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Dear Neil

The network innovation review: Ofgem consultation proposals 1st December 2016

This response to Ofgem's consultation on proposed changes to the RIIO innovation funding mechanisms is made on behalf of National Grid Electricity Transmission (NGET). NGET owns the high voltage electricity transmission network in England and Wales and is the electricity System Operator for all of Great Britain.

We support Ofgem's objective of stimulating consumer focused innovation in the energy networks. Although the RIIO innovation funding mechanisms have been operating for less than four years, we believe they are succeeding in encouraging exploration and development of new approaches to energy network challenges.

The RIIO-ET1 NIC fund has been a significant factor in facilitating innovation in novel smart approaches to transmission network capacity (VISOR - 2013), new market and cross transmission - distribution network approaches to maintaining electricity system stability (EFCC - 2014, TDI 2.0 - 2016, Phoenix 2016), and enabling acceleration of the adoption of new and unproven equipment and network management approaches on critical national infrastructure (OSEAIT/Deeside – 2015).

Alongside these demonstration projects, the Network Innovation Allowance (NIA) has also enabled us to support a diverse portfolio of lower technology readiness or smaller scale projects led, or supported, by a range of partners and suppliers including: Small and Medium-sized

Enterprises (SME), large international Original Equipment Manufacturers (OEM), national and international research partnerships, academia and other GB gas and electricity networks.

We generally agree with the intention of the majority of the proposed changes and fully support bringing early effect to those that will result in process efficiency improvements to NIC projects. Our feedback on these is highlighted green in the annex below.

We suggest further consideration be given to the proposals that create additional regulatory constraints to innovation, particularly those based on lessons learned from the Low Carbon Networks Fund (LCNF) projects.

The LCNF functioned within the context of energy policy and forecasts of the needs of electricity distribution from almost a decade ago and, significantly, operated alongside an RPI-X price control framework. Some of the current proposals are based on evidence that doesn't reflect our experience of the first four years of the electricity transmission NIA and NIC funding under RIIO.

The RIIO regime has succeeded in driving greater customer and stakeholder engagement and outcomes focused on consumer value. RIIO provides strong incentives on networks to deliver lower cost solutions for consumers and has resulted in effective collaboration between transmission networks, sharing learning and adopting innovative solutions from projects led by other networks, such as the trial of ACCR conductor by NGET now being rolled out by Scottish Power Transmission with IRM funding.

We are concerned some of the proposed changes (highlighted in amber in the annex below) risk slowing down progress made to date in stimulating innovation in the electricity transmission sector. Specifically:

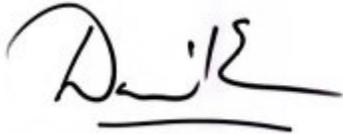
- some of the proposals will divert resources to service additional regulatory obligations. This could be mitigated by amending the limits on the use of licensees' own resource such that the limits exclude specialist engineering or scientific expertise in support of innovation projects, and
- some of the proposals risk creating constraints on networks and third parties that could hamper networks in responding rapidly to opportunities and may result in less rather than more third party engagement in innovation.

We have submitted feedback on the legal drafting consultation in an excel spreadsheet attached to the e-mailed response to this consultation. However, our feedback to the principles and substantive issues under consultation is contained within Appendix 1 attached to this letter. In the appendix we have outlined suggested modifications, where appropriate, that may help ensure that electricity transmission innovation outcomes under RIIO continue to be maximized.

We look forward to continuing to work with our stakeholders and customers to identify and implement innovative solutions to the network challenges we face that will enable us to continue play our role in facilitating changes across the energy sector and deliver benefits to our network users and energy consumers.

We hope that the information provided is useful for you. Please do not hesitate to contact me to discuss any elements of this response.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'David Oram', with a horizontal line underneath the name.

David Oram
Network Innovation Manager: Electricity Transmission

Chapter 3 Proposals for delivering greater value for money

Question 3.1: What are your views on our proposals to introduce a requirement for the network companies to jointly develop an industry-wide innovation strategy?

