



SP Transmission, SP Distribution and SP Manweb (SPEN)

**Response to Regulation Energy Networks for the Future:
RPI-X@20 Principles, Process and Issues**

24th April 2009

Introduction and Overview

SP Energy Networks (SPEN) welcomes the opportunity to respond to Ofgem's Regulation Energy Networks for the Future: RPI-X@20 Principles, process and Issues, consultation document (Ref 13/09). We believe that Government energy policy, including European energy policy and the policies of the Scottish and Welsh administrations, will all require fundamental changes to the existing network infrastructure and regulatory process.

Along side the need to review the role of Network Operators, it will also be necessary to consider the role of the regulator in the delivering sustainable energy networks. Ofgem holds an important role as a facilitator in the process by developing a balanced, supportive and forward-looking regulatory framework. Some advances in this respect were made at the last Transmission review but much more will be required in the years ahead. Ofgem therefore has an important task ahead with direct contribution to the reshaping of the UK energy system for a sustainable future.

We believe RPI-X regulation has been very effective in delivering significant cost reductions to consumers and has also yielded significant improvements in customer service. This has been delivered against a backdrop of a mature market where significant investment had taken place and the scope for efficiency was great. However, as we move towards a new energy paradigm this may mean that a primary focus on efficiency and cost reduction is not enough to meet the potential challenges of implementing current and future energy policies. We agree with the key themes that have been identified but we also believe that there would be merit in broadening the review to be energy sector wide since climate change solutions go beyond networks solutions.

Whilst we agree that it is entirely appropriate that the review should focus on the needs of consumers, the consumer population is broad and diverse, with each group having different interests and needs, our work with stakeholders at DPCR5 has served to underline this. We are not convinced that consumers' interests are best served by more and more direct engagement in the entire regulatory process. Most consumers have limited understanding of the regulatory framework of network companies, of detailed asset management techniques and of power engineering. We believe that consumer engagement has a role to play but that the process will need to be targeted and measured.

Significant investment is required in the networks to maintain existing high levels of security, service and to connect new forms of generation (including perhaps new nuclear capacity) to the grid in order to address climate change. In the years ahead we estimate this may require investment of up to £40bn in electricity infrastructure assets alone. Clearly a key requirement of any regulatory framework will then be to ensure flexibility in investment mechanisms and to ensure efficiency of investment continues by also ensuring that the confidence of the financial market is retained, particularly during the current economic climate. Against this background, it is essential that network companies be allowed to undertake the task of delivering a network that will ensure new generation plants can be connected without undue constraints. This can only be achieved by pressing ahead with the significant grid upgrades as they are identified at the earliest opportunity.

The outcome of this review represents an opportunity for Ofgem to create an environment in which the network companies can work towards building a sustainable energy sector that is robust enough to cope with the challenges ahead. The outcome of this review is therefore of fundamental importance to our energy future.

We are committed to working in partnership with Ofgem, government, the industry and all other stakeholders to meet the challenges facing the energy sector.

Chapter 2 - Aims, principles and approach of the review

Chapter 2 - Question 1: Do you have any views on our aims for RPI-X@20?

We agree that addressing the needs of consumers, both current and future is vital but we see little evidence that consumers express the desire for ‘choice’, the recurring theme in Ofgem consultations. Choice *may* be a means to an end but there is little evidence that consumers expressly desire ‘choice’, just value and good service.

We think that it would be helpful if more account were taken of the potential tensions that exist in the current model and the objectives companies are being asked to meet. For example, facilitating delivery of a sustainable energy network may require investment in advance of existing requirements and involve a risk that capacity is provided that is ultimately not fully utilised. The current objective of encouraging licensees to strive for greater efficiency and only constructing assets where there is tangible and demonstrable need could be seen as encouraging a more short-term approach and delaying provision of infrastructure capacity.

We are unclear as to how Ofgem will measure the success criteria as set out in paragraph 2.6. We would welcome further explanation from Ofgem with regards to this.

Chapter 2 - Question 2: Do you think the principles for undertaking the review are appropriate and sufficient?

