

**Regulating energy networks for the future: RPI-X@20**  
**Principles, Process and Issues**

**Electricity North West Response**

**1. Aims, principles and approach for the review**

ENW endorse the need for this review and agree that the focus of energy network regulation must shift from achieving operating efficiency gains towards facilitating the delivery of environmental targets (the low carbon economy). The changes required in our electricity networks are potentially greater than the post war rural electrification programme. We recognise that there are a wide range of possible options by which the nation might achieve the 2020 targets, exemplified for example by the results of Ofgem's Long-term Electricity Networks Study (LENS).

The current combination of regulated and competitive markets have provided the platform for these options to emerge; however there is no certainty regarding the way forward and significant doubt over whether solutions will be available in time. Therefore, all parties must work together to ensure that our energy sector and its regulatory regime are appropriately structured to address these issues and generate greater certainty. The co-incidence of this review and the Energy and Environmental Select Committee's review of The Future of Electricity Networks is propitious. Ofgem must ensure that the RPI-X@20 review outcomes are aligned with the findings of the Select Committee and any resulting actions.

We are extremely pleased to see an explicit description of the principles that will be employed to guide progress through this review and fully endorse them. When the review was initially announced we, and our investors, had expressed concerns about the nature of the review and its impact on regulatory uncertainty and the perception of regulatory risk, particularly in relation to DPCR5. The clearly stated references to no retrospective action and no stranding of efficient investment give considerable comfort in this regard. Such comfort is essential in maintaining investor confidence and there has never been a more sensitive time in which to focus upon this parameter within the regulatory framework.

The aim of developing a regulatory framework that encourages licensees to:

- facilitate delivery of a sustainable energy network;
- invest appropriately in networks;
- strive for increasing efficiency, innovation and appropriate quality of service;
- and respond to the needs of current and future consumers;

is very laudable and largely inarguable. However, it could also be argued that these ideas have always been the aims of the regulatory framework. What is important at this juncture is to reassess the relative weightings that we as a society should place upon these aims and the interpretation of precisely what will be required to meet these aims. It is for this reason that we are very supportive of this review.

We recognise that the two themes proposed for the review are inter-related in the sense that efficient delivery of a sustainable energy sector is likely to require increased communications with consumers. The themes are also likely to be linked in terms of measures to address both sets of issues.

This consultation correctly identifies that the world has changed. There is little need to review in detail the drivers of this change; the three largest forces are the move to a low carbon economy, the aging and much heavier utilisation of the energy networks and the global economic crisis. Government policy strongly reflects the need to move to a low carbon economy and this has precipitated changes in primary legislation including the changes in Ofgem's duties that we believe Ofgem are now interpreting correctly and are appropriately placing considerable emphasis upon.

Recognising that we are in a "new world" it is quite right that Ofgem should step back and review whether the fundamental principles of the regulatory framework are still appropriate. The key questions we need to ask ourselves are clearly how do our energy networks need to change in the new world and what regulatory framework will best effect this change.

It is not completely clear what additional network, particularly at distribution levels, must be built to facilitate the development of the low carbon economy. It may be the case that in addition to the continuation of asset replacement investment, investment in new capacity or control systems is required as the role of the networks changes. The increased uncertainty is another reason why it is appropriate to review the regulatory framework.

The exploration of these issues in the consultation document leads to the conclusion that we need to think again about:

1. Who decides what the networks should be doing, the infrastructure they should be building, the services they should be providing and the standards against which they should be operating?
2. What type of regulatory framework will best ensure the efficient and effective operation of the energy networks given the nature of decisions made by whoever is identified in answer to the first question?

There are a small number of discrete options to choose from in answer to both questions. To answer the first question we can broadly choose from:

- Customers
- Ofgem
- Companies
- Government

In this response we will try to explore the relative merits of each by considering the issues raised in the two main themes of your consultation; Focussing on Consumer Needs (Section 2) and Delivering a Sustainable Energy Sector (Section 3).

