is a risk that Ofcom will be unable to adhere to this timetable.

This suggests that we could expect that new licences will not be awarded until some point in 2022, which could be up to a year after Arqiva's current licence applications were originally submitted. Such a delay is unhelpful to the development of the sector and undermines investments which have already been made or are under evaluation.

Arqiva urges Ofcom to streamline its decision-making process as much as possible to reach an early decision following the consultation and to stick to the 10-week timeline as a maximum, rather than an indicative timeline, for the evaluation of any new licences. It should also ensure that it prioritises those applications already submitted, so that an early decision can be made on each of those.

Adopting a process which unnecessarily slows down the build of UK Gateways for NGSO licences given the likely potential demand

As mentioned, Arqiva recognises the challenges Ofcom is seeking to address through this consultation and its proposed new licence process. It is, however, unclear in relation to the situation with the location and number of UK gateways that the issue is as much of a concern as possibly perceived by Ofcom.

Ofcom will, of course, have greater market information around this and will form its own view on the likely overall level of demand for UK gateways. Arqiva's discussions with NGSO operators do suggest that there is interest in gateways located in the UK and that there could be demand across a range of providers. The level of demand we are aware of does not suggest that Ofcom or potential future network operators should be overly concerned about a lack of future sites for gateway locations. As long as network operators show flexibility and work with providers such as Arqiva to explore potential sites, then it should be possible to accommodate a number of systems.

The requirement on network providers that their systems can inter-operate is important and should be a key factor in the evaluation, but Ofcom needs to be careful that it does not adopt too cautious an approach around gateway sites so as to render locations unusable. For example, in Arqiva's view, it would not be appropriate to reject a NGSO gateway licence based on another site within a specific distance, claiming that it might have a potential future use itself. If there are other sites far enough away which could still be used, then that needs to be the key criterion.

Arqiva believes that its current limited licence applications could have already been approved and there are likely to be enough alternative locations for gateways at this point in time for Ofcom to have adopted a pragmatic approach and avoided such a long delay in the approval process for these applications.

A lack of clarity in how the process and evaluation will work in practice

In reviewing the consultation document, Arqiva has a number of questions around how the review and award process is likely to work in practice and how the different parties can fulfil the requirements imposed on them or provide the assurances and information Ofcom is likely to require.

As an example, without clear parameters available that will be used to assess each licence application, it appears challenging for either a network operator or a gateway operator to be confident that they are making a licence application that is expected to be able to be approved.

It may also be difficult to submit information around the ability to co-exist with future networks or to propose mitigation measures that they can put in place, when the parameters of such networks are either not available or might be based on target or theoretical performance which might vary when a system is actually launched. On this, it is not clear how Ofcom will use this information within any evaluation, for example, how Ofcom would determine if the parameters suggested for a future network are accurate.

As mentioned above, we note that the proposed process suggests only an indicative timetable for consideration of a new licence application. We believe it would be useful to make the 10-week timetable a maximum to ensure that a prospective licensee can have confidence in developing a business case to use a licence in a reasonable timetable.

Adopting a process which might make the UK an unattractive location for services relative to other markets and deter investment opportunities in the UK

Arqiva has an over-arching concern that there is a risk that Ofcom is proposing a licensing system which might make the UK a less attractive base for NGSO services than other European locations. If Ofcom adopts an approach which places greater obligations than other markets, or is too cautious in how it assesses the potential impact of some level of future and unspecified competition, then there is a risk that operators will just base themselves elsewhere and service UK consumers from overseas.

That would be a bad outcome for UK industry and may ultimately make it harder to regulate the sector. Ofcom needs to ensure that its licence process is timely, not overly onerous in the requirements imposed on parties, and clear in how it will operate and what it requires from those involved in the process.

About Arqiva

Arqiva is at the heart of the broadcast and utilities sectors in the UK and beyond, providing critical communications infrastructure and media services.