We do not believe the principles sufficiently take account of wider energy related issues, such as the role of the regulator, regulatory barriers and the role of the supply companies. The delivery of a sustainable energy network will not be without significant cost, with a direct impact on the cost to consumers. For example, a recent report by the Scottish Council for Development and Industry, “The Future of Britain’s Electricity Networks”, suggests that the cost of grid infrastructure improvements could add about £15 per year to the average UK electricity bill. In considering the stark reality that to provide for the future will require significant investment this will also require a more sophisticated means of cost benefit analysis on the part of Ofgem, balancing cost to the consumer versus societal benefit or cost of not investing for a low carbon economy for example.

Chapter 2 - Question 3: Do you have any views on our proposed approach to the review?

We are supportive of the approach Ofgem are taking to the review, in particular the dedicated team that has been established to lead the project and work with the industry. We also welcome the fact that the four working groups will provide industry stakeholders the opportunity to discuss ideas, and feed recommendations directly into the Ofgem RPI-X project team.

Chapter 2 - Question 4: Do you have any comments on inter-relationships between RPI-X@20, other Ofgem projects and EU & national policy developments?

The UK Faces a significant challenge in delivering its share of the EU renewables energy target. Critical to success is Government support and recognition of the need for significant investment in network infrastructure and the creation of a more efficient and supportive planning framework in addition to regulatory reform. Delivery of 2020 renewable energy targets and the longer-term goals will require swift action to ensure that the supporting infrastructure is in place, planning decisions are made in a timely manner, and key issues such as technology supply chain constraints are addressed.

Across many Ofgem projects RPI-X@20 carries a significant risk of being duplicative. For example in the current price control review, the current debates about funding offshore infrastructure investment and the ENSG investment incentive proposals, many of the themes discussed in the RPI-X@20 project are already being considered and developed. Ofgem has a long tradition of failing to coordinate its thinking between projects and working functions. If this review is to be a success then coordination of the ideas generated across these projects is vital.

Chapter 3 - Setting the scene

Chapter 3 - Question 1: Are the original principles of RPI-X regulation still valid?

The principles of RPI-X regulation was appropriate where the main focus of a networks business was to reduce costs to customers, manage incremental changes to the network and incrementally improve network performance to customers

Today we are seeing a significant shift in investment needs. Many of the UK's network assets have now reached the end of their operational lives and we have increased health and safety obligations. At the same time, the network is being asked to work harder, to ensure security and service delivered meets the needs of consumers. It has been recognised that the future requirements of electricity networks are highly uncertain being wholly dependent on uncertain changes on the supply (generation) and demand (load) sides. The RPI-X Regulatory mechanism is still dominated on assumptions of yesterday's network, with a higher emphasis on asset replacement, largely on a like-for-like basis, rather than a focus on what might be needed of a future network topology.

RPI-X is not necessarily broken, however the focus of RPI-X into the next decade certainly needs to be developed. The challenges faced by the UK to meet national and international targets will not be readily achieved by the continued application of a solely cost focused regulatory mechanism. We agree that an alternative revised model is required to be developed to encourage network companies to innovate and to take a more leading role in implementing wider government targets.

We note the negative aspects of the RPI-X approach detailed within the consultation paper, the aspects of these behaviours are inherently driven by this mechanism, and its application through successive Price Review processes. For example, in respect of any reluctance to invest ahead of commitment, this is an entirely rational economic behaviour to expect from a privately owned, even regulated monopoly. Shareholders will not invest in projects unless there is adequate return. This presents a challenge to Ofgem to formulate incentive mechanisms that also make more speculative projects attractive to investors.

Chapter 3 - Question 2: Do you have any comments on our description of the context of energy regulation since privatisation? Are there any issues or events relevant to the regulation of energy networks that we have not considered?

The review of the rail and water sector regulatory models by CEPA raises some key issues that are relevant to the review process, in particular the regulatory failures and consequential events experienced in each of these sectors in recent times. It is also hard to ignore the more recent failures of the FSA and in particular its failure to manage risk to consumers in the financial sector under a more market driven model. There has been much criticism towards the role of the FSA in its role as regulator of the financial markets. In particular, the 'light touch' approach to regulation that meant minimal questioning of the actions and decisions taken by financial institutions. This meant that the government and regulating body only intervened after failures in the market materialised.