We will then move on in Section 4 to review the different options for the regulatory framework and, in Section 5, whether different combinations of answers to the two questions posed above may seem more or less appropriate. Having participated in the useful debates that Ofgem have facilitated as part of the RPI-X@20 project, the three main models we will focus upon are:

- The existing RAV/WACC approach
- The introduction of more competition into traditionally monopolistic activities
- The use of more incentive mechanisms to encourage network companies to anticipate and speculate on future requirements

We have incorporated a range of comments on other issues raised in your consultation in Appendix 1, namely

- Different challenges for Gas and Electricity
- Key features of the Regulatory Framework
- Existing Regulatory Returns
- Implications for Charging Structures

## 2. Focussing on Consumer Needs

We agree that services provided to consumers must offer value for money, and that choice and quality of service are provided at the level required by consumers. The key question is, therefore, how to determine the level of service required by consumers. To date the key body to determine this has been Ofgem and this is why network companies may be observed to spend more time focussed upon Ofgem than directly upon their customers. We, therefore, agree that there is a case for getting more consumer involvement in the process of regulation.

Users of the network, such as suppliers, pay for the services it provides and clearly should have a strong role to play in the regulatory process. However, we always need to undertake a sense check to test whether their economic interests are directly aligned with the requirements of customers, before treating their wishes as a direct corollary of customers' wishes. If customers' views can be measured directly there is less need for other users to represent anything other than their own views.

The regulatory process must focus upon truly understanding the requirements of today's customers, what they consider value for money and what choices of service they would select. In doing this we need to recognise that energy delivery is a homogeneous product and must focus on meeting the needs of the majority of customers in any discrete group, rather than the sometimes more vocal minorities.

We need to continue to develop mechanisms for asking customers their opinions wherever possible. Ofgem's willingness-to-pay surveys are a very good tool in such a process and we believe that they can be developed further and implemented more regularly so that the results can be tracked over time, rather than jumping from one "snapshot" to another at times of conducting price control reviews. We recognise that recent changes in consumer representation have diminished the ability of statutory consumer representatives to undertake this work and therefore, under the current legislative structure, Ofgem and the network companies seem best placed to continue with it. Ofgem and the network companies should be able to do this work jointly, perhaps commissioning an independent agent to undertake regular customer research, to build a more comprehensive understanding of customer choices and greater expertise in measuring customers' requirements. We can determine where the key decision points in the regulatory process are and engage with customers on these issues, using a simple format, to determine the key issues of:

- price, magnitude and volatility
- range of services
- level of standards
- risk taken by customers and by companies

Whilst we can work jointly to determine the requirements and choices of today's customers, future customers do need specific representation. The role of making the strategic decisions on how to best serve future customers is very similar to the role of the "controlling mind" we also describe as being required in response to the sustainability challenges.

Identifying what the network itself needs is definitely a role for the network owners. There is a strong correlation between what customers want and the network required to deliver this; however, the needs of future customers must be taken into account. Therefore, provided there is a strong likelihood that the network itself will still be

required in the future, the network must be continually maintained to ensure that the costs of providing the network are smoothed over time and short-term payment holidays are not taken by today's customers at the expense of generations of future customers. This requires a strategic direction for the development of the network to be determined by a party with responsibility for all generations of customers, and with the ability to make judgements about the balance of costs and service across different customer groups. The decisions taken must reflect the balance of priorities set by society as a whole and therefore, must be determined by a body with a democratic mandate, i.e. Government. There seems to be no real alternative:

- Ofgem have repeatedly stated that these judgements are difficult for them to make, given the restrictions of their duties as currently laid out in statute.
- Network companies will always run the risk of being accused that decisions they take are driven by the needs of their shareholders, irrespective of whether their proposals meet the needs of their customers.
- Another agency could be brought into the equation, but this risks increasing the complexity of the regulatory framework; previous experience has demonstrated the difficulties associated with customer representatives being too closely involved in the regulatory debate.
- we have made significant strides in DPCR5 to increase engagement with a wider range of stakeholders, but we recognise that stakeholders are not customer representatives.

