



To generators, shippers, suppliers, network companies, consumers and their representatives, the sustainable development community, and other interested parties.

Promoting choice and value for all gas and electricity customers

Reference Number: 39/11
Email: Project.TransmiT@ofgem.gov.uk

Date: 22 March 2011

Dear colleague

Project TransmiT: publication of the draft academic reports on charging models and next steps

Project TransmiT is Ofgem's independent and open review of transmission charging and associated connection arrangements. The aim of TransmiT is to ensure that we have in place arrangements that facilitate the timely move to a low carbon energy sector whilst continuing to provide safe, secure, high quality network services at value for money to existing and future consumers.

Today we are publishing three¹ of the four² studies we have commissioned from academic teams on the optimal approach to transmission charging for Great Britain (GB). We are publishing these reports, which are still in draft, to provide transparency and encourage stakeholders to comment on the key issues ahead of their finalisation.

We are also publishing two short reviews of the draft reports provided by academic advisors that we have separately commissioned.

It is important to emphasise that the academic work is providing an important input to our thinking, but that these independent views are not a constraint on our thinking or on determining the outcome of our review process. We are committed to a thoughtful and objective assessment of the current electricity transmission charging arrangements. In doing so, we are committed to driving our review work forward in an inclusive way, actively drawing on the views of all stakeholders.

We welcome views on the draft papers. Please submit any written comments to Project.Transmit@ofgem.gov.uk, by **Monday 11 April 2011**. All responses received will be published on our web forum.

Scope of the academic reports

As noted in our open letter in January 2011³, we asked three academic teams to provide us with their independent views on the optimal approach to transmission charging for GB, with

¹ The three teams are: (i) Professor Jim Macdonald, Professor Graham Ault, Dr Keith Bell and Dr Ivana Kockar of Strathclyde University and Professor Richard Green of Birmingham University; (ii) Professor David Newbery of Cambridge University; and (iii) Professor Benjamin Hobbs (Johns Hopkins University), Professor Frank Wolak (Stanford University), Dr James Bushnell (Iowa State University) and Professor Ross Baldick (University of Texas).

² We have also separately commissioned Professor Catherine Mitchell of Exeter University.

³ http://www.ofgem.gov.uk/Networks/Trans/PT/Documents1/110125_TransmiT_Scope_Letter_Final.pdf

a particular focus on the electricity transmission charging regime. We expect to publish the final versions of the academic reports in late April/early May 2011.

We have separately commissioned another academic adviser to provide input to our thinking. Professor Catherine Mitchell, of Exeter University, is leading a team to assess whether transmission charging arrangements should be a vehicle to promote low carbon generation and, if so, how.⁴ This work is expected to be published in draft form in early April 2011 for comment, with a final version to be published in conjunction with the other academic reports in late April/early May 2011.

Professor Paul Ekins, of University College London, has separately provided a peer review of the three academic reports for publication. This work will be expanded to include the report from Exeter University when it is published in draft form in early April. A final version of Professor Ekins peer review work will be published shortly thereafter and incorporated in the final reports of the four academic teams.

We held a roundtable session on Friday 4 March with the three academic teams and stakeholders who had expressed an interest in attending the session. The purpose of the session was to enable the academics to discuss and debate the key ideas raised in their draft reports, and for stakeholders to feed into the finalisation of the academics' work. The annex to this letter provides a high-level summary of the views expressed at the roundtable event⁵.

For practical purposes, attendance at the roundtable was limited. To provide transparency to the discussion process we agreed to publish the draft academic reports and the results of the peer review work on our website. These documents are now available through the following link: <http://www.ofgem.gov.uk/Networks/Trans/PT/WF/Pages/WebForum.aspx>

Following the roundtable discussion and receipt of views from other parties, we expect to publish the final reports of the four academic teams, incorporating the comments received, in late April/early May 2011.

Taking forward our thinking on charging

These academic reports are only one input to our thinking on the appropriate way forward on electricity transmission charging. We are considering the full range of options. From the work by our academic advisors, dialogue with stakeholders and responses to our call for evidence⁶, interactions with our work on network constraints, and participation in discussions in Europe, a spectrum of options is emerging. The range of options reflects the divergent views on the importance of cost reflectivity and about the ability of the current arrangements to help deliver a balanced, sustainable and diverse generation mix.

The emerging options range from the adoption of a non-locational transmission charging model that spreads cost across all users through a uniform charge (a "postalised" approach), through improving the current long-term locational signal in transmission asset charging (e.g. to reflect better the usage pattern of generators), to an approach which would seek to improve short-term locational signals in transmission costs (either to supplement or to replace the long-term locational signals).