Further, at the 1999 price review of the water industry, Ofwat questioned the value to customers of the level of environmental spending being undertaken by the water companies. As a result, the primary focus was to move the industry away from the price escalator, and in determining both a one-off cut in prices, and then a tight RPI-X price cap, a regime was imposed which reduced the market value of the industry to below its regulatory asset base. As a result, significant concerns were raised about the ability of the industry to finance large capital expenditure programmes and in particular, there was evidence of a ‘flight of equity’ on top of a growing risk that high levels of debt would increase financial risk to damaging levels.

We do not believe the review adequately gives consideration to other regulatory model failures and the lessons that can be learnt. It gives too much weight to reducing regulation by extending competition, perhaps not surprising given Ofgem’s duties, but is a cause for concern given the high profile regulatory failures that have taken place in the last decade.

Chapter 3 - Question 3: Do you have any comments on our description of the evolution of network regulation since privatisation?

In general, we believe that the regulator has responded well in adapting the original RPI-X model to e.g. encourage efficiency and quality of service. We acknowledge that the subtle changes at the edges of the price control reviews are part of their incremental evolution. Fundamentally, there is a question over whether this incremental approach will help or hinder the path to achieve the UK’s EU 2020 carbon targets.

We would encourage an independent evaluation of the success or otherwise of areas where competition has been introduced in networks. We are not convinced that in all circumstances this has yielded greater benefits to the customer than could be achieved with effective regulation, for example, in metering, or in the case of competition in connections and ownership of networks. In the latter case this has led to greater investment in network assets and higher losses than if they had been planned and constructed as part of an integrated network. We are also not aware of evidence that the price benefits obtained by developers as a result of competition in networks have been passed on to end consumers.

Chapter 3 - Question 4: Do you think our description of the existing regulatory framework in electricity and gas transmission and distribution is the appropriate base case (starting point) for RPI-X@20? Is it appropriate for us to consider electricity distribution regulation using developing proposals from DPCR5?

We think that the description of the current framework given in chapter 3 is broadly appropriate. As regards the use of emerging/developing proposals from DPCR5, we think that these should be taken into account, but with the proviso that any specific measures arising from RPI—X@20 that hinge on such proposals should be amended as appropriate in the light of the final outcome of DPCR5. The DPCR5 policy incentive regime will have features that should be included in the baseline model for a future networks regulatory model, however current indications are that there are particular aspects of the current proposals that represent inappropriate risk to customers and companies, and do not effectively translate Energy Policy into regulatory drivers.

The policy incentive mechanisms that have developed around the RPI-X regulatory model over the last 20 years have demonstrated various degrees of success and it is worth noting that these can lead to year on year volatility in network charges. For example, Quality of Supply incentive has delivered significant improvements in customer service in contrast to the DPCR4 losses mechanism which is rewarding some DNOs for carbon footprint reductions that are many times greater than that which could physically be delivered. Finally, the existing DPCR4 Growth Term which rewards DNOs for increased customer consumption is clearly misaligned with Energy Policy.

Chapter 3 - Question 5: What lessons do you think RPI-X@20 can take from the history of energy regulation?

We think that one lesson is that RPI-X@20 has delivered in terms of incentivising cost efficiencies, but that it has tended to focus attention on short-term gains. A key challenge for RPI-X@20 is to preserve efficiency incentives while not putting at risk measures to benefit customers in the longer term. A key strategic question should therefore be whether Ofgem's revised objectives have changed sufficiently to address these shortcomings, and whether these need to be revised further in order to effectively translate Energy Policy into regulatory framework.

Chapter 3 - Question 6: Do you have any comments on our assessment of the performance of the network industries since privatisation?

We agree that economic regulation of network industry has been successful overall but we would caution the apparent 'success' of large decreases in allowed revenues which to a large extent could be delivered in a mature market benefiting from the significant investment that took place between 1950 and 1970. Recent increases reflect the need to replace an ageing asset base and the need to drive the network towards accommodating more diverse sources of generation of vastly different scales and proportions.

We also believe Ofgem have failed to address the single biggest source of a DNOs carbon footprint namely Losses where the existing incentive mechanism has been exposed in recent analysis and reviews.