- ***If you agree, should companies retain their own strategies, and in addition should there be a single system strategy, or one for gas and another for electricity?***
- ***How often should the strategy be updated?***

We believe that RIIO networks should retain their own innovation strategies.

The RIIO networks have undertaken extensive customer stakeholder consultation in developing their innovation strategies. It is appropriate for each network company to maintain its own innovation strategy informed by detailed knowledge of their network, their network users, their own assessment/knowledge of future needs and the challenges relevant to their geographical area.

It could be beneficial for a high level joint innovation strategy to be published for each of the network sectors (electricity transmission, electricity distribution, gas transmission, and gas distribution), but this should not create a constraint on the ability of networks to pursue innovation in areas that are not reflected in a sector wide strategy.

Including a requirement for all regulated networks including, OFTO's, CATO's and iDN's, to contribute to the joint strategy for their sector could provide additional benefit to consumers. Providing a complete overview of common network challenges and strategic priorities in each regulated network sector would further minimize the potential for unnecessary cost to consumers and create greater opportunity to share learning outcomes and roll out innovative solutions across each network.

We suggest that each sector should review and update their joint strategy every four years with timing aligned with the beginning of each regulatory period and at the mid-way point.

This timescale aligns with both the natural cycles in the regulatory period as well as the typical timescales of larger scale innovation projects. This creates opportunity for efficiency by undertaking reviews at times when networks will already be reviewing medium to longer term planning, and for learning generated by projects in the preceding period to be taken into account. Networks would be able to review and update on a more frequent basis in response to specific events, such as significant changes in government policy, but to mandate more frequent updates is likely to result in additional cost with little corresponding added value.

Consideration should be given to extending the time available each sector to prepare their strategy to early December 2017.

Developing joint innovation strategies, with effective consultation across a range of interested stakeholders, is likely to be both resource intensive and time consuming. Consideration needs to be given to how this is funded and whether the proposed deadline of October 2017 is realistic. A December 2017 timescale for sector strategies will align with the 2017 LCNI conference and provide greater opportunity for interested third parties to engage in the development of the strategies.

Question 3.2: What are your views on our proposals to help facilitate increased involvement of third parties in the NIC via the network companies?

We support the principle of network companies running open competitions for innovation proposals from third parties: however, we believe further consideration should be given to the proposal to mandate annual calls and mandate the publication of information relating to the proposals received from third parties.

NGET has published open calls for interested parties to submit NIC proposals for the last two years. We are aware that other electricity and gas networks have also published open calls in recent years and don't believe it is necessary to mandate that all networks run open calls every year.

If it is to be mandated, we suggest that companies should be able to operate their own competitions. This leaves networks free to issue calls that are of potential value to their specific circumstances, but doesn't preclude networks from collaborating either at the time of the call or during the development of a proposal initiated by another network's call.

NGET would be happy to publish responses to proposals from third parties to public calls that NGET is involved with. However, we believe that few third parties would want the details of their unsuccessful proposals and the responses to them to be published.

It is not appropriate to introduce an obligation for networks to respond to all proposals as suggest in the consultation document. Such an obligation, if it is introduced, should be limited to proposals submitted to the licensee in question only and not include those submitted to other licensees.

Question 3.3: What are your views on providing direct access for third parties to the NIC?

NGET supports the objective of attracting third parties to bring forward innovative proposals that have the potential to deliver benefits to consumers, and we have been active in publishing open calls for proposals from third parties.

We believe that third party participation in the NIC is already strong. At NGET we have not experienced difficulties in attracting participation from a wide range of partners on either NIC or NIA projects.

The first of the specific requirements articulated in the NIC and NIA governance document is that NIC and

NIA project must demonstrate the potential to affect a direct impact on a network licensee's network or the operations of the GB System operator. It remains unclear how a third party would demonstrate the potential to implement an innovation solution impacting a network without the involvement of the relevant network license.

Question 3.4: What are your views on our proposals to remove the Successful Delivery Reward and the provision to recover Bid Preparation Costs?

We don't agree that significant benefits from NIC projects will flow to the electricity transmission companies undertaking them and believe that further consideration should be given to the contribution that the SDR makes to electricity transmission NIC projects.

