Director, Electricity Distribution
Ofgem
9 Millbank
London

10th August 2007

Dear Mr. Martin Crouch**,**

Ofgem consultation on DPCR 5

Thank you for the opportunity to respond to the invitation regarding DPCR 5 – Looking Ahead.

The areas you have highlighted in your letter dated 17th May 2007 are all important areas to be considered. ABB believe the supply chain elements have some specific challenges that have not been identified in your analysis to date. In our response (attached) we have tried to cover the salient points, although not an exhaustive list the important points have been identified.

The success of the industry to react to the challenges imposed by climate change, external security of supply concerns, European mandatory directives, government policy and regional requirements will mean future regulatory reviews will need to be a delicate balance of not only economic modelling but also technical, environmental and societal constraints.

We hope that the following submission assists in this process.

Yours Sincerely

Duncan Botting
Head of Technology & Business Development
On behalf of ABB Ltd. (UK)

Introduction

This submission is in response to Ofgem's request for consultation on DPCR 5 – Looking Ahead.

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impacts. ABB in the UK operates from more than 20 locations nationally and employs around 2,800 people. The ABB Group of companies operates in around 100 countries and employs about 109,000 people.

Working within the businesses, our 6000 scientists, 70 university collaborations, and 9 research centres are focused on meeting the world's energy challenges, ensuring that the most energy efficient products, solutions and services are available to our customers.

In response to the consultation document we make the following general observations:

1. The context of this review must be taken in relation to current world market conditions and global product supply chain challenges
2. Our response is based on our experience to-date as a supplier of products, solutions and services operating in a regulatory environment both here in the UK and various markets overseas
3. Expectation of the Energy White Paper to deliver some level of certainty on Energy Policy in general and Networks specifically has given way to another round of consultations and analysis. This has delayed spend on several key areas with the inherent uncertainty while policy is still unclear.
4. It continues to be unclear how a market can design the coherent technical architecture required for a nationally integrated power system. Expectation within the industry of bodies such as the Electricity Network Strategy Group (ENSG) being able to inform government and regulator of appropriate frameworks for the liberalized market to deliver against is still to be proven but was widely assumed to assist this role.
5. The industry in general and, ABB specifically, provide a substantial amount of resource to work on cross industry working groups at all levels to assist in development of national policy, standards and regulation. It is important that the government and regulator provide similar commitments of resource in both cash and effort terms to ensure the good will of the private sector is maintained and projects in the national interest are taken forward.
6. As a technology leader we are often challenged with the introduction of existing technology that is tried and tested in other markets but is restricted in deployment by **perceived** regulatory, environmental or

economic considerations in this country. This has resulted in lost opportunities in terms of key indicators such as CML, CI, etc.

7. Following on from the previous point, new and innovative technology therefore has major hurdles to overcome when considered purely against the risk and reward offered in previous regulatory structures. This has been clearly assisted by the current IFI and RPZ approach in the last review (see next point)
8. Innovation that has been sadly lacking in previous price reviews has had a major revival in the last price review (DPCR 4) and has been seen to deliver major projects to tackle the challenges outlined in the consultation – we applaud this and based on its success suggest an extension to these schemes to allow greater capacity.
9. Since the previous price review the raw materials for the manufacture of many of the products used by utilities have undergone major price increases due global demand significantly outstripping supply.
10. Increased activity in response to ageing infrastructures in the developed world and global climate change around the world has led to pressure on the supply chain for some key elements of utility infrastructure. This, in turn (compounded by point 9), has extended lead times on many of these key elements.
11. Resource constraints are clearly becoming an issue as ramping of capex spend is significantly increased on previous reviews
12. As more extension of design life-cycle times are hit due to ageing infrastructure being extended, more emphasis should be placed on allowance for increased costs of maintenance of these items and the application of new technology to assist in this. Whole-life costing should be considered in this regard to establish the most appropriate maintain / replacement agenda.
13. Skills to assess and deploy the new and innovative technologies as well as those to maintain ageing assets are increasingly coming under pressure due the demographics of the industry currently and the supply of new talent into it going forward. Industry is responding to this challenge but both the response and lead times cover greater than the current 5 year regulatory cycle. It has been recognised that industry needs to work closely with government to develop appropriate resource feed from school leavers, the results of this are seen in eight to ten years. Further, development of appropriate training and continuous professional development once in employment are key actions in this area that require up-front investment and lead times that cover more than one regulatory cycle.
14. Procurement strategies that were developed for price cutting are incompatible with a buoyant global market and major infrastructure renewal. Both government and regulator should consider how best to work with the entire supply chain to ensure appropriate action is taken to mitigate these risks.