In all the future scenarios covered by the LENS project the electricity distribution networks have a pivotal role in the continuity of supplies to customers. For the vast majority of existing assets, in all the LENS scenarios, the requirements to continue to operate distribution assets up to 2050 is clearly identified. Whilst some scenarios under LENS continue to reflect a limited capacity increase, there is no doubt that the vast majority of the scenarios involve increased complexity and control of the management of capacity on the distribution system.

Chapter 3 - Question 8: Are the identified challenges the right ones? Are they new challenges not previously addressed? Are they short-term (temporary) or permanent challenges? Are there others that we should consider in RPI-X@20?

Meeting environmental targets should be at the core of the review, however it is difficult to see how we can achieve the 2020 targets with the current regulatory framework. Depending on how the UK works towards achieving the 2020 targets, and decisions made by Government, the energy requirements to and from networks are likely to change; this will ultimately affect the architecture of the network. The LENS scenarios for example, indicate some very divergent visions of the network of 2050 (or 2025) depending on the generation location / mix and the engagement / involvement of consumers.

The current rate of change from both generation plant (large and small) and policy drives for energy services (from energy efficiency to Feed-In-Tariffs to electrification of transport) are not well understood by many networks companies in large because there is significant diversity among their proponents, significant uncertainty in the market as a whole and a lack of leadership in this area from central government.

Chapter 4 - Focusing on consumer needs

Chapter 4 - Question 1: We present a number of issues that we will consider when assessing the processes that we and networks use to focus on consumers. Have you any views on these issues? Are there others that we should also consider?

Whilst we agree that it is appropriate that the review should focus on the needs of consumers, we are not convinced that consumers' interests are best served by more direct engagement in the entire regulatory process. A significant group of consumers have limited understanding of the regulatory framework of network companies. We believe that consumers have simple primary priorities, namely low price and a secure quality of service, both of which should be managed by Ofgem.

We would disagree with the view that network companies are not focused on final energy consumers. While the regulatory framework, with extensive reporting requirements, may give the impression to consumers that network companies' focus is more towards Ofgem, the regulatory framework has driven network companies to be the silent partners in the value chain in the same way that silent companies provide infrastructure for Sky Broadcasting Corporation. Network companies should not be criticised for delivering what they have been asked to do to date.

We recognise that there is a challenge to balance public expectations of reduced carbon and continued security of supply whilst maintaining a suitable level of charges to consumers. Many of the assumptions presented continue down the present line of thinking that the consumer is acting in a purely passive manner as a 'payer of bills'. Ofgem's own led focus groups / research has shown that the LV connected (domestic) consumers do not have a clear view of their needs or their potentially interactive role in working with the energy system of the future – whether through their smart meters, appliances or electric vehicles. We believe there is a piece of work that the industry (including companies, DECC and Ofgem) needs to jointly undertake, work with the media (and other appropriate bodies), to demonstrate leadership and present some of the opportunities on offer.

Chapter 4 - Question 2: We present a number of issues that we will consider when assessing how the regulatory framework encourages networks to meet the needs of consumers. Have you any views on these issues? Are there others that we should also consider?

One issue not mentioned explicitly is that of investment needed to meet the needs of future consumers (or renewable targets) where there is uncertainty over the scale of capacity required. With the range of emerging technologies in generation (e.g. microgeneration & renewables), networks (smartgrids) and supply (electric cars), there will be a change to the amount of energy we use and how the networks are run, however at this stage it is unknown which technologies will succeed over others. No matter what the outcome, there is likely to be a significant effect on the shape and size of the networks required.

Chapter 4 - Question 3: Are the issues different for gas and electricity, and for transmission and distribution?

We do not believe the issues are any different for gas and electricity, or transmission and distribution, however there is a blurring of the issues between gas and electricity distribution as the future consumer becomes closer to both (heat networks, and electric vehicles/microgeneration as examples, respectively). Consumers generally don't know the difference.

Under all LENS scenarios the distribution network is a consistent entity, whereas under some scenarios, the transmission network becomes either very significant, or less significant than currently. In some scenarios, if consumers move away from gas, in order to reduce their carbon footprint, then requirements for capacity on the distribution network could increase significantly.

Chapter 5 - Delivering a sustainable energy sector

Chapter 5 - Question 1: Do you have any views on our description of the sustainability challenges facing networks? Are these new challenges? Are the challenges different for electricity and gas, and for transmission and distribution?

