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## **RIIO-ED1: Electricity Distribution Networks Operators' (DNOs) business plans – publication, views and next steps**

### **Written response on behalf of Newcastle Institute for Research on Sustainability (NIREs)**

#### **About us**

The Newcastle Institute for Research on Sustainability (NIREs), based within Newcastle University, was established in 2010 to coordinate interdisciplinary research on sustainability and to provide leadership and innovation in sustainability research and demonstration across Newcastle University and in collaboration with a range of partner organisations.

Taking an interdisciplinary approach and focusing on addressing a number of key global sustainability challenges, we build on our areas of research excellence to create practical, engaged solutions, testing these solutions through a number of demonstration projects and enhancing them through active collaboration with academia and practitioners.

I am Director of the Newcastle Institute for Research on Sustainability and hold the Chair of Electrical Power Systems in the School of Electrical and Electronic Engineering. My research focuses on the challenges associated with the widespread integration and control of distributed/renewable generation in electrical distribution networks.

#### **The Technical Review Panel**

I acted as chair of the technical panel which was convened to provide critical feedback to Northern Powergrid (NPG) during the latter stages of the development of their ED1 business plan. The remit of the panel was to provide a thorough and challenging technical review of the NPG business plan with a focus on, but not limited to, innovation.

*(continued overleaf)*



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As well as myself, the panel comprised three experienced professionals from industry with a wealth of knowledge built from working in the electrical distribution networks sector. The review process was carried out over a six month period and included document reviews, detailed written feedback and a number of face-to-face meetings between the panel and Northern Powergrid staff in order to debate issues rigorously and to explain the more complex issues effectively.

### **The Business Plan**

The panel reviewed the following areas of the business plan in detail:

- Innovation and the transition to Smarter grids
- Skills, training and recruitment
- Implications and opportunities associated with the Smart meter roll out
- Network reliability and availability
- Core investment plans
- Network reinforcement approaches
- Asset renewal plans
- Environmental and safety considerations
- Scenario implications and decision making under uncertainty

From the interactions during the review process, and as a result of reading the final published Northern Powergrid business plan, it is clear to me that the comments from the technical plan were taken seriously and that the business plan changed materially as a result of the interactions with the panel.

I feel that the business plan is ambitious, comprehensive and well justified. Noteworthy aspects in the business plan would be the commitment to incorporate solutions such as real-time thermal ratings, demand side response and more sophisticated voltage control techniques. Also, the explicit recognition that the move to more innovative ways of working will have implications for the organisation in terms of the skills it needs and the way it will need to operate is very encouraging.

The plan also provides some promising initiatives regarding how best to exploit the national smart meter roll out and modern ICT technologies for the benefit of DNO customers.

If you would like to discuss anything further please do not hesitate to contact me.

Yours sincerely



Professor Phil Taylor

Director, Newcastle Institute for Research on Sustainability  
Chair of Northern Powergrid expert panel on technical issues