Regulating energy networks for the future: RPI-X@20 Emerging Thinking - A specific innovation stimulus

Document type: Supporting paper

Date of publication: 20th January 2010

Target audience: Consumers and their representatives, those with sustainable development interests, energy transmission and distribution companies, generators and offshore producers, suppliers, shippers, Government, investors, academics and other interested parties.

Overview:

RPI-X@20 is Ofgem's detailed review of energy network regulation. We are looking to the future on behalf of consumers by considering how best to regulate energy network companies to enable them to meet the challenges and opportunities of delivering a sustainable, low carbon energy sector whilst continuing to facilitate competition in energy supply. There is considerable uncertainty about how best to meet these challenges whilst maintaining value for money for existing and future consumers.

This supporting paper, published in parallel with our main Emerging Thinking consultation paper, provides further details on a potential time-limited innovation stimulus which would be designed to facilitate the efficient and timely transition to a sustainable energy sector. The stimulus would span the four energy network sectors (electricity and gas transmission and distribution) and a wide range of parties would be able to bid for funding. We explain why we think this stimulus is needed and how it would be applied across the energy networks. We include details on the scope of the stimulus, the process for awarding funding under the scheme and governance arrangements.

We welcome views on this supporting paper.

Contact name and details: Hannah Nixon, Partner, RPI-X@20 and Regulatory Finance

Tel: 020 7901 7165

Email: RPI-X20@ofgem.gov.uk

Team: RPI-X@20 and regulatory finance

Table of contents

1. Introduction

1.1. We think innovation could enable network companies to facilitate the delivery of the 2020 and 2050 low carbon targets and deliver value for money for existing and future consumers[1]. In our Emerging Thinking consultation paper and in our supporting paper on Incentivising efficient long-term delivery of desired outcomes, we emphasise that greater levels of innovation could be encouraged through appropriately designed incentives in a new regulatory framework. In particular, a focus on long-term efficiency, the delivery of predetermined outputs, the equalisation of incentives for different categories of expenditure and a greater role for competition in delivery would provide incentives for long-term cost efficiency and innovation.

1.2. We explain here why, even with wider changes in the regulatory framework, a separate time-limited innovation stimulus would be needed. We also discuss the issues that we would need to consider further on the design of such a stimulus for our summer 2010 recommendations if this aspect of a new regulatory framework is taken forward following consultation.

1.3. Our Emerging Thinking consultation paper, published in parallel, sets out a potential new regulatory framework for consultation. It attempts to provide an accessible overview of our emerging thinking and is aimed at a wide range of interested parties. Our ideas on 'embedding financeability in a new regulatory framework' are discussed in more detail in a parallel consultation paper. We will also shortly be publishing a related consultation paper on whether we should introduce a third-party right to challenge to our final price control decisions, as some participants in the review have advocated.

1.4. This is one of a series of technical supporting papers that provide further details on key aspects of the new framework. These supporting papers are aimed primarily at the network companies, investors and other stakeholders who require a more in depth understanding of our thinking and the rationale underpinning it in some or all areas. References for these papers can be found in Appendix 10 of our main Emerging Thinking consultation paper (http://www.ofgem.gov.uk/Networks/rpix20/publications/CD/Documents1/emerging%20thinking.pdf).

[1] The important role that innovation will play in the Government's renewable and low carbon strategy is discussed in the "RPI-X@20 working group report on innovation in energy networks". This was also recognised in the "UK Low Carbon Transition Plan, National strategy for climate and energy" produced by HM Treasury: http://www.ofgem.gov.uk/Networks/rpix20/forum/innovation/Documents1/FINAL%20working%20group%20paper%20on%20innovation.pdf and http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

2. Why do we need a specific innovation stimulus?

2.1. The thinking on a new regulatory framework set out in our Emerging Thinking consultation paper would do much to encourage network companies to think and act innovatively. In particular, the proposed framework would:

- set clearly defined outputs that networks need to deliver;
- clarify the way that any profits or losses from innovation would be treated under the regulatory regime, recognising that, by definition, some innovations will 'fail';
- equalise incentives between operating and capital expenditure, encouraging networks to make efficient choices about the actions that they take and changes they implement, removing the bias towards delivering capacity through assets rather than innovative arrangements on the demand side with customers; and
- move to a definition of efficiency that focuses on the long term, thereby promoting actions that are least cost for consumers over time.