The sustainability challenges set out in the consultation paper are without doubt the core priorities for both Ofgem and the network companies. The Government targets for energy and climate change are ambitious, but these targets cannot be delivered without essential network development, both onshore and offshore.

In order to meet the sustainability challenges, not only must network companies need to evolve, but as an industry, we must also review the end-to-end energy supply chain. Perhaps the most fundamental challenge revolves around the lack of coordination between generation, network and electricity supply development in the UK. In particular in relation to energy services, with an expectation that supply companies will move away from the selling of energy as a commodity to energy solution providers.

This challenge is likely to be more acute in electricity than gas networks, due to the physics of managing power flows in a manner that is radically different to that which the network was originally designed. A 'holistic' approach is essential in delivering an effective solution.

Chapter 5 - Question 2: We present issues that we think we should consider when assessing how decisions about what needs to be done by the networks are incorporated in the regulatory regime. Have you any views on the list of issues? Are there others that we should consider?

A key requirement of any regulatory framework is to ensure that the confidence of the financial market is retained, particularly during the current economic climate. Given the amount of investment required, it is highly unlikely that investors will be prepared to take significant stranding risk. This aspect of regulation will need to be a priority in this difficult economic period.

Should current circumstances persist, this will mean higher financing costs and more restrictive debt covenants. Prospective investors must therefore be re-assured that all efficient expenditure by network owners is recoverable and that the rewards available to them are commensurate with the risks they are faced with in transforming their networks. In fact current circumstances may actually require stronger Regulatory and Governmental guarantees round about network investment if the investment is to take place.

SPEN do not consider that uncertainty surrounding some major investments is as significant an issue as is often portrayed by Ofgem. Coordinated work effort with a diverse group of stakeholders, such as was the case with the recent report produced by the Energy Networks Strategy Group (ENSG), prove that by working together effectively industry and government can iron out uncertainty and develop solid plans for the future. The ENSG recommendations have identified key network upgrades that are required and which will enable a significant proportion of the required renewables to be connected in the next decade at Transmission level. Further, these additional upgrades can be progressed in a staged basis, as the new renewables fleet builds up and certainty improves. Similarly, we believe that the feasible sites for new nuclear development are well known and that integration of the necessary grid upgrades into the process should not be difficult.

Chapter 5 - Question 3: We present issues that we think we should consider when assessing how the regulatory framework can ensure that any capital investment is efficient and is financed. Have you any views on the list of issues? Are there others that we should consider?

We support Ofgem's recognition that it is extremely difficult for the industry to anticipate the size, significance and timing of the consequences of all of Europe and the UK's environmental policies, and that there is a need for the network companies role to grow to participate in the development of these policies. Many of these factors will require a fundamental change to the regulatory framework and consider the implications on other parts of the supply chain.

The traditional regulatory arrangements do not create any incentive for investment in advance by network companies for future need. There has been some headway made in this area where there have been more flexible revenue adjusters/incentives built into the regulatory regime associated with transmission investment that protects consumers and allows companies more flexibility. These incentives include revenue drivers based on cost/MW of generation connected, with companies retaining a share of efficiency savings and bearing the risk that inefficient investment is excluded from the regulatory asset base and in principle could have a wider application in funding investment.

Other areas that could be reviewed include the "ultra-shallow" connection-charging regime that is currently in place, which may not place sufficient incentives on generators to work with the TOs to minimise connection costs.

It is also essential that consideration be given to the underlying investment incentive mechanisms and that any potential interactions and impact of modifications are fully taken into account. For example, the purpose of Information Quality Incentive mechanism is to encourage accurate forecasts from DNOs, we will need to consider the role for this type of mechanism and its interrelationship with investment as part of this process.

Chapter 5 - Question 4: We present issues that we think we should consider when assessing how the regulatory framework balances risk and rewards. Have you any views on the list of issues? Are there others that we should consider?

The main factor that limits the deployment of renewable electricity continues to be the speed of planning decisions and the existing regulatory process.