### **3. Delivering a sustainable energy sector**

The way forward for transmission has been clarified to some extent by the recent ENSG report "Our Electricity Transmission Network: A Vision For 2020", which focuses on the need for adequate network capacity to be in place in good time to bring large scale generation from remote points (including offshore) to major load centres. The energy generation scenarios envisaged as the most likely in the ENSG report have been signed off by both DECC and Ofgem.

The challenges for distribution are more diverse and difficult to crystallise. At the larger end of the scale, the issues are similar to transmission in that they relate to the potential role of pre-investment in network assets in order to facilitate the timely connection of generation. However, they are harder to judge due to the greater uncertainty over location and the specific impact each individual generation project has on the local distribution network. The wider technical challenge for distribution is to accommodate a more even balance between local load and local generation, thus reducing grid demand and allowing this to be met by low carbon generation, primarily larger grid-connected sources such as nuclear and offshore wind.

Energy efficiency, in particular zero carbon homes, and new sources of space heating including CHP will reduce the energy demand of buildings, although some technologies, such as heat pumps, whilst reducing overall energy demand actually increase electricity demand. Also the holistic GB energy usage perspective indicates that new "low carbon" electricity demands, such as for transport, will emerge to enable a reduction in other fossil fuel use. Thus the pattern and direction of load flows will change, both geographically and by time of day in ways that are currently hard to predict. The corresponding network changes are driven by the resulting balance of demand and generation locally and will require a combination of investments, involving both "traditional" asset-based solutions and an increasing need for real-time

information and control systems for the active management of the network, the so called “smart grids”.

The key question for the future is whether the longer-term security and climate change goals can be achieved purely through market forces via the current structural model, or whether an element of central planning is required? There needs to be a decision made on the broad generation mix and strategic direction to achieving the 2020 targets as a stepping stone towards the 2050 targets. This requires the explicit identification of the “guiding mind” - clearly a role the new Department of Energy and Climate Change (DECC) must take on. Decisive leadership from DECC is of fundamental importance to the effective translation of policy into practice. We can see that a consensus on the generation mix and appropriate strategic direction is forming, it is now necessary to move the whole weight of the industry behind a clear statement of the strategy all must implement.

Against a clearer strategic direction, energy networks would be able to determine the appropriate investments required to delivery the strategy. This would relieve Ofgem of some of the burden of trying to second guess the energy network companies in determining what investment is required. However, the role of ensuring that the investment is delivered in a timely, effective and efficient manner would remain.

We can determine what investment is required in the distribution network in the North West to achieve a certain approach to the required targets, and all other network owners will be able to do the same for their networks, identifying initially the “least regrets” things to do, once the “guiding mind” specifies the broad direction. The objective must be to ensure that sufficient clarity is given to government policy to set the vision and direction, and to ensure that network owners can respond to this directly.

#### **4. Alternative Regulatory Regimes**

##### **4.1. The existing RAV/WACC approach**

Since privatisation DNOs like ENW have halved their work forces, halved their costs and doubled the quality of supply enjoyed by customers. This performance is direct evidence of real strength in strategic and innovative thinking and implementation. The RAV/WACC model that has evolved under RPI-X regulation has clearly led to highly innovative companies, but this innovation has been focussed on areas where it can yield additional value for companies. Network companies are very much creatures of the regulatory framework. They are restricted from undertaking new ventures and taking on new risks by the ring-fencing provisions of their licences. It is not a surprise they have become risk averse in nature. Where network companies are dependent on a regulator who controls their revenues very tightly and allows no scope for increasing revenue by differentiation, it is no surprise that companies become focussed upon Ofgem.

The regulatory framework must provide investors, of both equity and debt, with the confidence to make the required funds available to enable investment programmes. The key determinant of such confidence is the security that the costs of efficient investment will be recovered over time with an appropriate level of return. This has been a strong element of RAV/WACC regulation and therefore, the argument for retaining much of the current approach is a compelling one.

