

## **Regulating energy networks for the future: RPI-X@20**

### ***How can the regulatory framework for energy networks deliver both a sustainable energy sector and value for money to consumers?***

**Workshop, 2nd July 2009  
Imperial College, London**

Following the success of our workshop 'The future of energy regulation' in December 2008, Ofgem's RPI-X@20 team invited a number of high-level 'thinkers' in regulatory economics – both academic and practitioners – to a summer 2009 workshop.

The workshop was structured around three key questions:

- How can we encourage networks to efficiently facilitate delivery of a sustainable energy sector?;
- Do we need to do more to stimulate innovation; and
- How can we encourage more engagement between networks, network users, consumers and Ofgem?;

Each theme was introduced by several short presentations and then opened up to discussion.

The meeting was conducted under the Chatham House rule. A number of common ideas and issues were discussed and the key themes which emerged are summarised below.

### **Session 1: Delivering a sustainable energy sector**

#### *Presentations*

Ofgem presented a summary of the key issues discussed in other stakeholder workshops/seminars to date and presented some high level strawmen options to spur the debate. These strawmen included, introducing competition in delivery and ex-post regulatory methods.

The two external presentations for this session looked at:

- Lessons from the telecoms and water sectors.
- Ideas on how to regulate to encourage long-term efficiency.

The presentations are available in the supporting documents section for this workshop on our website at:

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=35&refer=Networks/rpix20/publications/Presentations>

### *Summary of discussions*

One of the presenters argued that Ofgem should look to align networks' incentives with government carbon dioxide targets. This would mean there is no need for targets on specific schemes such as renewables. Although price controls are not currently aligned with the five year carbon budgets, this could be done and would:

- Reduce the need for other specific incentives that may create unintended consequences.
- Provide clarity for networks on what needs to be done.

However, several other delegates disagreed with this view noting that specific targets or programmes, such as those for renewables and CCS, are essential in order to drive innovation. They were seen as necessary in energy because there is little end user product differentiation. This suggests it would be difficult, without specific programmes, to get competition if companies cannot sell their product for a premium. The telecoms sector was noted as a contrasting example to this.

In the context of delivering a sustainable energy sector, one attendee asked Ofgem about the relationship between the RPI-X review and the Transmission Access Review (TAR). It was highlighted that the regulatory regime will have to be adaptable to the transmission access reforms which are expected to be announced in the next six to nine months by the Secretary of State.

There were several discussions on how to encourage investment including:

- The idea of rewarding and assessing new investment in a different way to replacement investment. However, one delegate noted that rewarding replacement investment differently could be problematic because it may also be seen as 'new' - we do not want to just reward like-for-like replacement investment. Another suggested that imposing boundaries could create problems with incentives.
- Another member commented that we also need to encourage companies to consider options other than investment, e.g. can the asset be used differently to extend its life?
- Several members discussed the importance of developing a clear and streamlined process for approving new investments:
  - One delegate highlighted that companies would be encouraged to make significant investments, if a procedure was developed, that appraised the decision to undertake a particular investment rather than the outcome. This would recognise that some investments, when moving towards a sustainable energy sector, will be unsuccessful and not penalise companies who were able to justify that this was the best decision at the time.
  - Ofgem need to develop ex-ante rules, including treatment of investment ex-post.

- One delegate saw no way to avoid Ofgem getting heavily involved in the details of companies' investment plans. Another delegate cautioned that more complex and detailed regulation could create worse regulation, meaning greater scope for errors by Ofgem. It was argued that Ofgem should not be too optimistic about what it could achieve under a more complex regime and recognise the probability of problems arising and having to make changes along the way.
- The above points were seen as similar issues for innovation.

The treatment of stranded assets was also mentioned by one delegate as an area for investigation. It was questioned how much embedded network value is truly a 'sunk' cost, e.g. in transmission, could pylons and wires be moved?