Arqiva provides much of the infrastructure behind television, radio, mobile and other wireless communications in the UK and we are at the forefront of network solutions and services in an increasingly digital world.

Arqiva is the only national provider of terrestrial television and radio broadcasting and provides a machine-to-machine connectivity network for smart metering within the utilities sector.

Arqiva has a long heritage of satellite services in broadcast and data. We operate at scale within the UK across a number of secure, best-in-class teleports and sites, which provide services to both geostationary and non-geostationary (NGSO) customers. We are trusted by global operators and service providers to deliver their end-to-end services and we work closely with our customers to overcome complexity, ensuring they have the level of support they need to service their end-users.

Arqiva operates four world class teleports (Tier 4 WTA accreditation at Chalfont Grove) accessing C, Ku, Ka and X bands alongside a growing number of LEO gateway sites in the UK, with best-in-class levels of operational resilience. We also have access to a wide range of secure sites across the UK with connectivity and power, supported by a nation-wide field service team and accompanied by site acquisition and management expertise.

Arqiva's history can be traced back to 1922 when it broadcast the world's first national radio service. In 1936 it carried the BBC's first television broadcast. In 1978 it enabled Europe's first satellite TV test. By the 1990s Arqiva was working with the UK's mobile operators to bring mobile telecommunications to UK businesses and consumers. In the 2000s, it launched the UK's national DAB radio and Digital Terrestrial Television networks. Most recently, Arqiva has played a pioneering role in the roll-out of the national smart energy and water metering networks.

Arqiva's teams are, behind the scenes, delivering millions of vital connections every day for our customers, the major UK and international broadcasters, independent radio groups as well as major utility companies and networks.

Arqiva is owned by a consortium of infrastructure investors and has its headquarters in Hampshire, with major UK offices in London, Buckinghamshire and Yorkshire and operational centres in the West Midlands and Scotland.

Consultation Questions

Question 1: Do you have any comments on our assessment of the interference challenges raised by NGSO systems and their potential impact on a) service quality; and b) competition?

Arqiva agrees that the issue of in-line interference is recognised and accepts that the high-level description provided by Ofcom is appropriate. We see this as only the simplest of analysis and we have concerns that the practical implementation of coordination and appropriate technical solutions will not be straight-forward. It appears that this will be likely to introduce significant potential delays to service provision to the public.

Interference

Our concerns over interference are:

1)   While we recognise that this is an evolving business sector with innovative developments ongoing, there are no technical parameters provided in the consultation. This may limit the ability of licence applicants to have any confidence when they submit an application that the information provided and the analysis required will allow an application to be successful.

2)   For gateway operators in particular, there are some concerns about whether gateway separation certainty and scarcity are expected to be a major issue across the UK landmass. These concerns are addressed later in this response.

3)   The role of the ITU is important, as outlined in sections 3.10 to 3.15 of the consultation, but this position appears incomplete in the case of NGSO satellite systems. It is not clear if the priority determined by the ITU in terms of filings with them is proposed to be taken into account by Ofcom. Without any clarity on this, it would appear that NGSO satellite system operators may able to challenge this and a challenge could potentially result in delays to service provision.

4)   There is no mention in the consultation of any protection to be required by new services to any GEO satellite systems. It is essential in any new deployments to ensure that the existing established GEO satellite systems are protected adequately to allow them to operate without degradation.

Gateway Separation and Scarcity

In sections 3.17 to 3.22 of the consultation, the potential necessity of gateway separation is discussed. Other in-line event mitigation methods are however not included, even though it would appear that they could usefully be considered. Examples would be satellite diversity and orbital angle avoidance, which have previously been included in earlier ITU recommendations.

In section 3.17 of the consultation, although there is reference to "10s of kilometres or more" being required for separation, there is no reference to how this was determined. In section 3.20 it is stated that Ofcom do not think there is a significant risk of this scarcity materially constraining the deployment of NGSO systems in the UK and that sufficient sites will be available.