At the moment, market conditions are particularly onerous at this point in time and are a major concern. The cost of borrowing has increased significantly in the market. Shareholders are nervous about providing further capital and expect higher returns and stronger commitments from network companies. The severe lack of liquidity in markets is undoubtedly affecting utilities worldwide. Given the scale of the investment to be undertaken and it's criticality for the UK to meet its Renewables targets, before embarking on a fundamental revision of existing mechanisms, Ofgem must address whether or not the consumer will get a better deal with any proposal, and whether or not the economic climate and prevailing conditions will support the proposals.

Price control arrangements are a well-proven, successful mechanism for delivering optimal and cost-efficient investment. Introducing more risk and greater complexity for companies will undoubtedly lead to greater problems in securing funds.

Chapter 5 - Question 5: We present issues that we think we should consider when assessing how the regulatory framework can encourage innovation by the networks. Have you any views on the list of issues? Are there others that we should consider?

SPEN agrees that if value for money for consumers is to be achieved, innovation is needed to identify the most effective and efficient means of meeting the challenges arising from an uncertain sustainability agenda. We do not agree however that a regulated monopoly cannot deliver innovation effectively. We do believe that some adjustments maybe required to the regulatory framework to remove some of the regulatory barriers that prevent the facilitation of innovation across industry sectors in the future.

Case for Innovation

The requirements on networks have changed slowly in the last 20 years as societies electricity needs have evolved through a period of relative price stability. However this is unlikely be the case for the next 20 years, as environmental legislation impacts on the supply industry, the cost of energy rises and the social “green” awareness of the public develops. The effects of climate change should also be factored into the future, given the increase in extreme weather events that will impact on quality of supply.

Increasing electrical energy costs are likely to drive energy efficiencies that might be seen in a number of areas that deploy innovation:

- SMART meters with dynamic tariffs will facilitate behavioural change in the home.
- Distribution network design strategy will have to adapt to bi-directional power flows
- Demand side management and Energy Storage to facilitate a more effective frequency regulation in a period of increasing generation from intermittent sources.
- Demand side management may offset the need for some network reinforcement

To facilitate increasing levels of embedded generation, distribution networks will require active management and this will require enhanced SCADA facilities to address the technical control needs and a market structure in which the DNO may manage generation for network security purposes. If a DNO had the ability to constrain generation on or off, this might allow network reinforcement to be deferred in planning time-scales.

There are significant barriers in the way of delivering network reinforcements, principally from the planning and the consenting process. This places an increased emphasis on the need to maximise the use of existing assets, as a last resort.

SP Energy Network believes that regulated networks supported by the IFI incentive and working in conjunction with research bodies and academic institutions, provides an ideal framework for delivering innovation.

Scope for innovation

There is growing evidence that there could be a significant deployment of electric vehicles by 2020 This will require innovation mainly in the areas of vehicle design and battery technology, however the supply industry will be tasked with the challenge of agreeing new standards for battery charging facilities to ensure they do not adversely impact on quality of supply (harmonics) and also with the provision of a substantial public infrastructure. The impact on system demand needs to be studied with a range of market development scenarios in order to better understand the future network reinforcement needs and the impact on supply security of the energy supply. Innovation may be deployed in a number of ways to maximise the use of existing assets:

- The application of dynamic rating to use the full cyclic overload capability of the network assets. This is particularly useful where wind generation triggers marginal network reinforcement, i.e. maximum output from the windfarm is concurrent with maximum conductor cooling of overhead line conductors.
- The use of weather forecast informed rating for overhead line assets in operational time-scales.
- The use of Wide Area Monitoring to provide a real time indication of voltage and stability limits on the transmission system.
- The use of “Hot Wiring” to establish the opportunities to increase the operating temperature of overhead lines and hence thermal rating.

Significant levels of innovation will be required for the ENSG network reinforcement proposals cited to accommodate the 2020 renewable targets. The use of embedded HVDC links and series compensation on heavily meshed transmission system present a significant technical challenge.

SPEN have previously engaged in the IFI funded collaborative research with the Met Office, TOs and DNOs to look at the effects of climate change and more extreme weather events on future network resilience. Given that new assets deployed on the network are expected to provide a 40-year service, it is important that they remain fit for purpose for the full plant life. Further innovative research is being proposed develop skill in forecasting the effect of climate change on network resilience and inform a discussion on future security standards.