The merits of ex-post regulatory methods was briefly discussed. Several delegates highlighted notable barriers including:

- How much Ofgem is able to rely on ex post regulation will depend on the amount of competition. While there may be some scope for more competition, this is probably not enough.
- The considerable uncertainty it could create for investors.
  - In particular, competition could create greater uncertainty on future revenue streams and markedly raise the cost of capital for big investments – though this was not necessarily seen as a bad thing.

One delegate cautioned that the RPI-X@20 project should not overplay the dichotomy between the LENS scenarios - big transmission & distribution versus micro generation – because this could lead to paralysis in decision making. For instance, it was suggested that big wind and nuclear can be facilitated by smart grids and distributed generation.

There was also a discussion on efficiency, in particular, what is meant by dynamic efficiency? However, no firm views were raised. There was a suggestion that Ofgem consider the potential relevance of the issues and problems that have arisen in other infrastructure industries - most notably in telecoms and, in particular, regarding digital access for pay-tv.

## **Session 2: Innovation**

### *Presentations*

Ofgem presented its current thinking in the area of innovation and presented some high level strawmen options for how it could be stimulated.

The two external presentations for this session looked at:

- Innovation in action: Smart grid- smart meter – smart home interactions.
- Ideas on how to regulate to encourage more energy network related innovation.

The presentations are available on our website at:

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=35&refer=Networks/rpix20/publications/Presentations>

### *Summary of discussions*

A presenter highlighted that there is lots of innovation going on in the energy sector, but we need regulation to help it be deployed and used effectively. Several issues discussed were:

- Whether Ofgem should re-consider the relationship and roles of networks and energy suppliers in order to effectively exploit new technologies such as Smart Meters. This was seen as a barrier under the current regulatory regime.
- Should a new role be created in the regulatory framework for Energy Service Companies (ESCOs)? For example, enabling ESCOs to trial on networks.

Another presenter highlighted several reasons as to why R&D expenditure and activity has reduced including:

- Greater risk aversion amongst firms.
- Re-orientation of innovative efforts toward those that have concrete customer benefits.
- Uncertainty about future changes in government or regulatory policy.

One delegate noted that “business as usual” would be a disaster. The changes needed would be delivered at an enormous cost. This is why innovation is so important.

However, several individuals questioned whether there is actually an innovation deficit. For example, is there evidence that innovation is lagging behind that in other countries?

One member commented that the UK is at the forefront of innovative technology, with ideas developed here copied elsewhere. However, the roll out of new ideas in other countries has been much quicker than in the UK as other countries have ‘picked winners’. This has also created positive momentum in these countries, which has further encouraged uptake of innovative technologies.

It was recognised that energy related innovation is not just an issue concerning Ofgem and network companies. Several participants commented that enabling trialling of outside companies’ products on networks was essential and was a key barrier to innovation. Another noted that Ofgem needs to consider the types of innovative funding that are not incentivised within the current regime and cannot be obtained from other sources. It was also suggested that separate schemes could be introduced to encourage different players, such as NGOs and the Research Council, to trial on networks. An individual, however, cautioned that specific schemes could crowd out what would happen anyway.

One member argued that the RPI-X framework does encourage innovation, however, currently the incentives operate in too narrow a domain – largely opex. It was argued

that if Ofgem looked to widen the domain, the RPI-X regime could facilitate significant innovation.

One delegate commented that if the primary goal is to meet sustainable targets cheaply, then the purchase of EU emission allowances (not to use) would be the most cost efficient policy. It was argued that policy targets act as a constraint on achieving cost effectiveness. However, several delegates noted that purchasing emissions allowances was not a feasible policy given that the system does not offer a credible carbon price in the future.

Several delegates identified a potential problem of split objectives, in particular between consumers and the environment. Some saw Ofgem's aim to be to minimise costs to consumers subject to environmental constraints which are determined by Government. Others thought it essential that Ofgem focused on the transition to a low carbon economy.

