

RPI-X@20

A view from the countryside

Submitted by 'Bury not Blight', Suffolk

*Response to Ofgem's consultation RPI-X@20 'Emerging Thinking' and 'Embedded
Financiability'*

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Overview

RPI-X@20 is Ofgem's detailed review of energy network regulation. Ofgem believes a new framework is required to "enable the energy companies to meet the challenges and opportunities of delivering a sustainable, low carbon energy sector while continuing to facilitate competition in energy supply."

It is not the intention of this submission to respond to all the questions posed in the RPI-X@20 documents *Emerging Thinking* and *Embedded Financiability*. It would be difficult to fault the broader objectives and level of consideration given to achieving them.

Rather, the aim of this submission is to present a case for incorporating a method of recognising the importance of visual amenity in any new framework that is developed.

Ofgem has already acknowledged the significance of this subject in earlier price reviews and by sponsoring a report on visual amenity¹. As this report notes, in recent years the planning process has seldom provided the outcomes desired by local and regional authorities, nor by the populations affected. The objections raised by large numbers of people in response to recent and current transmission applications have received widespread publicity. These views have been articulated in many forms, including submissions provided by an alliance of countryside organisations². Furthermore, the legal requirement to protect the environment is enshrined in numerous Acts³. The relative importance of visual amenity is therefore well established and should be acknowledged in the formation of the next review.

The way in which the price control framework for transmission is drawn up has a critical impact on the ability of transmission network suppliers to respond to fresh thinking and to develop innovative technology. With so many changes forecast in the energy sector it is an ideal opportunity to embrace the opportunities presented and work with the public and network providers alike to facilitate a fresh, imaginative approach.

Executive summary

1. Ofgem has in recent years acknowledged the significance of the value of visual amenity and its role in influencing change. However, recommendations for additional research have not been adopted and the current consultation documents make no provision for this value; this omission should therefore be rectified.
2. In *Emerging Thinking* Ofgem advocates an outcomes-based approach. One of these outcomes should be the review and revision of transmission systems in the UK, looking beyond 'strengthening the network' to eventual restructuring.
3. Innovation can be used to improve efficiency and preserve the value of visual amenity. Revised controls should stimulate both technological and financial innovation.
4. Promoting competition in selected projects would improve the prospect of achieving desired outcomes.
5. Overall, regulation of transmission should allow for greater flexibility over a longer period than the existing five-year control period.
6. The concept of 'pay now, enjoy later' should not be discounted.

¹Efttec: *The Overview of Valuation of Visual Impacts on Transmission Price Control Review (TCPR) 2006*

²CPRE: *A Countryside Friendly Smart Grid, March 2009*

³GEMA has duties relating to the environment and conservation under the *Electricity Act 1989*, the *National Parks and Access to the Countryside Act 1949 (Amended)* and the *National Parks Act 2000*, among others.

Emerging Thinking

Chapter 1: Question 1 - desired outcomes and missed opportunities

While setting a range of highly laudable desired outcomes, *Emerging Thinking* takes no account of the framework's impact on the longer term potential for more innovative and socially acceptable forms of transmission - such as an offshore electricity grid or underground cabling - nor of its impact on short term decisions relating to protecting the value of visual amenity.

The current proposals do not appear to take account of the Ofgem-sponsored eftec study into the *Valuation of Visual Impact* (June 2006). Findings from this study that are significant to the RPI-X@20 consultation relate to:

- the assessment of reduced valuations for properties close to pylons
- the case for compensation for those whose property rights are adversely affected
- the criteria for establishing the cost benefit of pylon removal (or avoidance)
- the need for additional information in order to assess whether a transmission project is justified by a social cost-benefit appraisal
- the response of the general population to the notion of paying a varying amount for the benefit of visual amenity enhancement (or preservation).

In all of these areas the report recorded either the negative impact of pylons or called for additional research. There is no evidence from GEMA minutes for that year that the report or the visual amenity topic received recognition and although 'absence of evidence is not evidence of absence' there appears to have been little interest in taking up the suggestions for further research. However, visual amenity is given limited consideration in TPCR4 as detailed below.

There are thus strong grounds to recommend additional research along the lines advocated by the eftec study before reaching conclusions to be used in TPCR5.

One subject examined in the report which requires further scrutiny at this point is 'willingness to pay'. A perceived reluctance by people not directly affected by 'disamenity' to pay extra (based in this case on limited older data) is not an argument for discounting public contribution in the form of increased charges. Our tax system is based on the principle that delegated authority decides exactly which minorities should receive contributions from the majority for the 'greater good'. Referenda are not required to decide that highways infrastructure should receive £2 less per capita or the NHS £5 more. Unlike taxation, individuals have the theoretical right to 'opt out' of the utilities regime but for the vast majority this is not a practical option.