With the observations identified above in mind the following responses to the questions posed by Martin Crouch are given below.

Response to questions:

Have we captured the key strategic issues?

Not all.

We believe the concentration on the economic business model for the DNO is missing major supply chain challenges. See above points.

The importance of interoperability and integration on a national scale will be ever more important going forward. E.g The concept that large residential micro-generation (a mix of micro-chp, wind, solar and possibly fuel-cells in the future) may interact with regional community based generation and central generation, via the distribution and transmission network, to reduce output of fossil fuel plant in favour of renewable, can only be realised if generation, T & D networks and demand side participation (the so called “intelligent home”) are configured and operate in real-time as a total system architecture. The ENSG could provide a vital link in this respect.

Environmental issues will, in the future, play an increasingly major role in the weighting that end customers will demand with respect to best value for the customer. The cost of extended public debate and delay to implementation of major projects will also need to be considered in the equation when considering what constitutes best value for the end customer. Technology is currently available to mitigate many of the risks identified by concerned groups, such as energy efficient or less visually impacting solutions, while increased R,D&D effort could offer other options for the future. It is imperative that efficient use is made of current technology and investment is made in technology and applications to deliver the future mandated goals by the European Union and National Governments.

What changes should be considered to the role and responsibilities/obligations of distribution businesses?

As new market opportunities are implied by the movement to Active Networks it is highly likely that new market participants will enter an already complex trading situation. E.g. Aggregators for residential micro-generation, Service based rather than commodity based operators, etc. In order to facilitate these sorts of market evolutions the five year economic regulatory process may fail to make allowance for technical functionality needed now to allow these to flourish in the future.

How can we build on or make best use of the range of developments and initiatives set out in paragraph 10 above?

Unfortunately individual companies, which are regional, can not have a major impact on numbers of school leavers entering engineering. In order to deliver this much needed increase national institutions, government and regulator have the opportunity

to work with business to address these issues. It is no longer acceptable for the government and regulator to say this is purely a business problem. The industry is aware of its role in promoting Power Engineering via routes such as the Power Academy, Research Academy and Power Sector Skills Strategy Group. It requires recognition and funding to achieve the growth goals identified.

How can we simplify and refocus the incentive package to address future requirements?

The incentives need to be considered not just from an economic perspective, there is a need to consider the technical, environmental and societal impacts in a coordinated manner. A more holistic approach both in supply chain terms as well as network infrastructure could yield major gains to both customer and business alike. A possible option would be to use the one-off incentives indicated in para. 14 of your letter to promote better use of the supply chain management issues, technical engagement, etc.

Do you agree with the suggested process and timetable set out, both for work in 2007 and for the review? What should we do differently?

The customer survey could be widened to canvas the views of different stakeholders in the supply chain, in this way a more inclusive picture would be captured. Further, it is difficult for customers to know what is possible or achievable based only on what has gone before. The vision of the “SmartGrid” of the future is not yet well understood from the customer perspective so it is unlikely they will know what new services could be on offer from a more intelligent Grid.

The impact of European mandatory targets and the **urgency** this implies for the resolution of some major technical issues from central, regional and distributed generation through transmission and distribution networks to demand side participation is not evident from the proposed schedule. If 2020 targets are to be achieved activity will have to be substantially increased and now.