One member thought that a longer price control (may be 20 years) should be considered in order to encourage innovation. While this would increase risk, they considered that such a degree of risk was not uncommon in other industries.

Linking back to earlier discussions from the first session on encouraging investment, it was reiterated by several members that the regulatory regime needs to be adapted to reward networks for experimentation whether or not it ultimately proves to be a success.

### **Session 3: Encouraging engagement**

#### *Presentations*

Ofgem presented its current thinking on the role of consumers and presented several strawmen options including constructive engagement and negotiated settlements.

The two external presentations for this session looked at:

- An airline perspective on constructive engagement.
- The case for introducing constructive engagement for TPCR5

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#### *Summary of discussions*

One presenter outlined several options for consumer engagement. All of them had potential benefits, however, constructive engagement was argued to be the most promising. While constructive engagement was not without difficulties in airports, agreement was reached and lessons have been learnt.

Some of the main lessons concerning constructive engagement in the context of airports were identified:

- A clear process for engagement is required.

- All parties need to be privy to the same information in a timely fashion.
- The process should be designed such that customers get a price for a specific project(s), including specification, before a decision is made. If users do not know exactly what they get from new investment (service, capacity, price) they cannot get involved in the process effectively.
- One participant noted that constructive engagement could be enhanced to bring competition into the process for certain projects. For example, a specific project like a new baggage claim belt, could be put out to tender to give a range of options/costs for parties to choose from.
- Involvement of the regulator as a facilitator is crucial.

This sparked debate amongst participants as to the appropriateness of constructive engagement for electricity transmission.

Some differences were suggested between transmission and airports including:

- Unlike airports, there are a small number of large players.
- Arguably there is not much to engage on in transmission other than price – big decisions are already made by the government. However, others challenged this view, and noted that even if some decisions were made – as in the water sector - there was still scope for discussion on how to implement government policy.
- Airlines face competition downstream from other transport modes and therefore are more concerned about the charges they pay. The circumstances of generators are different.

Several other members raised the problem that charging poses for constructive engagement. The charging structure in electricity transmission means that domestic consumers would pick up most of the bill. As such, it may not be sufficient to rely on constructive engagement from generators.

One participant noted that for constructive engagement to be beneficial, it is important that parties are not arguing over 'zero sum' areas such as the WACC, but on issues like quality and location of investment.

Several delegates highlighted that regardless of the difficulties that engaging with consumers may pose, it has to be done. With prices set to go up in the future, it will be essential that the public understand what decisions are being made and how it affects them. Indeed, as far as possible they should be able to participate in making that decision.

It was also noted that constructive engagement can provide benefits including:

- Providing more information on preferences by:
  - Revealing (including to the regulator) what the 'sticking points' are, and what the important issues are for various parties.
  - Revealing unexpected issues and enabling unexpected outcomes.

- Organising the regulatory process to focus on contentious issues and move away from areas parties can agree on.

The difference between using a constructive engagement type process to get a decision made and using it to get better information, or to consult in a different way was highlighted in discussions.

Getting future consumers involved was seen as a challenge by several delegates, as was making sure consumer groups are representative of final consumers. In both cases a role for Ofgem was seen as important.

One delegate highlighted the lessons from the Transmission Access Review (TAR) in trying to get consumers involved. They noted that getting a consumer body involved in the process was difficult and, in the case of TAR, did not happen.

One delegate challenged the idea of constructive engagement in terms of what benefits it would add over and above what Ofgem does now. They argued that the key issue may be to introduce a cheaper and easier way, than judicial review, for consumers to challenge Ofgem's decision. However, several delegates highlighted the difficulties of introducing an appeals process. For example, designing a framework to prevent over use of the process.

Another delegate commented that introducing constructive engagement and other schemes could be detrimental, since the more rights to consultation/negotiation/veto there are, the harder it may be to achieve the fundamental change that the government might think is needed.