



Electricity Distribution Price Control Review Second Consultation 171/03

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 120,000 people.

After reviewing the whole document ABB would like to make the following comments on several of the questions raised within the document:

Q1 What would be the impact of each of the following?

- **distributed generation incentive;**
- **IFI; and**
- **RPZ mechanisms**

on the volume (or capacity) of distributed generation connecting to the distribution networks?

ABB believes that a clear and attractive financial distributed generation incentive is the most effective long-term market mechanism to signal the requirement for the increased application of distributed generation on the UK distribution network.

However due to the very low existing level of electrical engineering related research and development activity in the UK and the rapid decline in collaborative development programs relating to electricity transmission and distribution, additional financial incentives are required in the form of the IFI and RPZ to 'kick start' development programs.

Without such additional financial incentives in the form of IFI and RPZ, piece meal and ineffective development programs, will result, in poorly coordinated,



uneconomical distributed generator connections. This will stifle attempts to economically achieve the government 2010 targets.

Q2 To what extent does the connection of distributed generation require new R&D by the DNOs?

Many of the technologies required to connect distributed generation in the UK are in existence elsewhere in the world or currently under development to address similar issues in the global engineering marketplace. ABB is of the opinion that development work funded by the IFI and carried out by UK universities and research organizations should be focused on the UK specific application requirements of this existing and proposed technology and then working with the manufacturer supplier base, deploy these modified technologies via coordinating organisations, funded within the RPZ's. This will result in the most efficient use of funding available and avoid potential duplication of development effort.

Q3 What would be the impact of IFI and RPZs on research and development and network innovation? What benefits would these provide to generators and other connected consumers in comparison to the associated costs that would be incurred?

As previously outlined in Question 1 the severe decline in the electrical engineering research and development base in the UK has result in a limited capacity to respond to existing market incentives. The IFI coupled with the RPZs will overcome this issue by producing very positive stimulation to prime the research and development process. ABB is of the opinion that without this immediate financial incentive the capacity to engage with manufacturers and suppliers and deliver economical and cost effective distributed generation connections solutions will be severely restricted.



Q4 How would you expect new technological developments to reduce the £/kW cost of connecting distributed generation over that period?

ABB has demonstrated to OFGEM and the DTI, a fault level management technology, that if applied correctly in the UK and deployed within a managed RPZ network for DNO operational and application experience, is estimated to deliver connection cost savings of up to 50% where network reinforcement is required due to fault level considerations.

If traditional plant and systems are applied to existing and future networks to address the technical challenges presented by renewable and embedded generation, it is the view of ABB that unnecessary costs will be passed on to the generators and electricity customers.