Much of the benefit arising from Electricity Transmission NIC projects in the remaining four years of the RIIO-T1 period will be passed to consumers under the RIIO-T2 price control before the networks have the opportunity to benefit from them.

The SDR is also particularly important for the GBSO for whom there are limited ways in which to realise benefits from taking on the risks involved in leading innovation projects or supporting those led by others. Projects relevant to the GBSO are likely to deliver benefits to consumers through lower system balancing costs: and the SO's Balancing Services Incentive Scheme, as currently framed, does not provide access to innovation benefits.

The successful delivery reward also provides an effective and positive incentive for NIC funding licensees to ensure that projects are not only managed efficiently and delivered effectively; it also ensures there is a focus on the project close down phase and knowledge sharing.

Removing the SDR has the potential to reduce the number of NIC proposals coming forward in the second half of RIIO T1 and the resulting lost opportunity for long term value to consumers should be weighed against the increased short term value to consumers from removing this incentive.

We agree that the recovery of bid preparation costs for the NIC is unusual compared to other sources of innovation support, such as the EU Horizon 2020 programme, and agree that it is appropriate to consider the benefits of this provision for consumers. However, when comparing the NIC with other funding mechanisms, a holistic view of the process and funding terms need to be considered.

In the last ten years NGET has been party to eight FP7/H2020 projects as well as several Industrial CASE awards partially funded by the Engineering and Physical Sciences Research Council. In our experience none of these sources of funding require the level of detail that NIC bids must provide. Nor do they include comparable restrictions on intellectual property ownership that limit the ability of participants to benefit from IP or the range of ex-poste funding claw back mechanisms built into the NIC mechanisms. All of these factors are taken into account when we consider investing in the bidding process for and co-funding at least 10% of a NIC project.

We suggest that, in parallel with removing the bid cost recover provision, the NIC full submission requirements and bidding process should also be revised to be more aligned to those of other funding

sources.

Chapter 4 Proposal for future funding level of the electricity NIC

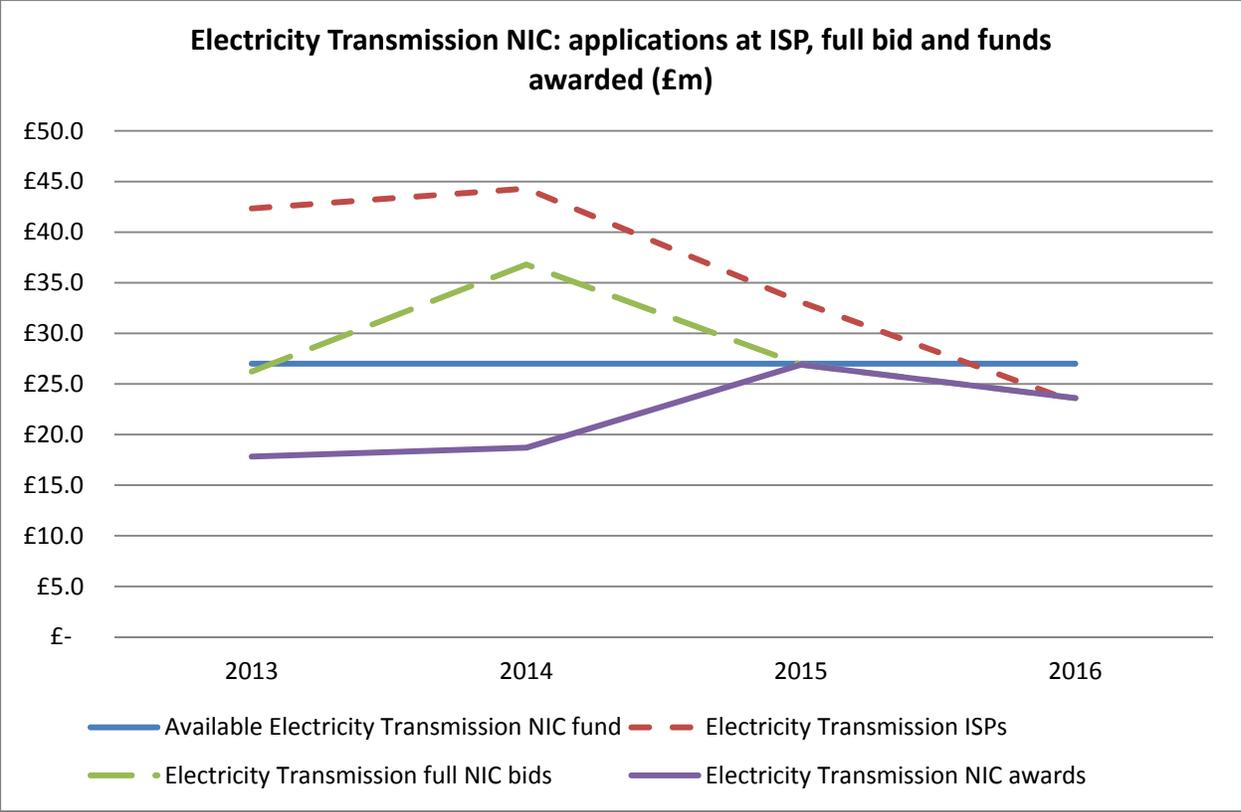
Question 4.1: What are your views on the rationale for reducing the level of electricity NIC funding pot?

