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Dear Gideon

Next generation networks

As you may know, SSE is a large energy company but we do also have interests in the communications market. We provide retail telephony and broadband products, using available wholesale products; we have a subsidiary that owns network infrastructure, providing capacity and bandwidth services to large business customers as well as to other communications providers (CPs); and we use communication services to support our energy services.

We therefore welcome Ofcom's consultation on the implications of the next generation network (NGN) developments, the change in the pace of this and the appropriate regulatory actions to protect consumers as communications infrastructure evolves to adopt this technology - "a positive yet disruptive trend", as Ofcom describes it at the start of the document.

We have attached our responses to the consultation questions as an appendix to this letter and would summarise our main points as follows:

• We agree with Ofcom's emphasis on consumer protection issues; the importance of switching arrangements that are simple for customers to use; and various technical issues that need to be resolved;

• We believe that each of these areas needs more industry-led coordination and have set out, particularly in response to question 6, how we think that could best be achieved.

We also welcome Ofcom's continued monitoring of the dialogue between BT and the energy industry about the traditional interface circuits that support telecontrol and protection activities. These services support our own critical services and are an important example of the reliance which end customers of communications products can place on the security of the communications infrastructure which supports them. In this way, communications are also entailed in the country's critical national infrastructure and, in our view, should increasingly be regulated and governed as a utility infrastructure. We believe this view is consistent with the conclusions of the Digital Britain project.

We hope these comments are of interest and would be happy to discuss them further.

Yours sincerely

Aileen Boyd
Regulation Manager

Consultation Questions

Question 1: How do you envisage the model of competition changing over the next 3-5 years, and what sort of input products will be needed to support this competition?
We expect that there will be increasing technological development in the range of products available in the market place. In our view, deployment of "next generation" technology in access networks as far as customer properties is likely to be undertaken in small geographic areas – predominantly in new build housing developments – leading to "islands" where new technologies are enabled. We think that these technologies potentially could lead to differently engineered products and we believe that great vigilance will be needed to protect the customer experience of using new products and of switching between old and new technology products, for example as customers move in and out of new technology areas – or indeed between different "new technology" areas.

If the governance arrangements for customer switching that we describe in response to question 6 below were put in place, we believe that the required adaptations of input products could be debated and pursued by the market itself in a coordinated and forward-looking manner.

Taking this into account, we would support the currently predominant model of competition i.e. based on non-discriminatory wholesale access to BT's Openreach infrastructure via products such as wholesale line rental, being extended to include all relevant mass-market infrastructures. This would allow suppliers to provide their products seamlessly to a customer, irrespective of the technology infrastructure that the customer is connected to. This aim would entail development of wholesale access products from a range of "mass market" infrastructure providers and we welcome the steps that Ofcom has taken to date to establish open technical standards for such developments. As with customer switching, we believe it will be important to establish the means of governing the development of the technical standards, such that they can be enforced if necessary.

Question 2: Do you agree with our analysis of the requirement for xMPF?
We cannot readily comment on the detailed analysis of the different circumstances where xMPF products (described in paragraph 3.49 as "access to the voice part of the telephone line in situations where another CP is providing broadband") might be used.

However, we have two general observations on the areas discussed. Firstly, as xMPF is a copper-based product and as alternative voice products are developed on NGN access infrastructure, this would appear to remove the need, over time, for the xMPF product range for areas that are NGA enabled.

Our second observation is that the debate about xMPF highlights an important principle about the communications channel into a customer's premises. We believe that this channel should be managed at the infrastructure level without "belonging" to any particular supplier. A variety of independent products from different suppliers could then be provided over the channel without them affecting each other's technical characteristics or the commercial relationship that each supplier has with the customer. For example, it should not be possible for the withdrawal of one service due to payment issues to adversely affect or "cut off" a different service. Much of the xMPF debate seems to have

its origins in the lack of capability of legacy systems to recognise different suppliers providing voice and broadband on the same channel.

We understand that the independence of the channel is recognised in the evolving NICC standards for active line access in the context of NGA developments. We advocate that this principle be preserved and protected as a regulatory "open access" requirement as these standards evolve.

