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To all CUSC Parties

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Dear Industry Colleagues,

Initial thoughts on the charging implications of CAP148, Deemed Transmission Access for Renewable Generation

Introduction

CUSC Amendment Proposal (CAP) 148, Deemed Transmission Access for Renewable Generation, was proposed by Wind Energy (Forse) Ltd. and submitted to the CUSC Amendments Panel for their consideration on 27 April 2007. The proposal has been considered by a CUSC Working Group, and is currently the subject of a consultation. The CAP148 Consultation can be found on the National Grid Industry information website[1]. The original proposal envisaged that users of Deemed Transmission Entry Capacity (DTEC) would be liable to pay Transmission Network Use of System (TNUoS) charges.

Charging Governance

At the August 2007 Transmission Charging Methodologies Forum (TCMF), National Grid presented initial thoughts on the charging implications of CAP148[2]. At this meeting National Grid agreed to produce this industry letter to aid interested parties who were considering responding to the CAP148 Consultation.

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1 http://www.nationalgrid.com/uk/Electricity/Codes/systemcode/amendments/currentamendmentproposals/

2 TCMF presentation on initial thoughts on Charging implications for Cap148: http://www.nationalgrid.com/NR/rdonlyres/3DFD600D-C03C-47D8-89E0-8A4854F37BAA/19109/TCMFCap148initialthoughtsfinal.pdf

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The governance arrangements for the Use of System Charging Methodology are covered in System Operator Standard Condition C5 of the Electricity Transmission Licence.

It should be noted that this letter is not a consultation on possible charging arrangements and National Grid has indicated that should CAP148 be accepted by the Authority, it would take forward more detailed analysis on the specific amendment approved (the Original, a Working Group Alternative or a Consultation Alternative Amendment), possibly including detailed discussion at the Charging Issues Standing Group.

Following further development of the proposals, National Grid would then discuss the detailed changes at the TCMF, and formally consult on any change proposals with interested parties in accordance with Transmission Licence Condition C5.

Since the lead-time from Authority approval to first use of DTEC is at least three years, this will provide sufficient time for the further development of the charging proposals.

Background

CAP148: Deemed Transmission Access for Renewable Generation

CAP148 was put forward on the basis that, in the proposer's opinion, it would 'prioritise connection to and use of the GB Transmission System, in accordance with the EU Renewables Directive 2001/77, Article 7'. It seeks to ensure that new eligible renewable generators are given access to the Transmission System by a fixed date and then have priority despatch once connected. This would be achieved as follows:

- New eligible renewable generators would have a new access product known as DTEC which will confer transmission access rights on the generator regardless of the commissioning or not of any associated wider system reinforcements;
- In the event of constraints on the GB Transmission System, National Grid would be obliged to constrain existing generators (including existing renewable generators) before DTEC eligible renewable generators.

The original amendment would also lead to a system of administered Interruption Payments for constraints arising from facilitating DTEC eligible renewable generators. The proposer suggested that these payments would be funded through the TNUoS charging system (rather than through the Balancing Services Use of System or BSUoS charging system) and would cover the 'associated losses' of the constrained generators.

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The working group developed a number of alternatives to the original proposal, all of which rely on the existing market mechanism to deal with constraints i.e. no priority despatch or administered interruption payments. The alternatives differ in three other areas from the original: eligibility, period of guarantee and applicability of force majeure provisions for wider works (for more information on these, please refer to the CAP148 consultation document).

TNUoS and BSUoS Charges

TNUoS tariffs are made up of two main elements: the locational signal and the residual element. The provision of cost reflective locational signals means that generators have information about the cost of providing transmission to a particular location and they are therefore able to optimise the overall costs of generation and transmission within their control e.g. weigh up the cost of moving further to the periphery of the system to gain a better load factor for a wind farm (or to be closer to the fuel source to save transport costs for conventional units) against the incremental cost of providing more transmission infrastructure. The residual element is a flat charge that is added onto all tariffs to ensure the correct revenue recovery.

The 'strength' of the locational element is related to the costs of providing new assets. Asset costs are mainly driven by the need for capacity at system peak and are stable; therefore the TNUoS charge is based on long-term capacity (TEC for generation) and derived from peak system analysis.

BSUoS charges recover the cost of Balancing Services activities carried out by National Grid as GB System Operator. National Grid is incentivised to minimise the cost of balancing the system and the incentive payment (or receipt) is included in BSUoS. Balancing costs occur in operational timescales and reflect the cost 'on the day'. National Grid can and does contract forward for balancing services where it believes this is the most economic solution, although in BSUoS these costs are attributed as far as practicable to the periods where the benefit was determined to be. Therefore BSUoS costs are more volatile than TNUoS as the balancing activity is performed through contracts and the balancing mechanism.