2.2. However, there is a question as to whether such mechanisms would be sufficient to stimulate the right amount of innovation in a timely manner.

2.3. We recognise that it would take time for any new incentives to become embedded in the regulatory framework and for the network companies to respond to them. The network companies would need to adapt their behaviour to attain the available rewards and this would require mindset change and a period of learning. Network companies, by their own admission, have not proactively invested in innovation[2], largely in response to the regulatory incentives to improve operating efficiency. Rebuilding this expertise would take time, suggesting that network companies alone may not deliver innovation quickly enough.

2.4. In terms of the quantum of innovation, network companies may also be slow to deliver the amount required, or deliver within the required timescales, for a variety of reasons including:

- the company may not take account of all the benefits from innovation that accrue to a wide range of parties as they consider the relative merits of innovations;
- the upfront costs of innovation may be significant;
- the long-term private cost to network companies from choosing not to innovate may not be significant because the costs associated with continuing to deploy existing technologies are generally funded under a price control; and
- network companies may discount the future benefits of innovation to facilitate a low carbon energy sector if the carbon price is low or they doubt the political commitment to meet the targets.

[2] This is acknowledged in the "RPI-X@20 working group report on innovation in energy networks".

2.5. In time, appropriate output definition, strong incentives for long-term efficient delivery and a robust carbon price may allow for these factors to be taken into account by the energy networks. However, this is likely to take some time and we have challenging targets that need to be delivered over the next 10 years.

2.6. In this context, at least in the short to medium term, we think there needs to be a separate innovation stimulus within any new regulatory framework. The need for this would be kept under review over time. The stimulus would be removed when it became clear that the regulatory framework was encouraging sufficient innovation itself. The need for it would also be reassessed if the scale of innovation required reduces over time. We need significant transitional changes now, but as we move to a decarbonised and secure energy sector the scale of required innovation may reduce.

3. Alternative models for an innovation stimulus

3.1. In our July working paper on innovation in energy networks we presented three possible models on the form an innovation stimulus could take. Table 1 provides an overview of the models discussed in the working paper and illustrates the variety of options available in terms of scope, approach to project assessment, governance, methods of awarding funding and applicability.

Table 1: Overview of the potential forms of an innovation stimulus

	Option 1	Option 2	Option 3
Eligibility	Networks	3rd parties meeting certain criteria	All parties
Network applicability	Individual Networks	Networks in one/all sectors	Networks in all sectors
Forms of innovation	One type e.g. R&D	All types	All types
Qualification for funding	High level criteria	Competition	Ex post assessment
Governance	Low level	Strong	Post review
% of funding	Partial	Partial	TBC
Assessment	Ex ante	Ex ante	Ex post
Benefit sharing	Not explicit	Portion of benefits to consumers	Retain all benefits

Our emerging thinking on the innovation stimulus

3.2. In our working paper we recognised that each of these options had associated advantages and disadvantages. Our further assessment of these options has indicated that an innovation stimulus drawing on the features of option 2, highlighted in table 1, could deliver real benefits in terms of stimulating the network innovation needed to facilitate the transition to a sustainable energy sector and more efficient network operation. We recognise that options 1 and 3 could also potentially deliver benefits in this area but plan to focus our further assessment on option 2 for the following reasons:

- Extending the innovation stimulus beyond network companies allows the potential for non-network parties to develop new and innovative ideas for network development. However, parties would need to be able to demonstrate compliance with certain skills and experience to equip them to engage in this way.
- An innovation stimulus that applies across all sectors and all types of innovation allows funding to be allocated to the network projects that have the most potential to deliver benefits.

- Awarding funding via a competitive process allows equal access for all parties. The process would need to have strong independent governance to ensure fair assessment of proposed projects.
- Providing partial funding ensures that parties progressing innovation bear some risks of the project reflecting the opportunities available for them to achieve benefits.
- Undertaking an ex ante assessment of projects, and awarding funding at this stage, provides guarantees to parties regarding the receipt of funding and would remove some of the risks which result from the uncertainty surrounding the outcome of an innovation project.
- The design of the stimulus provides provisions for the benefits of any innovation to be shared with consumers, in terms of lessons learnt from innovative projects and reduced costs that result.