Whilst the utilities sector has been viewed as a reasonably low risk investment in the past and has attracted comparatively low interest rates, the current economic circumstances are likely to result in higher financing costs with more restrictive debt covenants for a number of years. The ability of DNOs to adequately finance their activities over the medium term will be a significant challenge for Ofgem to ensure in line with its statutory duties.

The challenges now facing energy networks are clearly the greatest since privatisation. The environmental challenges alone would encourage dramatic change, but the accompanying economic climate requires more thoughtful contemplation. If we are to continue to utilise the benefits secured under the RPI-X regime since privatisation, we need an evolution in the regulatory framework rather than a revolution. To change more fundamentally risks the old adage of “throwing the baby out with the bath water”.

#### **4.2. The introduction of more competition into traditionally monopolistic activities**

When the energy networks were privatised the challenges the new companies faced were all about improving efficiency and maintaining service. Companies were asked to build upon high service standards whilst bringing in the efficient working practices of the private sector. The key challenge for the regulatory framework was to make sure that the introduction of more efficient practices was strongly encouraged and that the benefits realised were shared with customers.

In this new world we need to consider whether we need new types of network companies whose emergence is a function of, or response to, a different regulatory framework. We agree that energy networks face an environment characterised by increased uncertainty about demands at different points on the network, at different points in time, and from users with different characteristics.

Would less monopolistic companies, facing greater competitive pressures, have such a different approach? In recent years the regulatory and legislative framework has enabled the emergence of new network owners who can compete with incumbents. However, we have not observed the “risk averse” network companies, as Ofgem seem to like to characterise the incumbent network owners, being pushed out of the way by the new non-price controlled network companies rushing to build the new networks required to meet the new strategic challenges. Instead the new network companies, such as the IDNOs, have focussed on trying to substitute the traditional activities carried out by the previous incumbents.

We believe this is because the returns available within the regulated arena are far too low to enable such risk taking. This problem is a function of the regulatory regime Ofgem have created, that protects customers from the risks of high prices and consequently results in very restricted financing structures for network companies.

Network companies cannot borrow cash to enable investment at a rate consistent with the scale of regulatory returns without being able to give debt and equity markets and investors reassurances about risk in the regulatory environment. The attitude to risk in network companies will also be a function of the shareholders of network companies and their reasons for acquiring the network companies. For most, if not all, the very reason the shareholders are attracted to the sector is because it operates in a regulated environment and whilst it offers low returns, the accompanying risks are low.

There are specific areas, typified by smart metering and demand side management, where the separation of licensed activities to introduce more competition has created divergent objectives which would now benefit from greater alignment. We believe that it is now important to move away from the philosophy of “competition at all cost” in areas where the financial benefits of competition for customers are unproven, to improve co-ordination and simplicity on behalf of customers. This does not require a change in industry structure, but does require a change in attitude and philosophy on the part of Ofgem and a focus on pragmatism. Network companies must be allowed to develop direct and ongoing commercial relationships with users of the network. Furthermore, policy goals can be achieved by mandating obligations on the network companies rather than waiting for market forces, thus utilising the unique long-term relationship that exists between the networks and every household or property in the land.

#### **4.3. The use of more incentive mechanisms to encourage network companies to anticipate and speculate on future requirements**

Within the existing RPI-X regime we have seen the emergence of some incentive mechanisms, such as the Distributed Generation Incentive, that are specifically targeted at encouraging network companies to anticipate the needs of customers or other network users. This is a significant departure from the RAV/WACC model in that the certainty of cost recovery and return is a function of ex-post measurement of network utilisation, rather an ex-ante decision about whether the specific investment is required. The use of more incentive mechanisms to encourage network companies to anticipate and speculate on future requirements is another alternative approach to developing the regulatory framework. However, the change in risk profile is dramatic and the returns available would have to be considerable to incentivise companies to take on such risks, or to sell their ownership stakes to other parties more interested in higher risk and higher potential return operations. The key determinant of the level of change will be the scale of the additional investment that is dealt with in a high risk manner; investment for existing needs could continue to be incentivised under a RAV/WACC model in a hybrid regime, but this will still change the net risk profile of network companies.