These statements raise a concern that the process proposed and the delays that are expected from it are potentially unnecessary and might be seen as unduly burdensome, given the likelihood of a significant issue occurring. We are not clear that the assessment of a possibility of an issue is able to be weighed against a real probability of an impact on a service. Any clarification on this would be welcome.

In the approach proposed to address potential interference, there is currently no distinction made between the impact on a gateway as opposed to a user terminal. It would be useful if any clarification could be provided on the relative weighting of priorities between gateways and user terminals.

Mitigation of Risks to Service Quality and Competition

Arqiva acknowledges the approach being taken in sections 3.25 to 3.36 in relation to risks to service quality and competition and has some concerns about how this is proposed to be implemented. We provide feedback on each of the relevant areas from Section 3 of the consultation as follows:

Encouraging cooperation

Arqiva has always sought to ensure cooperation and engagement over the deployment of satellites, earth stations and use of capacity. Given the variety of potential proposals that may come out of new innovation and system and product developments, we are not convinced that it will be practical to try to prescribe a single process to manage applications in an appropriate timescale. As the consultation states in section 3.28 that no change or replacement of the existing ITU coordination procedures is proposed, the need for an additional process specific to the UK licensing requirements would appear to risk making the UK less attractive for the operation of NGSO services. This introduces a risk that investment in innovation in the UK will be reduced and services to the public impacted.

The requirement to publish potential gateway location information without any clarity of what may be acceptable for approval similarly does not appear to assist with supporting any potential business investment case or the development of services.

We would propose that additional guidance is provided on the parameters that will be used for assessment of new licence applications and the supporting evidence is made available for applicants to use to be able to prepare their licence applications.

Managing Interference

As stated earlier in the response to this question, the proposed approach to managing interference is currently lacking some guidance on the relevant parameters and what will determine the ability to coexist.

We would support additional guidance being provided on the parameters that will be used for assessment of any interference issues, either when making an application or once a service has commenced operation. It would be useful to have any supporting evidence made available for new licence applicants against which to prepare their licence applications.

We would seek that any assessment of interference issues ensures that consideration of the impact on Geostationary satellite operator services is also included.

Supporting Competition

Arqiva is keen to support competition in the provision of NGSO satellite services and is keen to work with a number of network operators in the provision of gateway services. We are somewhat concerned that the approach being suggested currently appears to propose measures that will delay the provision of licences for gateways that have already had licence applications submitted. Putting this in place could be overly complex and might as a result deter network operators from seeking to use locations in the UK for their gateways.

There does not appear to be clarity yet available in the assessment approach that will be undertaken and no backstop on the timeline for a new gateway licence application to give any certainty on when a licence may be approved.

We would propose that new gateway licence applications are given a backstop date whereby an applicant can expect confirmation of the approval of an application or clarity on any reasons not to approve and potential remediation requirements to allow approval.

Open and Transparent Process

The process proposed does not currently appear to recognise the additional delay that the process will bring to current and future deployments and without any parameters to guide an applicant, it possibly risks introducing more uncertainty rather than reducing it. It is not clear how any potential comments received in any period for stakeholders to comment will be assessed and how this will allow new entrants to operate. There would appear to be a risk of introducing a delay to innovation and investment without any supporting clarity or controls to prevent this. Although we can see that the 12-month limit is proposed to be required in the delivery of a new services, there appears not to be a matching appropriate control for the timeline for approval of applications. It would be useful to understand how the licensing process will ensure that

consideration of multiple networks and designs for new networks or changes to existing networks will ensure that there is no delay to the approval of licence applications.

As included earlier in this response, we would see the provision of parameters for assessment of applications and a backstop date for determination as useful additions to the proposed process and licence conditions to support competition and development in this UK business sector.

Question 2: Do you have any comments on our approach to dealing with the interference challenges raised by NGSO systems?

Arqiva agrees that the issue of in-line interference is recognised and accepts that the high-level description provided by Ofcom is appropriate.