⁴ Professor Mitchell was also commissioned to provide a short critique of the three draft academic reports for publication.

⁵ To be clear, it is not a summary of the key discussion points and ideas raised during the Q&A and Panel sessions.

⁶ <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Networks/Trans/PT>

The finalised views of all four academic teams will inform our thinking on the full range of emerging options. We expect to consult on more detailed options in light of this further work and responses to the academic reports.

Yours sincerely

A handwritten signature in black ink, appearing to read 'H Nixon', is centered on a light-colored rectangular background.

Hannah Nixon
Senior Partner, Smarter Grids and Governance

Annex 1: Roundtable event

Purpose of the day

The purpose of the day was to complete a peer review of the three draft reports that our teams of academics have produced and elicit stakeholder views. These reports each put forward a suggested optimum approach for transmission charging for GB.

The intention of the day was to focus on the draft reports produced by the three academic teams rather than other potential options for charging or Ofgem's wider work on TransmiT.

The event was structured in two parts. The morning session involved presentations from the academic teams to help clarify key aspects of their proposals and to provide an opportunity for stakeholders to ask questions of each of the teams. The afternoon session then considered the broader application of the academics' work and encouraged discussion around three key overarching themes:

- **Theme 1: Alignment with principles** – alignment between the objective of the review and the principles adopted by the academic teams and between such principles and their proposed charging models
- **Theme 2: Balance in the key areas of trade-off** – such as between economic efficiency and facilitation of carbon reduction, between long-run and short-run efficiency, between self-contained optimal model and need for closer integration cross border
- **Theme 3: Practicalities of transitioning** – including the likely costs and benefits of transitioning to a new model, and other factors that need to be considered for GB application

There was a wide ranging discussion in each of the above areas. The sections below provide a high level description of the range of questions and issues raised by attendants in each of the areas.

Theme 1: Alignment with principles

- Charging should signal the cost and benefit incurred in transmission. Clarity of such information, particularly on the cost implications of market participants' siting and/or operation decisions, would enable them to make commercial decisions that would facilitate overall efficiency.
- There is a need to identify all levers which can be used to deliver the desired outcome of low carbon and efficient electricity supply, and to clarify the role of transmission charging with these levers.
- Ideally, coordinated overall planning decisions are required to deliver a timely and efficient investment solution that will satisfy security of supply and minimise total cost of transmission assets and the constraint of generation.
- Charging arrangements that deliver stable and predictable charging signals will reduce the risks associated with investment decisions in generation and load.
- A major change in transmission charging could introduce uncertainty into the market and might deter investment in renewable and other generation and associated transmission. Such delay in investment could jeopardise the achievement of the 2020 targets.
- Questions were raised on the robustness of the academic principles to operate in a European context and within the proposed European Network Code structure.

Theme 2: Balance in the key areas of trade-off

- Given the urgency and the large-scale nature of investments in renewables that are in prospect, and associated transmission construction, it would be best to get these in place without dramatic alteration to the present system of transmission charging, and then think about optimising the system.
- Any changes made to generation charging will necessitate a review of demand side charging to avoid distortions arising.
- There seems to be some focus on investment and constraints costs, while the treatment of transmission losses also need to be considered, especially if the cost is material.
- Further work is required to identify the magnitude of impact of the change to any new charging model for categories of users (including embedded generation, particularly those small-scale, community based schemes) under each academic model. For example, in applying deep connection, consideration needs to be given to how to deal with large transmission investment triggered by smaller generation projects.
- There was discussion about the transmission investment paradigm (eg whether it "leads", or "is led by" generation investment), the treatment of the associated costs in the transmission charges (eg whether they are recovered with or without locational differentiation, especially if there is already a short-run locational signal), and the potential impact on generation behaviour.

Theme 3: Practicalities of transitioning

- How long would each model take to implement, and how could a hiatus in investment through the transition period be avoided?
- Because of the potential for significant change it is beneficial to have a single transition to minimise complexity.
- It would be useful to have a detailed description of the practical experience of markets where the LMP model has been introduced, particularly the impact on areas of a network where wind is not adequately integrated with the rest of the network.
- A large proportion of the cost of transition is not simply purchasing computer models, which could be reduced by using software developed for elsewhere, but also includes the costs populating these models with data and testing.
- There is some support for keeping the stability for incumbent users, while new users can be exposed to revised arrangements if more efficient.
- The EU 'target' proposal with which GB would be expected to integrate was based on zonal pricing. Do any of the academic models provide a robust solution that adequately transitions to a European target model, or are there other transitional steps that can be usefully adopted?