3.3. Under option 2, the innovation stimulus would comprise a pan network fund applicable to all types of innovation and from which network and non-network parties that met certain criteria would be eligible to apply for funding. To achieve funding for a proportion of the cost associated with an innovation project, parties would submit applications into a competitive process and these would be assessed on an ex ante basis by an independent governing panel. We would need to consider further how decisions would be made on the awarding of funding, particularly the role of the governing panel and the Authority. Chapters 4 and 5 provide more detail on the form that the innovation stimulus could take.

3.4. In line with the arrangements under the Low Carbon Network Fund, introduced in our recent electricity distribution price control review, funding for the innovation stimulus would be raised from consumers. As the fund would apply across the four network sectors we would need to consider appropriate funding arrangements to sit across each of the sectors. The arrangements that could apply for funding of the stimulus are discussed further in Chapter 5.

3.5. The innovation stimulus would be focused only on projects that:

- have as their intent the facilitation of the transition to a sustainable energy sector; or
- are expected to deliver outcomes leading to more efficient network operation.

3.6. Potential participants in a stimulus would need, at a minimum, to demonstrate that their proposed projects met one or both of these conditions.

3.7. We are keen to ensure the innovation stimulus does not crowd out innovation that would have taken place in the absence of this support. We would seek to address this issue through the development of assessment and eligibility criteria for funding. We envisage that these would require parties to demonstrate there are factors associated with the outcomes of the project meaning that the additional support is needed. Parties would also be required to share information with others, particularly in relation to lessons learned from innovative projects funded under the stimulus. This sharing of information and intellectual property may deter parties that would be able to progress projects commercially without support from the innovation stimulus and therefore may address concerns around the potential crowding out of innovation that may have taken place even in the absence of the scheme.

3.8. There are long-term benefits associated with learning what works well and what does not as part of any innovation process. We would look for ways to ensure these lessons are shared across the energy networks. We would consider further how to ensure that consumers of GB networks get the benefits of innovation projects, particularly those undertaken by non-network companies. We would balance the need to allow those undertaking innovation projects to get benefits with the need to share those benefits with the consumers that have paid for the fund.

3.9. Chapters 4 and 5 provide a more detailed description of our emerging thinking on the applicability of the scheme, the structure of the competitive process and its governance. Further development is needed in relation to the detail of the scheme and the way that the process for allocating funds would operate. We intend to work up this detail for our final recommendations.

Building on the Low Carbon Networks Fund

3.10. A specific innovation stimulus, the Low Carbon Networks Fund (LCN Fund), is currently being implemented for electricity distribution companies, following our recent price control review. Funding for research and development is also available to energy network companies in each sector through the innovation funding incentive (IFI). The LCN Fund has refocused attention on the need for innovation to facilitate the transition to a sustainable energy sector by extending the scale and scope of low carbon innovation funding available to the electricity distribution network operators.

3.11. Under RPI-X@20, we intend to build on the progress made through the establishment of the IFI and LCN Fund. We envisage that the IFI would be subsumed within the innovation stimulus and that network companies may also seek to take forward some level of R&D to deliver their well-justified business plans. We envisage that the innovation stimulus would build on the LCN Fund, with the two potentially running in parallel for a period of time and we would need to consider further how to manage the transition to one innovation stimulus.

3.12. The main differences between the stimulus set out here and the LCN Fund are that the new stimulus would be:

- applicable across each of the networks rather than to just one;
- open to third parties to apply for funding to lead an innovative project[3]; and
- open to all forms of innovation, potentially covering a wider set of projects.

[3] We recognise that there may be constraints on third party involvement which we will consider in developing our recommendations (see paragraphs 4.12 - 4.18 below).

3.13. We would introduce the new stimulus at the next round of price control reviews for transmission and gas distribution networks. Electricity distribution networks have the opportunity to obtain funding for innovation projects earlier through the LCN Fund and would be rewarded by acting early. Taken together, the LCN Fund and this innovation stimulus would encourage networks and other parties to act now and to make innovation a priority in the near term.

4. Applicability of the scheme

4.1. As outlined in Chapter 3, we think that the innovation stimulus should be open in terms of:

- the network sectors to which funding can be allocated;
- the stages of the innovation process which are able to receive support; and
- the range of parties that are eligible to participate.