Barriers to innovation

Some areas of innovation cited above impact on more than one sector of the supply industry and their successful implementation might be facilitated with an adjustment of the regulatory framework to facilitate co-ordinated “network” and “energy” project development.

The existing regulatory framework makes no allowance for innovative equipment which is more expensive. There is also strong incentive on network companies not to spend more than the capex allowance. Network companies therefore have little incentive to develop and invest in new, unproved technological developments which may, ex post, be deemed to be inefficient or become stranded. Network companies should be incentivised to innovate more through higher rates of return, to reflect the higher risk associated with innovation. We believe network companies are well placed to lead many of the sustainable futures innovations, however, to date this has been limited by the “ring fenced” approach of the Regulatory environment.

Encouraging Innovation

SP submitted a detailed view on how technical innovation could be encouraged on the UK networks as part of our response to Ofgem’s Dec 08 policy document. Broadly this included:

- Recognition of the positive effects the Innovation Funding Incentive has had on UK electricity networks R&D activity, but also recognizing the inherent inertia in making radical changes to an asset that has to last 40 years+.
- Recognition that 15 years of RPI-X pressures and it’s affects on engineering resource in the UK, will give rise to a natural delay in the delivery of innovative solutions to the network moving from such a low starting point (UK networks R&D was ~£1m in 2005).
- Identification of anecdotal evident that network related R&D has longer timescales in comparison to many other sectors (e.g. pharmaceuticals, vehicles, mobile phones, etc), where their end product life expectancy and competition (directly linked to market share) are on a different scale to that of electricity networks companies.

- Recognition that overcoming the technical barriers with a ‘product’ is only part of the challenge, and having proven a technology there may be commercial or Regulatory issues that need to be resolved prior to wide scale adoption (e.g. energy storage).
- A proposal for an additional 0.5% of turnover to be geared towards the ‘Application of IFI’ (AIFI), with some detail on how such a mechanism could be shaped to work in practice.

Chapter 5 - Question 6: Are we addressing the right issues and questions in the 'Delivering a sustainable energy sector' theme? Are there any issues missing from this theme?

The review should also focus on the role of Asset Management within network companies to ensure there are well formulated asset management policies that continue to deliver network performance for current and future customers, strengthens the criteria for long term asset stewardship and delivers value for money.

Chapter 6 - Ideas for further exploration

Chapter 6 - Question 1: We have presented a number of ideas on changes that could be made to the existing regulatory framework. Are there other alternative frameworks that you think RPI-X@20 should look at?

Regulation of networks has been “economic” for the last 20 years, however it now needs to become more “strategic” by recognising the networks place and the challenges in delivering secure low CO2 energy for the UK. This means working better with other parts of the system (generation/supply, gas, water) and giving flexibility to innovate to change the network. Future regulation should recognise that there is a huge investment challenge that will need to be delivered against difficult capital market backdrop. As an industry, we must be forward looking and continue to promote investment in our networks, at the same time, sustaining and creating jobs, and facilitating the transition to a low carbon economy.

Perhaps consideration should be given to that what is being done as part of the US fiscal stimulus. The American Recovery and Reinvestment Act 2009 targets investments towards key areas that will save or create good jobs immediately, while also laying the groundwork for long-term economic growth. The US has already targeted a package of \$43bn to create a framework for clean, efficient, American energy. This includes detailed plans by the Department of Energy to develop a smart, strong and secure electrical grid, which will create new jobs and help deliver reliable power more effectively with less impact on the environment to customers across the nation. As part of the American Recovery and Reinvestment Act, the Vice President outlined plans to distribute more than \$3.3bn in smart grid technology development grants and an additional \$615m for smart grid storage, monitoring and technology viability.

Chapter 6 - Question 2: Do you have any provisional views on any of the ideas presented here?

We believe that a number of the suggestions presented in this chapter are worthy of further development. We agree in principle with a greater focus on outputs, for example, so long as these are measurable, appropriate and within the licensee’s control. Distribution losses, for example, are only partially within the control of the network operator, and are subject to significant volatility due to settlement data and other factors.