## 5. Combinations of decision makers and regulatory models

There are a number of combinations of answers to our two key questions, some seeming more appropriate than others. The matrix below is designed to explore these interactions.

Regulatory Regime  <i>Decision Maker</i>	RAV/WACC	Competition	Incentivised speculation
<i>Customers</i>	Customer's interests are largely represented by Ofgem.	In the current regulatory regime customers determine the level of connection investment and connection related reinforcement in a competitive regulatory regime.	An inherent feature of this type of regulatory regime is that the customers are the ultimate arbiters of what is required from the network companies.
<i>Ofgem</i>	A key characteristic of the current approach to the RAV/WACC model is the debate between companies and the Regulator on the required investment in the network. Ofgem determine the total size of the investment programme forecast. Customers then hold the risk that the resulting investment is sufficient. Recent Ofgem developments in Output measurement as part of DPCR5 may change this paradigm significantly, but will still be largely untested by the time the RPI-X@20 project must report.	This form of regulatory regime may still require Ofgem to determine whether investment is appropriate and approve or challenge the proposals of network companies. Ofgem would then be required to design a framework that enabled competitive forces to identify the most efficient constructor of the identified investment.	Whilst customers, not Ofgem, determine what is required on the networks – Ofgem will need to design the incentive mechanisms that ensure that where companies make the right predictions of what is required they are appropriately rewarded and that the returns available are sufficient to cover the significant increase in risk.

<b>Regulatory Regime</b>  <i>Decision Maker</i>	<b>RAV/WACC</b>	<b>Competition</b>	<b>Incentivised speculation</b>
<i>Companies</i>	<p>Under the existing RAV/WACC model companies are the key decision makers. There is a tension between creating incentives to ensure efficiency and ensuring long-term asset health is not neglected. Network companies are required to predict customer requirements and propose appropriate investment responses to Ofgem for agreement of the aggregate quantum of investment. Companies are then required to monitor and match changing network needs over a fixed period. Were these predictions to prove to be inaccurate, sunk investment, efficiently made, would still be recoverable from customers. There is no significant evidence of inefficient investment or stranded assets as a result of this regime to date.</p>	<p>As with the RAV/WACC model investment would still be determined by a network company prediction of customer requirements. The key difference from the RAV/WACC model is that companies would compete to determine who could build the required assets most efficiently. To change the decision-making from companies and Ofgem to customers would require competition to be introduced in combination with an incentivised speculation type regime.</p>	<p>Companies are required to make predictions of what customers require, as with RAV/WACC and Competitive models. The key feature of this regime is that, if these predictions are inaccurate, companies rather than customers bear the majority of the risk.</p>
<i>Government</i>	<p>Input from a “guiding mind” at Government is entirely compatible with the RAV/WACC model. High level guidance would assist companies and Ofgem in determining the efficient level of aggregate investment, reducing the reliance on competing forecasts of customer requirements. This enhancement to the existing regime could increase the risk of stranded assets, but could also enhance the delivery of Energy and Environmental Policy objectives.</p>	<p>As with the RAV/WACC model, input from a “guiding mind” would enhance and improve the determination of what network enhancements would be built by competing constructors, giving the same risks and benefits.</p>	<p>The introduction of a strategic steer from Government is not compatible with the incentivised speculation model.</p>

## **6. Conclusions**

A recurring theme in this writing this response has been the emergence of the need for an additional party to enter the regulatory relationship with companies and regulators. There is an even greater need for a strategic direction and this is very likely to result in an enhanced role for the Department of Energy and Climate Change. It may appear fortuitous that the need for more involvement from Government occurs at just the time that Government is reorganised to create an agency such as DECC, but this is much more likely to be a result of Government recognising the fact that this is a priority area for the nation (and indeed the global economy) and recognising the need for developments to be led from the centre.