We have raised a number of questions and potential concerns around the approach to dealing with interference challenges raised by NGSO systems in our response to Question 1 above. We would see these as also relevant to this question, both specifically for Interference and also for the issues of Gateway Location and Scarcity provided in that response.

For brevity we have not repeated them here.

Question 3: Do you have any comments on the proposed updates to our process for NGSO gateway and network licences?

Arqiva has been to some degree surprised by the introduction of the updated process retrospectively to applications that have already been submitted. We ask that Ofcom prioritises those licence applications already submitted a number of months before the start of the consultation and that it comes to a speedy conclusion on these applications.

We see the new process and indicative timeline as appearing to lack clarity on the typical period of uncertainty and delay that the revised process will introduce over the previous process that has worked successfully for Arqiva and others to date.

As we have referred to in our response to Questions 1 and 2, we feel that there is uncertainty over how any assessment will be made and the relevant parameters that an applicant may need to comply with to be confident of an application being successful. Additionally, in Section 4.33 of the consultation the option to extend any assessment period is included.

We are concerned that with ongoing developments in this sector and innovations and enhancements likely to be forthcoming from network operators, it may not be possible for Ofcom to analyse and predict all interactions between existing and future operators in a time-bound and efficient way.

While Arqiva accepts that controls for both existing and new operators, to ensure that they cooperate in addressing coexistence issues, can be relevant conditions of any licence, we do not see that the process of making information public for a delay period will ensure that issues might not occur. We believe that there may be a downside of introducing this additional delay, and along with this, allowing challenge with no certain decision parameters available. In the consultation, Section 4.7 (a) appears to be able to allow a "reasonable" application to be able to block the development of new uplinks due to the limitations of the mitigation measures available to the applying operator. This is where the reasonableness test may be skewed, if the limiting parameters of the two systems are significantly different. We would welcome clarification from Ofcom on this point.

As included earlier in this response, we would see the provision of parameters for assessment of applications and a backstop date for determination as useful additions to the proposed process and the new licence conditions to support competition and development in this UK business sector.

We would seek that any assessment of interference issues ensures that consideration of the impact on Geostationary satellite operator services is also included.

Gateway Location and Scarcity

We would see the same concerns as have been raised in our response to Question 1 as relevant here for Gateway Location and Scarcity. For brevity we have not repeated them here.

In general, we are not clear that there will be the volume of applications for gateway locations in the UK that justifies too complex an evaluation and licensing process. We ask that Ofcom takes this into consideration and does not end up with a process which may be too difficult to predict or navigate relative to other markets and which might deter systems seeking to locate gateways in the UK.

Question 4: Do you have any comments on the proposed updates to existing and new NGSO network licences?

Arqiva sees this question as primarily one for the network operators. However, we would be keen to avoid a situation where any existing services are impacted by an amendment to the licensing conditions. Where a sunk investment has been made, contracts for services are in place and a service is already operational, or ready for operation, this should be fully taken into account by Ofcom. This should include NGSO and Geostationary satellite operator services.

Arqiva will be keen to be involved and fully cooperate in any investigation or evaluation of any changes to existing licences which might impact on the services that Arqiva operates.

Question 5: Do you have any comments on the proposed updates to existing and new NGSO gateway licences?

As with Question 4, Arqiva will be keen to avoid a situation where any existing services are impacted by an amendment to the licensing conditions. Where a sunk investment has been made, contracts for services are in place and a service is already operational or ready for operation this should be recognised and taken into account by Ofcom.

Arqiva will be keen to be involved and fully cooperate in any investigation or evaluation of any changes to existing licences which might impact on the services that Arqiva operates.

Question 6: Do you agree with our proposal regarding NGSO terminals operating in Ka band?

Arqiva has no comment on this proposal as it does not appear to relate to user terminal services that Arqiva would operate. We are aware that some NGSO operators are planning to use Ka band for user terminals in future.