The value of visual amenity

Visual amenity has no less status in the countryside than in the urban environment. Rather it is generally held that a 'function' of the countryside is to provide enhanced visual amenity for the benefit of the majority; visual amenity is in this sense the 'visual environment'. Yet funding from the public at large is available to preserve the visual amenity of urban public places, such as through attractive paving, collection of litter or as part of major urban regeneration projects.

Erection of lines of pylons creates gross 'littering' and 'pollution' of the countryside with commensurate damage to visual amenity. It is therefore reasonable to suggest that there is a case for ensuring the financiability of such 'pollution removal' across the country.

The quality of visual amenity does not necessarily correlate with the quality or diversity of natural habitats. However, many habitats that we value for their unique or exceptional flora and fauna also have an intrinsic beauty or 'visual amenity value'. The principle of paying to preserve this value is well established. At a time when farmers are paid to conserve and improve the natural environment under their stewardship, such as through the Environmental Stewardship Scheme (at a cost of almost £3 billion over six years), it is perverse to destroy the amenity value of the British landscape through the erection of more pylons.

Noise pollution and perceived health risks are also anti-social products of high voltage transmission cables, albeit at a localised level.

This is not to argue that RPI-X should determine one form of transmission over another but to highlight the need to create a framework in which it is possible to take bold steps to conserve and enhance the landscape for future generations under the auspices of a sympathetic and engaged regulator.

True recognition

In its last Transmission Price Control Review Ofgem recognised the value of visual amenity:

11.19. We are keen to ensure that the value to consumers of visual amenity is recognised and considered objectively in determining how the networks are developed over time.

However, it then noted:

...for transmission we need a different approach. There is much less transmission in sensitive areas, but the visual impact is much greater per km because of the size of transmission pylons. But the costs of replacing a km of transmission line with underground cable are also significantly higher. To illustrate, based on illustrative cost estimates provided by the transmission companies, a single project to replace a relatively small stretch of overhead transmission lines with underground cable could quite feasibly cost more than the entire five-year budget for the DPCR scheme across all fourteen distribution companies.

The need for additional funding for underground lines should be treated on a 'case-by-case' basis, it stated.

The minimal impact of transmission costs has also been accepted Ofgem and these costs have been described as "marginal" (minutes of GEMA meeting June 2006). Even if transmission capex is doubled (a worst case scenario for the whole project value of current potential underground cabling) the cost remains marginal. The visual amenity cost-benefit is thus significant.

Irrespective of arguments concerning the true cost of undergrounding, rather than concluding that the cost-benefit ratio makes alternative forms of transmission uneconomic, it would have been equally logical to argue that financial incentive for innovation is required in order to ensure a cut in - for example - the cost of underground cabling.

In this sense, rewarding efficiency – one of Ofgem's stated 'outcomes' – is not just about rewarding the least expensive option, it can also be about rewarding effective solutions that have the greatest long term benefit. Within this context innovation is not only about technological advance but also involves innovation in managing regulatory finance.

Chapter 1: Question 2 - Is a new framework needed to achieve these outcomes?

It is clear from the current position adopted by transmission companies in the UK that they regard the regulatory framework as an impediment to full examination of alternative methods of transmission.

During a recent consultation National Grid was asked:

“Would National Grid support a change to the regulatory framework to allow longer amortisation periods, which in turn would make funding undergrounding more financially acceptable. Are they lobbying for it now?”

National Grid replied:

When Ofgem sets National Grid’s price control they generally allow recovery of investment costs at a rate which amortises investments over periods that are consistent with typical transmission asset lives. The manner in which such costs are levied on individual transmission customers via the charging methodology is developed by National Grid and approved by Ofgem and also uses amortisation factors consistent with typical asset lives: 40 years in the typical asset life of a 400kV cable.

National Grid believes that increasing amortisation periods such that the charges resulting from the extra costs of choosing underground cables over overhead lines are mitigated to major extent is unlikely to be justifiable. If we assume cables are approximately 15 times more expensive than overhead lines, then Ofgem would need to increase cable investment amortisation periods to around 15 times the normal life of these assets. This would mean that there is a high probability that future customers would face ongoing charges for assets that they are no longer using. Such an outcome would be inequitable to those customers and contrary to both National Grid’s and Ofgem’s duties.

As Ofgem points out in RPI-X@20, methods of shortening asset lives through higher initial payment mechanisms can be achieved. Indeed, a variety of arrangements have been used to meet the needs of the network suppliers. An amortisation period of 600 years, as implied in the answer above, is unnecessarily pessimistic, to say the least. Further comments on this issue are included in the *Embedded Financiability* section below.