Tidying up the existing regulatory framework

We are of the view that we need changes to the existing regulatory frameworks, not replacement. Network companies should have the freedom to develop strategic plans, but would question whether or not there is a fundamental conflict between shareholders interests and their earnings motives with delivering optimal levels and long term quality of green energy. Greater incentives are required to encourage proactive and potentially risky investment.

There is greater need for a total UK co-ordinated effort, with Ofgem, as the consumer advocate, representing the consumer. This effort should enable Network companies to focus on the delivery of sustainable energy networks.

We agree with the points made in relation to Efficient Capital Investment, but would not be supportive of any added complexity. There must be a clear balance of efficiency considerations to ensure projects are delivered, we do not believe a move towards contracting out enhancement investment would be effective.

Add-ons to the existing regulatory framework

Some of the suggestions included appear to require legislation to be taken forward. For example, it is not clear that franchising parts of network operations is consistent with existing safety regulations (e.g. ESQCR). A requirement for tendering to take place beyond those areas where licensees already apply this approach may lead to loss of cost savings achieved in-house and delays in projects being undertaken. Further, given the high level of contractor involvement in the Network Operators value chain, particularly in investment we are not convinced about what can be achieved by this approach and believe there is a considerable risk to fragmentation of the management of the overall network. The case for such an approach has not been made in our view.

As a business, we do seek, where possible and appropriate, to encourage regular dialogue with customers in relation to connections and other matters. While the right for consumers to appeal a proposed settlement appears attractive at first sight, there is a risk that lobby groups could subvert this process, and it could also be a cause of delay in delivery of investments to achieve sustainability and other objectives.

Capacity auctions have long been discussed in the electricity sector, but a number of factors militate against read across from gas. These include the greater complexity of electricity networks, even at the transmission level. Identifying the relevant capacity 'product' has proved elusive in previous consultations.

We note the suggestion to consider regulating networks by focussing more on outputs to support ex-ante assessment of investment. We support this move but would suggest that a move towards more focus on outputs should be incremental; that is to start by identifying and monitoring appropriate measures, then in the medium to longer term considering these outputs as part of the price control review process.

Alternatives to the RPI-X regulatory framework

As an industry, we should learn from other regulatory regimes wherever possible. The UK has advanced its regulatory thinking substantially in response to market developments. However UK regulation has also been heavily involved in encouraging market changes that have improved competition and outcomes, with UK utility regulation now being much more rooted into a competition policy framework. For utilities with monopoly fixed networks, there seems little alternative to continued ex ante regulation.

Australia for example, has established an independent electricity regulator to regulate the electricity network and associated functions. Such activities were previously assigned to the competition agency. While the Australian Energy Regulator maintains independence in its decision-making, through its close links to the Australian Competition and Consumer Commission, it is able to take an approach consistent with government law in order to achieve national consistency in regulating electricity and gas transmission and distribution markets.

Chapter 7 - Next steps

Chapter 7 - Question 1: Do you have any views on the proposed next steps for the review?

We are supportive of Ofgem's approach to the review and believe the industry workshops held to date have worked effectively. The commitment by Ofgem to consult widely and provide ample opportunity for stakeholders to have their views heard is also encouraging. We welcome the opportunity to participate in the working groups to develop ideas on key issues, and where appropriate provide recommendations to the Ofgem RPI-X Project Team.

We would ask that as part of the review, Ofgem consider their own first principle objectives to ensure that they are effectively aligned with the energy policies driving the forthcoming critical period. The existing regulatory framework is not an effective mechanism for the delivery of energy policies and will only serve to constrain both the regulator and the industry.

We would be grateful for a discussion about coordination of any implementation against a framework of delivering the outcome of DPCR5 (in distribution), commencement of TPCR5 (in transmission), implications of EU legislation (for example on unbundling), and measures arising out of 2020 and other targets.

SP Energy Networks – Summary of Key points

SPEN see the RPI-X @ 20 review as a positive step in the future development in energy network regulation and in delivering a low carbon economy.

In particular, we would like:

- Consideration of the nature and role of the regulator in the delivery of sustainable energy networks
- A broadening of the review to be energy sector wide
- Ability for network companies to undertake the task of delivering a sustainable networks without significant risk or regulatory barriers
- The development of a flexible framework to facilitate and stimulate companies' to meet the future energy challenges and objectives