4.2. We set out our emerging thinking on each of these areas below. We welcome comments from interested parties.

Applicability across networks

4.3. Given uncertainty about the network development needed to facilitate the delivery of a sustainable energy sector, we think the fund should be open to all network sectors (electricity and gas, transmission and distribution). This would allow funding to be allocated where emerging technologies and operational practices are likely to deliver most benefit.

4.4. The KEMA report that we commissioned on technological change in energy networks[4] suggested that more innovation is taking place in electricity relative to gas and in distribution relative to transmission but that there is potential for innovation in all of the sectors. We therefore think it is appropriate to allow equal access to funding for innovative projects on all of the energy networks. The amount spent in each sector would be determined on a 'best value' basis through the governance arrangements.

4.5. We recognise the potential difficulties associated with assessing proposed projects across the network sectors given the likely differences in proposed scope and anticipated benefits. To address this, we think that careful consideration would need to be given to the development of criteria for assessment of proposed projects. These criteria could be fairly flexible, recognising the differences between network sectors. Alternatively, a number of different categories of criteria could be developed to apply to different types of innovative projects. If the governing panel comprised a range of representatives with expertise across each of the sectors, this could also help to address the potential difficulties associated with project assessment. We would need to further consider potential ways in which this issue could be addressed in working up the detail of the arrangements for a new regulatory framework.

4 KEMA report for Ofgem "RPI-X@20 Technological change in electricity and gas networks, A sample survey of international innovation projects"

Stages of the innovation process

4.6. There should be equal access to funding for projects at all stages of development, e.g. R&D, trialling and pilot demonstrations, to allow support to be provided to initiatives with the largest potential benefits and the highest chance of success. We note observations during RPI-X@20 that, while early stage innovation is taking place, limited trialling of innovative technologies and operational practices is evident. We think the limited trialling is linked to the associated costs and see a rationale for support to be provided to encourage activity in this area, in line with the proposed LCN fund.

4.7. We would need to consider whether appropriate bidding arrangements and assessment criteria could be developed to enable different types of innovation to be assessed.

Eligibility

4.8. In the biggest departure from the IFI and proposed LCN fund, we are proposing that the innovation stimulus would be open to non-network parties that meet certain pre-defined criteria. They would be able to apply for funding, with the potential to lead on innovative network projects.

4.9. The KEMA report observed that the leading and most radical examples of innovation are commonly found where a partner has been involved with a network company. This highlights the potential for third parties to bring new ideas to network innovation. Our stakeholder engagement has also highlighted a general perception that network companies may not be best placed to progress innovation.

4.10. It therefore seems that where third parties can demonstrate certain skills and experiences they should have opportunities to progress innovative network projects as long as there are appropriate protections to the delivery of network services to existing and future consumers. For example, given the increased potential for smart technology which is reliant upon effective communications, there may be a role for communications providers in engaging in innovative network projects.

4.11. We note the existing routes for third parties to engage in the IFI and LCN fund by partnering with network companies. However, if third parties could lead on innovative projects, this would enable their proposed initiatives to be assessed independently without the need to find a willing network to support them. Where they were successful in attaining funding, this would also allow them to control the direction of the project to completion. This is likely to open up the pool of third parties that are willing and able to participate in the innovation stimulus.

4.12. We recognise that there may be constraints on third party participation, and we would need to consider whether the innovation stimulus could be implemented in a way that would enable third party participation. We intend to consider options further, and take account of any legal issues when considering how best to design eligibility criteria and implement the stimulus more generally. Two specific issues have been raised, namely access to the network and payments to non-licensed parties and we would need to consider these further. We invite views on these.

Access to the network

4.13. For innovations that are ready to be tested on live networks, non-network parties would need to establish arrangements for access to the network. As emphasised in our Emerging Thinking consultation paper and our efficient long-term delivery supporting paper, network companies would need to provide appropriate terms and conditions for network access. We anticipate that additional specific conditions would be needed in the context of third parties trialling innovations on an existing network.

4.14. In the first instance non-network parties could seek to establish bilateral contracts with one or more network companies to allow access to progress innovative projects and would need to explain the terms of such a contract in any bid. The contract would, for example, set out how the benefits of the innovation would be shared with the network company and how risks associated with the network company meeting its statutory duties and obligations, and delivering its outputs, were to be managed[5]. Where third parties are finding it difficult to identify a network company to participate in any trials with them, we would consider whether further requirements or inducements need to be provided to the network companies.