## **Appendix 1 - Additional Considerations**

### **Different challenges for Gas and Electricity**

As the document sets out, there is clearly a big difference between the challenges facing gas and electricity networks. In most scenarios the use of the electricity network is set to increase as more energy must come from renewable sources and the best medium of transport of such energy is electricity. On the other hand the fossil fuel dominated gas networks may be set to decline quickly as we move towards the Government 2020 targets. The regulatory regimes required by these different networks may be very different if the future does indeed evolve in such a manner. The RPI-X@20 review must treat these networks separately and develop the appropriate mechanism for regulating each. The lure of a "simple" one-size fits all solution should not distract from developing the best individual solutions.

### **Key features of the Regulatory Framework**

We believe regulatory complexity is a lesser concern. Where complexity detracts from ensuring efficient investment signals or focus on the right behaviours it should be addressed, but in a multi-faceted and highly complex industry such as energy networks it is not a surprise that the regulatory mechanisms that reflect the variety of competing pressures and requirements impinging upon networks are complex.

The transparency of the regulatory framework is already good and Ofgem are clearly not complacent in this area. We should continue to look to develop new ways of customers becoming more involved and having a greater voice, however we need to recognise that future customers cannot have a direct voice and do need to have nominated representatives.

### **Existing Regulatory Returns**

It is unfortunate that we find the need to comment upon Ofgem's assessment of the performance of the network industries since privatisation. The review document contains a significant misrepresentation of the returns earned by network companies in recent years. The document states that:

*"recent Ofgem analysis has estimated that actual returns across the electricity distribution networks over the current price control period may differ from the assumed norm by a variation of +3.5 to -1.5 percentage points."*

This is not the case, will be misleading to many stakeholders and, therefore, highly prejudicial to a balanced review outcome. The calculations referred to were initially published in the December Policy Document of DPCR5. Here, Ofgem describe an approach which appears to utilise and revisit the DPCR4 financial model to calculate return on equity. This approach does not allow meaningful comparisons with actual returns made by the DNOs because it does not enable the differentiation between returns generated because of simplifications or assumptions employed in the modelling and returns generated by actual performance.

This is an issue we had previously brought to Ofgem's attention in writing and through personal discussions and on which we had received explicit reassurances that the limitations of the approach would be made clear in any publication. Our concerns were obviously well founded as the first reference to these calculations we find in a subsequent publication fails utterly to appreciate that the returns quoted are theoretical potential, not actual. For such a misinterpretation to have been made by

an external party would have been deeply regrettable; for it to be included within an Ofgem publication is inexcusable.

As the company with the highest recorded return on regulated equity in this analysis, we are well placed to point out the error of this approach. We have provided Ofgem with evidence of the actual returns earned by ENW over the period in question. Given the damaging nature of this error we suggest that Ofgem publish a supplementary factsheet that highlights the nature of the error and provides all stakeholders with facts about the potential returns that could be earned by DNOs and also data on the actual returns that have been earned.

### **Implications for Charging Structures**

Ofgem and the network companies will be able to determine an appropriate incentive framework provided they have a clear strategic direction to work towards. The resulting charging structure that dictates what will be charged directly to specific customer groups and which costs should be smeared across a broad range of customers can also be left to Ofgem to determine in partnership with the relevant network companies. Allowed revenue is a function of the investment required in the network and the level of risk network companies are required to bear for customers. The specific charges for specific customers will flow from these principles and the guiding strategic direction for the sector. There is no overriding requirement to change this approach.

Increasing network charges, resulting from greater investment and other cost pressures such as duties to fund pension provision, are clearly a significant concern; as is the structure of those charges. We recognise that volatility in network business charges is a key concern for energy retailers and may result in the inclusion of risk premiums in charges to customers that potentially could be avoided. The success of fixed price tariffs offered by suppliers is a clear sign that a large proportion of customers value certainty of charges more than the minimising of charges. Network companies and Ofgem must work together to ensure that volatility of charging is reduced. This does not require specific changes in risk – it is more likely that this requires the provision of a regulatory environment in which network companies, and particularly their financiers (both debt and equity holders) can take a very long-term view.