Question 3: What additional technical standardisation work is required to support NGN deployment?
We support the work of the NICC in developing technical standards in this area. We expect that further technical standardisation work will be needed as the technology evolves and roll-out takes place. We therefore agree that the types of work that the NICC has itself put forward (paragraph 3.92) are likely to merit further work.

We do believe that establishing the NICC on a co-regulatory basis – as discussed in relation to customer switching processes in our response to question 6 – would provide the means and authority for these technical standards to be formally enforced, as well as transparency in how they develop.

Question 4: What policy positions do you believe Ofcom ought to adopt in relation to interconnection between IP and TDM networks?
No comment.

Question 5: Do you have any comments on our analysis of investment uncertainty in relation to BT's 21CN plan?
We can certainly understand the knock-on effect of uncertainty about BT's NGN plans on the investment plans of other infrastructure providers and share Ofcom's concern about the risks of reduced overall infrastructure investment as a result. The situation appears to have its roots in the market power that BT possesses across the total reach of fixed line infrastructure, which may therefore provide a basis for regulatory action. In the longer term, proposals from the Digital Britain report – in particular the role of the proposed Network Design and Procurement Group – may be able to contribute to a solution.

We certainly do not believe that "commercial negotiation" forms a satisfactory basis for resolving the situation, given the relative market power of BT and other operators who wish to interconnect with BT.

Question 6: How do you think Ofcom should take forward considerations relating to switching involving next generation access and core networks, and which areas should we focus on?
We have argued in a number of consultation responses that a greater degree of coordination between market participants (relevant infrastructure providers and suppliers) is required in order to protect the customer experience and establish comprehensive migration processes so that customers can switch easily between different suppliers and different products. We welcome Ofcom's support for the need for effective migration processes, at paragraph 3.159 and the following few paragraphs. Like Ofcom, we foresee that switching will become more complex for customers as new technologies are introduced. We thus believe it is vitally important for transparent, inclusive, co-regulatory governance of switching arrangements to be established as soon as possible

so that the market itself can proactively cater for prospective switching scenarios.

In our view, the single most important area that Ofcom should focus on is establishing arrangements to govern switching processes. We see the main components of governance being:

- A requirement, through a General Condition or otherwise, on relevant market players to belong to a market body that administers switching arrangements;
- Relevant market players to include those infrastructure providers whose networks are used to provide communications services to domestic and small business customers and suppliers of these services;
- The main purposes of the market body being maintenance of the documentation about what the switching rules are and facilitation of discussion on any required changes to the rules to accommodate market developments;
- Some form of representation and voting arrangements to cater for the inevitable situations where there is not full agreement on proposed changes;
- Some form of appeals process on decisions reached through the administered processes of the market body, which might involve industry panels and/or Ofcom;
- Ofcom involvement in directing the market body along the lines of a set of "relevant objectives" such that any developments to the initial set of switching rules is tested against appropriate criteria such as improving the customer experience of switching; greater efficiency of process; and the promotion of competition; and
- No Ofcom involvement in the day to day administration and development of the market processes, which are instead owned and developed proactively by the industry through the market body.

This balance of Ofcom involvement at high-level and collective industry ownership and action on a day-to-day "business as usual" basis seems best described as a "co-regulatory" arrangement, albeit that there has to be an absolute regulatory requirement on relevant parties to participate and thus form the basis for any enforcement required. Our view is that this could be considered as "an effective form of self-regulation" that Ofcom has a duty to promote and facilitate under section 3(c) of the Communications Act.

Question 7: Do you agree that the consumer protection principles and our approach to addressing consumer protection issues are still valid?
We agree with Ofcom's consumer protection principles for migration to NGNs, which are set out in paragraph 4.5 as:

- the services offered to consumers on NGNs should at least be equivalent to their existing services;
- consumers should not suffer any detriment during the transition to NGNs, for example, due to loss of access to emergency services or degraded call quality; and
- any changes to services are fully explained to end-users.

We recognise the critical importance of consumer protection issues as technology evolves and increasing reliance is placed by both residential and

business customers on the services provided over communications infrastructure. In terms of Ofcom's approach, therefore, we believe that there is justification for Ofcom to do more than monitor developments, relying on a view that CPs will have aligned objectives with Ofcom in seeking to minimise disruption for their customers.