4.15. We recognise that, particularly in the early stages of the innovation stimulus, the network companies may have concerns about a third party leading an innovative project on their network. This may be addressed, to some degree, by requiring third parties to demonstrate that they have progressed R&D on the proposal, e.g. through lab trials or pilot projects in testing facilities. We think there is an onus on the non-network parties to develop an understanding of the standards that need to be maintained and to design proposals with this in mind. Increased engagement with the network companies could facilitate this process as well as allowing them to initiate discussions on access arrangements.

4.16. While these actions would not entirely remove uncertainty, commercial arrangements could be designed to provide further assurances to the network companies. For instance, contracts could be established which require the third party to adhere to safety standards while allowing sharing of the benefits from successful innovation between the network and non-network party.

[5] It is important to note that the bounds of any such contract would be constrained by (1) Section 4 of the Electricity Act 1989 which places a prohibition on unlicensed generation, transmission, distribution and supply of electricity, and operation of an electricity interconnector and (2) Section 5 of the Gas Act 1986 which place a prohibition on unlicensed transportation, supply or shipping of gas.

4.17. We recognise that the potential may remain for the network companies to be reluctant to allow third parties to access their networks to trial innovative projects. This would reduce the ability of third parties to engage in network innovation and could mean that the stimulus is dominated by the network companies. We think there is merit in including a dispute resolution mechanism in the arrangements which would allow third parties to appeal to Ofgem where they were not able to access the networks but were compliant with the criteria under the innovation stimulus. We will also consider whether there are penalties that can be introduced to encourage network companies to provide third parties with access to their networks to all innovation trials.

Payments to non-licensed parties

4.18. We recognise that there are potential issues related to how funding can be awarded to non-network parties that seek to engage in the innovation stimulus. In our considerations, we would need to consider a broad range of options when thinking about whether and how best to implement the innovation stimulus, as part of our summer 2010 recommendations. Ideas that we may consider include the following.

- Creating a new licensable activity related to participation in the fund so that existing arrangements, which enable licence conditions to be implemented to allow licensees to raise money from their customers and for payments to be made between licensees, apply to the new licensable activity[6].
- Considering how the stimulus would be designed and implemented if changes could be introduced through primary legislation.
- Exploring opportunities for other organisations to manage the fund and allocate funding to third parties and network companies.

4.19. When assessing these and other options, we would need to consider how they might work in practice, whether there might be any legal implications and the options with the potential to deliver benefits in short timeframes. We intend to work up the detail for our summer 2010 recommendations.

[6] There are powers in the Electricity Act 1989 (section 56A) and the Gas Act 1986 (section 41C) which relate to the alteration of activities requiring a licence which we will consider going forward.

5. The competitive process and its governance

5.1. Under the innovation stimulus, parties would apply for funding through a competitive process with funding allocated on the merits of their application. We think that a competitive process offers real benefits by allowing proposed projects to be assessed independently against a set of established public criteria. It would ensure that projects with the best potential to deliver benefits for consumers and support the transition to a sustainable energy sector would be selected to receive funding. Under the competitive process, parties submitting bids would also be incentivised to consider potential efficiencies in their proposals to achieve advantages over other bidders.

5.2. Calls for proposed projects should take place at regular intervals to allow new initiatives to be progressed. To avoid complications in coordinating timings across price control reviews we would intend the stimulus to operate outside the normal price control review process, once decisions on the overall size of the fund are made. As outlined in table 1, an ex ante assessment of applications would take place with decisions on the allocation of funding taken on this basis.

5.3. The following sections set out our emerging thinking on a number of aspects of the competitive process.

Governance of the stimulus

5.4. We think that strong governance of the innovation stimulus would be needed. We consider that a panel comprising experts across gas and electricity transmission and distribution could be established to assess the bids that were submitted for funding. Under existing legislation it would not be possible for this panel to take responsibility for decisions regarding the projects to which funding should be awarded. As such, they would act as advisors to the Gas and Electricity Markets Authority in relation to these decisions.

5.5. Members of the panel would be independent to ensure that they did not favour particular bidders or types of innovation project in their assessment and subsequent advice to us. We note, however, that if certain areas were identified as priorities for innovation, the panel may provide guidance on this to potential participants or we could make available prizes for activity in this area.

