Electricity Transmission Charges

Key points

- Charging cost reflectively is a licence condition and locational based charging is the best way of achieving this.
- Scottish customers are £100million a year better off compared to consumers in England and Wales under the current charging arrangement.
- National Grid's transmission charges do not discriminate against renewables and changes being made to the market framework will further facilitate investment.

Introduction

As Great Britain System Operator (GBSO), National Grid levies three main transmission charges:

- Transmission Network Use of System (TNUoS) – to recover costs of installing and maintaining the infrastructure assets.
- Balancing Services Use of System (BSUoS) – to recover costs of operating the system.
- Connection charges – to recover costs of particular connection assets.

The above charges may be applied to generators, suppliers, distribution network operators, directly connected customers and Interconnectors.

National Grid is required to:

- Discharge our duties of building, operating and maintaining the transmission system in an economic and efficient manner under the Electricity Act.
- Charge in accordance with charging methodologies that are approved by Ofgem.
- Keep the charging methodologies under review and bring forward modifications (for Ofgem decision) which
  1. Facilitate competition in generation and supply
  2. Reflect transmission costs as far as is reasonably possible
  3. Reflect developments to transmission's business.

The revenue National Grid collects through its charges is controlled by the allowed revenue that Ofgem sets, under five-year price controls. The actual charges passed on to the market participants are set annually by applying a charging methodology which is approved by Ofgem. Changes to the Charging Methodology can only be made following consultation with market participants and must improve cost reflectivity and promote competition.

Locational charging

The level of use of system charges in Great Britain is determined on a cost reflective basis. This means that parties that are seeking to use the transmission system bear their appropriate share of the costs that they impose on the transmission network.

The methodology divides the country into zones where different generation and demand tariffs apply for the TNUoS charges. Due to most demand being in the south and generation in the north of GB, demand tariffs are low in the north and higher in the south; while generation tariffs are higher in the north and lower in the south.

This approach provides a locational signal that helps to ensure the long-term economic efficiency of the network. It provides market participants with incentives to guide investment in balancing the benefits of being closer to the demand areas against the associated costs of building plant closer to those areas.

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Charging and renewables connections

It is sometimes suggested that National Grid's charges are a barrier to the connection of renewable sources of energy generation. National Grid's charges are technology neutral. They do not discriminate against any particular source of generation and do not favour others.

There is a view in some quarters that the charging methodology is a barrier to renewables connection in the north, particularly in Scotland. However, charges reflect the differing costs between the different regions in GB transmission.

In the financial year 2007/2008 England and Wales transmission users contributed approximately £56million per year to Scottish transmission costs.

There is additional £45million of "Hydro Benefit" [Assistance for Areas with High Distribution Costs] as provided under the Energy Act 2004 for the social cost of owning and maintaining the Highlands/Islands distribution network that is spread across all the GB users.

Consequently, Scottish customers are around £100million better off compared to those in England and Wales under the current charging arrangements. Removing the locational charging methodology would not remove this transfer. The fact that the costs of Scottish Transmission are relatively higher means that there would still be a cross subsidy from England and Wales.

Scottish consumers have benefited from the arrangement introduced following the advent of the British Electricity Trading and Transmission Arrangement (BETTA) in 2005. BETTA was introduced to harmonise the different arrangements under which the wholesale market operated in England, Wales and Scotland

Prior to BETTA, Scottish generators paid lower charges passing the rest of the transmission costs on to Scottish consumers. This translated to higher transmission cost being borne by the Scottish customers despite the fact that they were located close to generation. Scottish consumers did not receive a compensating benefit through lower generation costs because Scottish wholesale prices were pegged to the England and Wales market price. Following BETTA, charges have re-allocated network costs and now reflect the benefit that Scottish consumers should receive from availability of surplus generation in Scotland.

Ofgem's 2008 Corporate Strategy document argues for locational charging stating:

"5.15. Making sure that electricity generators located far from energy consumers face the full costs of the transmission and distributions system they use helps to promote microgeneration and other technologies that bring generation closer to demand and smaller, local energy networks. Locational charging has a key role to play in encouraging more decentralised generation including microgeneration and smaller networks".

National Grid's role in facilitating renewables

Throughout Great Britain, National Grid is currently managing 16GW of signed connection contracts for new renewable generation projects - 7GW of which is in England and Wales and 9GW is in Scotland.

National Grid is actively developing solutions that would help facilitate getting these new renewables projects connected in a timely manner.

Reform of the existing transmission access rights

Transmission access arrangements dictate the transmission capacity available for a generator to use. As wind, in particular, does not require access all the time, National Grid is committed to developing new transmission access arrangements. These improvements will make the best use of available capacity, and facilitate the connection of additional renewable generation.

National Grid is playing a pivotal role in driving this forward with BERR and Ofgem within an industry wide discussion as part of the Transmission Access Review (TAR).

In June 2008, Ofgem published their final report on the TAR. The report welcomes changes to the existing arrangements that aim to make the best use of existing capacity while incremental system reinforcements are underway by introducing options and flexibility for generators in the way they connect to the system.

There are three broad models being considered as part of the TAR which National Grid is leading the industry in developing.

- Arrangements to allow generators to connect ahead of wider transmission system reinforcements to accommodate their required capacity.
- Short-term access arrangements to free up some of the existing capacity.
- A system of capacity auctions that would allow renewables, with the support of ROCs, to compete with fossil fuelled generation in gaining long term access rights.

National Grid has put forward modifications to several industry codes. Amendment proposals will be delivered to Ofgem for determination by the end of 2008, with the aim of implementing any reforms by April 2010.

Increased support for new generation projects

National Grid is managing applications for connections to ensure that projects that are ready to proceed with construction are not being held back by those without planning permission.

National Grid has developed this approach alongside other framework changes that include:

- Making information about projects and associated transmission works more transparent. This better supports generation projects to make decisions on where to connect.
- A new approach for the provision of financial securities to trigger the start of transmission investment in order to allow projects to connect earlier. National Grid is consulting with industry over these proposals during 2008.
- Helping to reduce the upfront costs that individual projects face. By clustering projects together, the cost of triggering network investment can be spread over several projects.

Network investment

Improvements to the access regime would allow for the more efficient use of the existing transmission system capacity, and facilitate the connection of additional renewable generation. However, achieving the very challenging targets for renewable generation will also require the delivery of significant additional transmission capacity.

National Grid is working with Ofgem and BERR to put together an investment model which will allow us to invest in the network ahead of time. National Grid is proposing strategic investment of around £3.5bn to reinforce the onshore transmission system. This will ensure that infrastructure can be put in place to meet the EU renewables target by 2020.

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