Separate analysis of the electricity transmission NIC funding shows that the assessment of the LCNF and NIC across both electricity transmission and distribution in the consultation document underestimates the level of participation from electricity transmission networks. Consideration should be given to ring-fencing the £30m funding commitment from the RIIO T1 price control to projects addressing transmission challenges. Removing funding from transmission networks now may undo the positive change that has taken place in the last four years amongst the transmission network owners and the GBSO.

The graph below illustrates how the electricity transmission networks and our third party partners have responded to the NIC over the last four years.

The steadily increasing level of funding awarded to electricity transmission NIC proposals, (94% of available RIIO-ET1 NIC fund over the last two years) demonstrates rapid development amongst electricity transmission licensees in promoting and developing proposals that deliver the objectives of the NIC and gained the support of the independent NIC panel.

The graph also illustrates that as the transmission networks' experience of the complexity of the NIC bidding process has developed, the number of projects progressed to full bid submission has been strongly influenced by the amount of funding available.



Question 4.2: What are your views on the proposed funding level of the electricity NIC?

Decreasing the maximum potential funding will reduce the maximum potential cost to consumers; however it is also likely to reduce the number of NIC projects brought forward as full submissions and could therefore diminish the benefits for consumers.

The maximum amount of funding potentially available for the electricity NIC is not the determining factor when considering the cost impact for consumers. The amount of funding awarded under the electricity NIC, and therefore the cost to consumers, is determined by the Authority based on the merits of the proposals, the recommendation of the expert panel and the potential benefits for consumers.

However, the amount of funding available is a material factor for networks and third parties and will influence the decision to invest in developing a proposal into a full bid submission, particularly given the proposed changes to bid preparation funding.

Chapter 5 Other proposals for governance arrangements

Question 5.1: Do you agree with our proposals to clarify the circumstances we do and do not expect change requests are submitted to us?

- ***If you agree, do you think our proposed draft explanation of material changes is clear?***
- ***If you think alternative drafting would achieve this more effectively please provide this drafting***

We support the objective of reducing the cost of managing relatively minor changes to ongoing NIC projects. The draft wording in the amended NIC governance provides a good starting point in setting out what kinds of changes Ofgem has to date considered not to be material. It would be beneficial if Ofgem was to maintain a published list of changes which are in future judged to not to be material.

However, we believe further consideration should be given to the cost to consumers associated with the proposal to require all future NIC projects to include an external audit of project outputs.

The NIC governance currently provides for the review, and potentially the disallowance of NIC funding that Ofgem determines has not been spent in line with the NIC governance or the Project Direction. This approach provides for efficient regulation by allowing Ofgem to apply resources where there is reason to believe that disallowance may be appropriate.