5.6. We recognise there may be difficulties in recruiting parties with the appropriate skills to sit on this panel given the knowledge and expertise they would need to have and they would need to be sufficiently independent to advise us on proposed projects. The costs associated with recruiting experts to sit on the panel would also need to be considered with a balance struck between attaining required expertise and managing administrative costs. If members of the governing panel were paid, meetings would need to be effectively structured and governed to ensure an expedient but effective assessment of bids submitted. We think there is a role for Ofgem on the panel to facilitate effective discussion of proposals and obtain a clear understanding of the rationale underpinning the advice provided by the governing panel. This would be particularly important where recommendations were being made by the panel to the Gas and Electricity Markets Authority who would be the ultimate decision maker.

5.7. Public criteria would be established to ensure that proposals are objectively considered. The criteria would act as guidelines for the way that the governing panel assess bids and would set out the factors that the panel would need to have regard to when considering proposals and advising us on the awarding of funds. The criteria would likely require that the proposed project had the potential to deliver benefits in facilitating the transition to a sustainable energy sector. In addition, it would need to provide guidance on the best way to consider competing proposals that related to different network sectors or different phases of innovation. The criteria may evolve over time as understanding is developed and, where this happens the governing panel should ensure that lessons from the experience of previous innovative projects are reflected. The governing panel's assessment of the proposals may also require discussions with the parties submitting bids to ensure a full understanding of the issues covered in bids submitted.

Participation conditions

5.8. We envisage establishing a set of conditions, up-front, that potential bidders would need to agree to if they wish to participate in a competition. We set out here examples of the types of conditions that might be set on parties engaging.

- Potential bidders demonstrate that they have expertise in the relevant area and a clear understanding of the implications of innovation for delivery of sustainable network services.
- Potential third party bidders wishing to trial innovations on a 'live network' provide details of arrangements that have been agreed to with a network company.
- Potential bidders agree to share the intellectual property rights associated with their projects proactively given that one of the benefits of innovation is the potential to learn from successes and failures. This would include details of the innovative projects they progress and the resultant outcomes.
- Potential bidders agree to share information regularly with us on progress being made on the project, particularly at key milestones. The relevant milestones for the project should be agreed at the outset. This could address concerns over potential misuse of the scheme and the funding available.

5.9. We would also need to consider further the potential to incorporate a participation fee, to recover the administrative costs of the fund.

A screening stage for proposed projects

5.10. In line with the proposals for flagship projects under the LCN fund, we think it would be appropriate to have a 'screening' round for parties applying for funding. This would allow us to provide an indication to parties submitting proposals of the likelihood that a project would meet the requirements of the scheme. We note that this would represent advice for prospective bidders rather than a definitive view on whether the proposal would meet eligibility criteria for the stimulus, as the detail of the proposal would not be fully understood. However, we think that this stage could avoid parties expending significant resource in developing proposals for innovative projects if these are unlikely to comply with requirements.

5.11. If a 'screening' stage were included, it would be crucial that we understood the intent and scope of the bids submitted to this stage to avoid providing misleading advice. We intend to publish guidance setting out the criteria with which proposals submitted to the screening process would need to comply. We recognise that incorporating a screening stage could create an additional administrative burden for us and think it is important that a balance is struck between providing indications on the potential compliance of proposals with the requirements of the stimulus and minimising the resource that an additional stage might need.

5.12. We note that the governing panel could have a role in screening proposals but the process should be relatively straightforward, complemented by effective guidance and criteria to assess applications submitted. We therefore think that this is a role that we can perform particularly given the potential costs associated with convening the governing panel to screen proposals.

Requirements for bids submitted

5.13. Following the screening process, parties would need to consider whether they wished to develop their proposals further. As outlined above, to facilitate bid comparison and evaluation, guidelines would be developed to provide clarity over the information required for final bids. These would be particularly important given the broad scope of the stimulus and recognising the potential difficulties associated with assessment of proposals that are very different in nature. We therefore think it is important that the guidelines are quite specific in nature to facilitate assessment of competing final bids.