Chapter 2: Questions 1 - 3 - Delivery of desired outcomes

The outcomes mentioned above require innovation. There is evidence to suggest⁴ that innovation overseas may resolve problems regarded as impediments by transmission suppliers in the UK. However, from recent consultations it appears that UK operators are unwilling to invest in ‘home grown’ innovation.

Commercial innovation is invariably a response to financial incentives. Such innovation is often the result of applied research. The present system only rewards technological innovation that enables costs to be minimised when applied to existing systems ie making current methods of transmission cheaper. There is little incentive for more fundamental applied research and commercial development in UK transmission technology. As the RPI-X@20 working group on innovation – *Section 6 - Intellectual Capacity in Innovation* – shows, there has also been a decline in the number of new engineers coming forward to do such work. There is thus a pressing need to stimulate all stages of the research and development chain in the UK and to encourage collaboration.

⁴ Europacable (European Federation of National Cable Manufacturers Associations) presentation June 2009. Notable projects in other parts of the World include the Middletown-Norwalk high voltage line in the USA and the Victorian Desalination supply in Australia.

While recognising that Ofgem already has the IFI programme, enabling DNOs to recoup the cost of qualifying technical research, it would seem reasonable to extend this to aspects of transmission. At present there is the entirely unacceptable situation where important cost data supplied by a transmission operator directly contradicts equivalent costings by the body⁵ representing a main supplier of materials to the operator. Validation through independently audited research is essential, especially when such data is used in public consultations.

Chapter 3 - Question 1 - Improving engagement

Ofgem is already engaged with consumers and with other stakeholders. However, in order to recognise that people with an interest in visual amenity are also customers and not merely a “special interest group” it would be beneficial for Ofgem to become involved in longer term engagement with a broader range of representatives.

Chapter 4 Question 8 - Competition

Competition for discrete projects should be implemented in the area of transmission. There are two strong reasons for this:

1. After generation, these projects are the most capital-intensive items in the supply chain and thus there is the potential for the greatest savings.
2. In a monopoly the supplier controls the information pertaining to its activities as well as the right to carry out all works. Protestations that it will be ‘transparent’ in all its discussions may well be genuine but there is inevitably an inbuilt culture of using information in a way that furthers its own ends. Taking a different view may even be contrary to shareholder interests. The problem is compounded by the fact that while operating as utility monopolies transmission companies are private entities and therefore not subject to the Freedom of Information Act. Competition can be effective in introducing fresh thinking and in challenging the ‘status quo’. The regulation and organization of competition is often key to getting the best out of the process and should be considered in the formulation of RPI-X.

Embedded Financiability

Chapter 3: Question 1 - Overview of how financing is considered

With regard to 3.5 (re-opening controls) at a time of such extensive change in the structure of the energy supply sector, there is merit in enabling a more flexible approach to the setting of controls for network enhancement. It may even be necessary to re-work controls across longer periods than the existing five years to facilitate, for example, deferment of projects until new equipment becomes available which would enable alternative methods of transmission.

In this context Transmission Increased Incentives (TII) would also have a more flexible application, enabling the planning and preparation for intermediate structures that would allow more innovative solutions at a later date.

The practical outcome of such changes would be to assist companies in taking a longer term view

⁵ Europacable: ibid

of network requirements when planning their finances than that demonstrated in the ensg *Vision for 2020*. Such long term planning may be difficult for a short-termist financial community to understand or accept and the support of a robust regulatory system may be essential.

On the subject of depreciation it is clear that Ofgem has worked with the transmission companies to implement policies that have matched changing circumstances. Examples include the “accelerated depreciation” policy adopted in TPCR4 and the variable “smoothing adjustment” designed to generate an income that closely matches the loss of depreciation.

In the light of this practical approach it seems reasonable to propose that suitable policies can be implemented to take account of increases in the cost of certain transmission assets - notably sub-sea or underground cable - without unduly penalising consumers or bankrupting the contactor.

Chapter 4: Question 3 - Striking a balance

It is not appropriate to comment in detail on the depreciation methodology currently used (4.11) other than to suggest further examination is required to consider even greater flexibility for complex, longer term capital projects. It is also worth pointing out that there is nothing wrong with the concept of ‘pay now for longer term gain’.

Likewise, cash flow ratios (4.19) should reflect the longer term structures of transmission rather than the five-year price control period.

Chapter 5: Straw men

The general point to be made in this section is to repeat the need for flexibility, especially with regard to the investment required (5.17).