Requiring all NIC projects to engage an external auditor to assess all the outputs of a project will result in additional cost across all NIC projects in an untargeted way: this is unlikely to be as efficient as the current arrangements and will result in additional cost to consumers.

Question 5.2: Do you have any feedback on our proposal to publish a plain English guide to our default intellectual property (IP) requirements?

We support the intention to provide greater clarity around the default IP requirements for NIA and NIC funding and believe this would be best achieved by doing so in the text of the NIA and NIC governance documents. Introducing an additional source of information about the default IP arrangement is likely to increase rather than decrease uncertainty around interpretation of the requirements.

The NIA and NIC governance documents have a status equivalent to that of a licence condition and therefore underpin the advice given to, and the interpretation adopted by, licensees. Any clarification of the default IP requirements will need to be contained in these documents to have any effect.

Question 3: Do you have any views on our proposals to improve the visibility of the NIA projects? What are your suggestions for a proportionate way to get assurance that the NIA is being used by network companies in an appropriate way?

There is a high level of visibility of NIA projects: before they start, whilst they are in progress and when they conclude. In addition to publication of the project eligibility assessment form on the ENA Smarter Networks portal which is accessible by all, Ofgem is notified by e-mail of all NIA projects as soon as they are registered. We welcome interest in the NIA projects we are undertaking and will be happy to discuss any of them further with Ofgem.

All NGET NIA projects are subject to approval through a monthly sanction committee that consists of representatives from across the NGET business including the Head of Innovation for both Transmission Owner and System Operator. Compliance with the specific requirements for NIA funding is one of the factors reviewed in the approval process. We already endeavor to articulate as clearly as possible the reasons why we consider a particular project meets the specific requirements for NIA eligibility: adding a specific narrative section in the project eligibility assessment document may make this even clearer.

Question 4: Do you have any comments on any of our other proposals?

New Regulatory Instructions and Guidance requirements

The NIA and NIC governance terms already require levels of reporting that exceed that of any other sources of innovation funding we have experienced. Whilst we believe the current reporting obligations are appropriate for these funding mechanisms, the costs of additional reporting obligations should be considered alongside the potential benefit.

Licensees are already required to report on their own plans for the implementation of their NIA and NIC funded projects as part of the project closure/completion report. It is not clear that adding similar reporting requirements in the RIGs will provide additional value that would justify the additional reporting costs.

We agree that licensees should be taking into consideration other licensee's projects that are relevant to them. For example, onshore electricity transmission network owners should take into account projects undertaken by other onshore electricity transmission network owners. Although there is currently no obligation for networks to report on the potential to implement NIA and NIC project solutions led by other networks, the RIIO T1 Totex sharing mechanism provides a strong incentive for us to actively engage with and learn from innovation projects led by other networks. This has led to enhanced engagement across the transmission owners and System Operator, both bilaterally and through the ENA's TO / SO collaboration forum.

We believe it would be beneficial for licensees to include information about how NIA and NIC projects relevant to their networks, whether led by them or by other networks in the same sector, have been used to inform their business plans for the next regulatory period as part of RIIO T2 submissions.

Release of data gathered during NIC and NIA projects

We support the principle of sharing data from NIC and NIA projects with third parties, however, the way this is effected in the NIA and NIC governance documents must take into account other licence and legal obligations that the licensees have which in some cases limit their ability to share data.

In addition to ensuring that existing provisions around data security are not compromised, the licensees should be permitted to limit the use of data provided for research that will be fully and freely published only.

Merging ongoing NIC and NIA project reports

The current annual NIA summary published by licensees provides an overview of the licensees NIA funded activity in the preceding year. We believe it would be beneficial to include a summary of the licensee's NIC funded projects in the same document, however, this should be a summary and shouldn't replicate all the details currently required in NIC six monthly progress reports.

NIC project progress reporting, to the level of detail required under paragraphs 8.17 to 8.21 of the NIC governance document, would detract from the value of the summary document. More comprehensive NIC project progress reporting should remain separate from the annual summary report.

Contingency funding / cost overrun protection, NIC alternate bank account, customer engagement and data protection plans and cross sector NIC project bidding process

We support all these proposed changes.