5.14. We would have responsibility for preparing these guidelines but think there is a role for the governing panel to review the guidelines, drawing on their expertise. This would help to ensure that the type and range of information requested was sufficient to enable proposals to be assessed. Examples of the types of information that may be requested include:

- Project type, innovation type and area of the network;

- Expected benefits and costs over time – including those that are not easily measured;
- Parties involved in the project – where they are non network companies, details would need to be included of how they are qualified to progress the innovation;
- The arrangements that have been agreed for access to the network, where applicable;
- Possible unintended consequences of the project and mitigating actions;
- Project milestones/timings – this would allow arrangements to be made for monitoring the scheme and to determine whether there are points at which the project could be wound down if it was not delivering anticipated benefits;
- Arrangements for sharing benefits – particularly intellectual property benefits as costs savings would be recouped through the price control if networks progressed innovation and where third parties contracted with networks to sell the product;
- A risk assessment for the success of the project – possibly using scenarios; and
- Plans for disseminating learning and assisting rollout of successful innovations.

5.15. At a minimum the bidder would need to demonstrate that the proposals:

- had as their intent the facilitation of the transition to a sustainable energy sector; or
- may deliver outcomes leading to more efficient network operation.

5.16. The bidder would also be expected to demonstrate to the panel that they were able to manage and deliver an innovative project effectively. In this regard, the panel would also have access to information on the performance of the regulated network companies in planning and delivering outputs efficiently over the long term. This would be one of a number of pieces of information that may influence their views on the extent to which a specific network company was expected to be in a good position to manage an innovation project effectively. The panel may also seek information on the performance of non-network parties in delivering similar innovative projects.

5.17. In assessing bids, to inform their advice to us, the governing panel should consider the opportunities for monitoring proposed projects. A key concern raised in discussions on the innovation stimulus is the potential for misuse of funding awarded under the scheme. We think arrangements to enable regular monitoring of projects could help to protect against this concern. Discussions on the appropriateness of the milestones and timings for ongoing monitoring, which were indicated in applications, could take place during bid assessment to ensure that there would be adequate opportunities to oversee the project. Progress on the project should be monitored as well as the extent to which parties are sharing the benefits from the project, in terms of the lessons learnt from their experience.

5.18. We recognise the potential for failure of innovative projects and do not think that parties should be penalised where this happens as this may dissuade them from engaging in projects and participating in the fund in the first place. While we think it is important that parties have certainty of funding, if it were possible for projects to be wound down where it became clear that they would not deliver against expected outcomes, these opportunities should be taken. The stimulus should therefore include a mechanism to allow unused funds to be recouped in the event that projects were wound down. If innovative projects did fail, lessons should be learnt from the experience and the governing panel would be expected to consider whether it was appropriate to advise the Authority to award funding to proposals with similar characteristics.

How much would consumers pay into the fund?

5.19. The funding for the innovation stimulus would be raised from consumers across the four network sectors. We need to consider further, for our summer 2010 recommendations, how to determine the size of the fund and the proportion raised from each sector. We also need to consider the most appropriate way for these funds to be raised. We would also need to consider the extent to which decisions on funding should be made in the price control review. We anticipate that decisions on other aspects of the stimulus would not need to be taken during the price control review process.

5.20. When considering the scale of support that could be provided we would reflect on the funding available under the LCN fund and the extent to which it has been used. Any decision on funding would also need to recognise the extended scope of the stimulus, which would allow innovation to be funded in all of the network sectors.

The awarding of funds

5.21. The governing panel would make recommendations on which projects should be awarded funding by reference to a set of public objective criteria. For our summer 2010 recommendations, we will consider what these criteria could look like. We would expect recommendations to relate, in particular, to the expected impact of the innovation delivery on our desired outcomes and on existing and future consumers more generally.

5.22. Successful bidders in the innovation stimulus would be awarded partial funding for their project. We would determine an appropriate cap for the proportion of funding that would be available to parties wishing to apply for funding under the stimulus as part of our work for our final recommendations. We would need to balance the need to incentivise participation in the stimulus and innovation itself, with the need to ensure that innovative projects are managed and delivered efficiently. However, parties would be able to bid for a proportion of funding lower than the cap where they did not require this level of support. There may also be a maximum cap on the total scale of a project, although the governing panel may need to have discretion to award larger sums for potential high benefit projects.

5.23. If none of the bids submitted were compliant with the requirements outlined above, we would decide not to award funds to any projects in that bidding round. If a high volume of promising proposals were submitted, we may need to consider whether increased funding in the latter years of the scheme may be appropriate or whether funding committed for later years could be bought forward. Such a decision would need to be taken reflecting on the success of projects under the scheme and recognising potential price impacts on consumers.