In particular, we believe that the type of market mechanism that we have described in relation to switching processes in response to question 6 would provide an enhanced means of catering for consumer issues and the type of end-to-end service quality issues described later in this section of the document. The market body could, in this case, provide a forum for any consumers or representative bodies to raise issues formally with an industry body comprising the relevant market participants, with regulatory oversight from Ofcom.

Question 8: Do you agree with our assessment of how the alarm equipment incompatibility problem should be addressed?
We support Ofcom's level of concern about the matter of alarm equipment incompatibility with NGN networks and believe that there could be other applications (apart from energy network signalling that Ofcom mentions later in the document) that have similar incompatibility problems.

Ofcom suggests involving industry associations in the tele-care sector in the dissemination of information. We would advocate that there should also be an authoritative communications industry forum with which these associations and other representative bodies can interact, with a view to determining what steps the communications industry could take to mitigate any concerns or perceived problems with NGN implementation. As discussed above in response to question 7, we advocate that this has regulatory oversight from Ofcom in order to prevent commercial interests leading to customer harm.

Question 9: What will be the impact on vulnerable consumers of replacing telecare and other alarm equipment?
The financial impact on customers of the changed characteristics of communications networks is a valid issue and could be addressed by the market body/industry forum we have suggested.

Question 10: Would it be appropriate to agree a common set of terminal equipment compatibility tests? What would be the most appropriate forum to develop these tests?
Question 11: What other steps could be taken to help manufacturers ensure terminal equipment is compatible with the QoS parameters of NGNs?
Question 12: Do you have any other comments about compatibility of terminal equipment with NGNs and how they should be addressed?
Question 13: Do you think there is risk of terminal equipment incompatibility that warrants further SIP UNI standardisation? How should this be progressed?
Question 14: Do you have any other comments about compatibility of terminal equipment with NGNs and how they should be addressed?
The set of questions above relate to areas where further development of technical standards and testing of end-to-end network characteristics appears to be required. We note that Ofcom suggests that these areas would benefit from cross-industry coordination and very much agree with this. We believe the NICC is probably best placed to observe and act upon technical end to end quality issues and that it would have greater authority if constituted in a co-

regulatory manner, involving all relevant parties in the industry as well as Ofcom in a high-level role as previously discussed.

Question 15: Will a slower transition from TDM to NGN networks pose a risk to voice quality of service? How should such risks be addressed?
We do not know whether a slower transition from TDM to NGN networks will pose a risk to voice quality of service but we recognise the risk of this in terms of call routing complexity. We have supported Ofcom's intention to seek to develop more efficient routing architecture for ported numbers and believe, as noted above, that a co-regulatory arrangement would give more power to Ofcom to enforce an industry consensus on the best way forward to resolve quality issues such as this. We believe that technical issues, risks to call quality and other issues of concern to end customers should be monitored through such a co-regulatory body, based on the remit of NICC, as discussed earlier.

Question 16: Do you have any comments on the long-term trends in the evolution of networks to next-generation architectures?
We understand the technical logic for an evolution of networks towards next-generation architectures. Our feeling is that product development has, up until the widespread use of the internet, been dominated by technology-led rather then market-led principles. We firmly believe that a more sustainable market model would be for competitive service provision over open access infrastructures, which may develop as a patchwork of different technologies and owners. Thus service providers/suppliers using the infrastructures would seek to provide the types of service their customers want supported by infrastructure providers who are similarly seeking to provide what their wholesale customers want.

The underlying requirement for coordination of the market for the benefit of customers will increase in importance as technologies and products become more diverse and we have argued earlier in this response for forms of co-regulatory governance to address various different aspects of the market. Governance is necessary in our view in two main areas:

- **to deliver smooth operation of the infrastructures in terms of technical standards, quality issues and interconnection rules; and**
- **to allow normal utility market processes such as customer migration arrangements to be documented and developed as the market develops.**

If these vital areas of the market are coordinated, transparent and adaptable to change on a proactive basis by the market itself, under high-level regulatory direction, we believe this will form a solid basis for the management of future change and development of the industry. Whether the change comes from technology or service innovation, having a clear set of rules against which to test the new proposals to ensure they do not interfere with other products or with established market processes will, in our view, allow the industry to innovate and adapt in an evolutionary and controlled manner for the ultimate benefit of its customers.