Transparency of bids

5.24. We think there is a rationale for making available public summaries of bids submitted. This transparency would help to avoid duplication of innovative projects and would also facilitate learning over time with respect to the potential for innovation. These public summaries could be compiled by Ofgem, approved by the governing panel and the parties bidding into the process and posted on Ofgem’s website to allow equal access to the information. While we recognise the potential benefit that parties may achieve from full disclosure of information in terms of facilitating learning, we think the main benefit would be achieved through ensuring the appropriate sharing of lessons learned and further roll out of potentially successful innovations. We also have concerns that full disclosure of proposals could dissuade parties from bidding into the process as they may not want to be exposed to risks associated with their intellectual property rights. However, there would need to be clarity on the arrangements for sharing benefits. We would need to give consideration as to the best way to balance these considerations.

Ensuring appropriate sharing of benefits

5.25. It would be crucial that the benefits from innovative projects are appropriately shared with consumers, given that they would have partially funded these.

5.26. Monetary benefits may accrue where network companies are able to delay or offset investment that may have been needed in the absence of the innovation. These benefits could also accumulate where implementation of a process or asset allows outputs to be delivered at lower cost or in faster timescales. If these types of innovation were progressed, the financial benefits would largely accrue to the network company through lower than expected costs. However, any cost savings would be shared with consumers through the regulatory framework, as discussed in Emerging Thinking consultation paper.

5.27. However, these cost saving benefits would only be shared with consumers of that network company. We think that where there was sharing of information and lessons learned one of the big benefits would be linked to the potential for other network companies to roll out these initiatives. This is particularly important when it is third parties that have been successful with an innovation project. This emphasises the importance of appropriate procedures being in place to ensure sharing of knowledge and deliver benefits for consumers. We would need to consider further how to manage cases where innovators wish to sell technologies or processes to other companies, sectors and other countries.

5.28. As outlined above, where third parties progress innovation on the energy networks there could be merit in entering into bilateral contracts with the network companies to set out terms for network access and requirements upon the non-network parties to comply with safety standards. We think these contracts could also incorporate provisions relating to the sharing of risks and benefits. In this respect, arrangements could be incorporated to reflect the cost sharing arrangements in the event that potential risks were to become issues. Equally, there should be arrangements for sharing of benefits in the event that the innovation was successful. We would anticipate that non-network companies would want to have an understanding of the provisions that it may be possible to incorporate into contracts of this nature before initiating a bid to attain funding.

5.29. We anticipate significant potential for non financial benefits from successful innovations under the stimulus given the facilitation of a sustainable energy sector is one of the key criteria with which projects would need to comply to achieve funding. Where these benefits accrue, they would be shared by all consumers. Where projects were largely motivated by benefits of this type there may be a rationale for making available ‘prizes’ to encourage engagement in this way. However, we recognise potential complexities associated with determining the ultimate success of projects and therefore note that clear criteria would need to be developed for this, reflecting on the experiences under the LCN fund.

6. Next steps

6.1. We recognise there are a number of aspects of the innovation stimulus which would require further development if we decide to include the stimulus in our summer 2010 recommendations. Over the coming months we intend to focus on determining:

- The arrangements for establishing a fund that receives contributions from consumers across each of the four energy network sectors;
- How to ensure that lessons on what works well and what does not are shared across the energy networks;
- Appropriate assessment and eligibility criteria for access to funding. These criteria would seek to provide that:
    - the stimulus did not crowd out innovation that would have taken place in the absence of the mechanism;
    - that projects could be assessed equivalently across network sectors; and
    - that different types of innovative projects could be assessed equally;
- Arrangements for allowing third parties to participate in the innovation stimulus;
- The conditions for participating in the innovation stimulus;
- Appropriate governance arrangements for the competition;
- Guidelines on the composition of the governing panel;
- The requirements for bids submitted to the competitive process;
- The size of the fund and the proportion of funding that would be available to individual network projects;
- Arrangements for transparency of bids submitted to the competitive process; and
- Arrangements for sharing benefits from innovative projects.

6.2. We would also need to consider the development of guidelines relating to the arrangements for the competition, governance of the scheme and awarding of funds.

6.3. We welcome the views of interested parties on our emerging thinking on a time-limited innovation stimulus.