Initial thoughts

National Grid is obliged by Licence Condition C5 to keep the use of system charging methodology at all times under review to ensure it achieves "the relevant objectives", which are:

a. To facilitate effective competition in generation and supply;
b. To result in charges which reflect, as far as reasonably practicable, the costs incurred by transmission licensees in their transmission businesses;

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c. In so far as is consistent with a. and b. above, as far as reasonably practicable, they properly take account of the developments in the transmission licensees' transmission businesses.

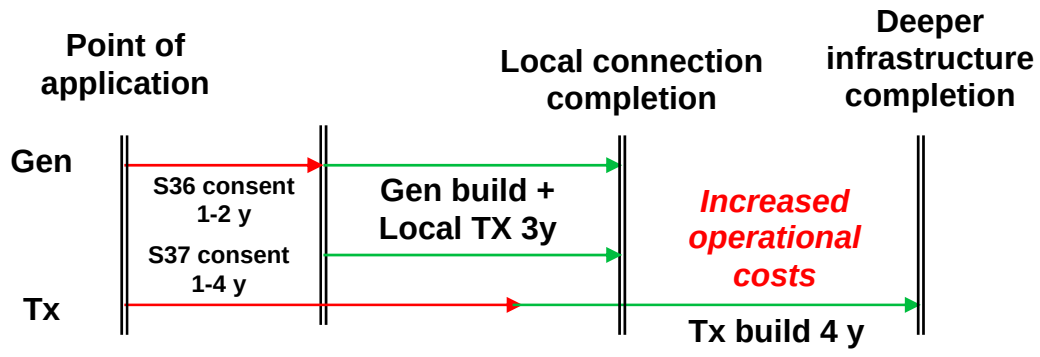
National Grid believe that in order to better achieve the relevant charging objectives following the implementation of CAP148, the three main areas listed below need to be addressed:

1. Charges for additional Balancing Costs;
2. Treatment of the "residual" element of TNUoS;
3. "Local" infrastructure asset charges.

These areas are described in further detail below.

Charges for additional Balancing Costs

The basic principle of CAP148 is that developers are not constrained by wider transmission works e.g. the proposed new overhead line between Beauly and Denny. This leads to a period between them connecting and the wider works being completed where the system is not fully compliant with the Security and Quality of Supply Standards and there is an increased risk of costs in operational timescales. The costs resulting from CAP148 in this period would not be asset related (the basis of TNUoS charges), but operational costs (dealt with through BSUoS charges). The diagram below shows the situation where the period required to achieve consent (red time line) is much longer for transmission than generation and the local connection can be established prior to the wider infrastructure works. If either of these assumptions is not true then DTEC has no value over TEC.



As described above, the costs that arise from CAP148 (release of DTEC) are in operational timescales. National Grid does not believe it would be cost reflective to provide an asset based signal for a balancing cost (incurred in operational timescales). National Grid considers that access provided through DTEC, early connection, should be seen as an additional service and priced appropriately i.e. at the marginal operational cost associated with providing it, as far as it is reasonably practicable.

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The options discussed at the August TCMF were:

1. An ex-ante annual kW charge based on a forecast of operational costs; or
2. An ex-post MWh charge based on actual operational costs incurred.

In practice, actions can be taken in operational timescales to meet a number of objectives which means that the establishment of the operational cost associated with DTEC generation can sometimes be somewhat subjective. To ensure that the operational cost associated with DTEC is transparent to users, National Grid would need to develop a charging methodology.

A simple methodology for deriving an ex-post cost has been discussed at the Transmission Access Standing Group (TASG)[3]. National Grid expects that this would need to be robustly codified and possibly automated in order to be incorporated within the charging methodology. Clearly a forecast approach benefits from simplicity and users would know the cost in advance, however is unlikely to be as cost reflective as ex-post charging arrangements. National Grid has currently assumed that any error would be passed through BSUoS charges.

It should be noted that these options are based on the assumption that the costs rise sufficiently to justify the development of systems and processes to administer specific charging arrangements for operational costs. Should CAP148 or an alternative be introduced National Grid would further develop these concepts, however they would only be taken forward if the cost of providing the systems was proportionate to the operational costs they would be dealing with. Initial estimates of the "connect and manage" principle presented at the CAP148 working group suggest the operational costs could be very significant.

Note: the short-term charge would be zero if no additional operational costs were caused.

Treatment of the "residual" element of TNUoS

The residual element of TNUoS is a flat charge passed through to all users (taking account of the G/D split[4]), and unlike the locational element is not an economic signal as such. For 2007/08, the residual element of TNUoS for generation is £3.81/kW.

[3] http://www.nationalgrid.com/NR/rdonlyres/7DFB1235-5741-4744-9C9F-54B8CBC2F1A1/19202/PresentationNationalGridIntrotoconstraintcostingan.pdf

[4] The overall revenue recovery for TNUoS is 27% from generation and 73 % from demand

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As this is not related to assets and covers a wide range of the transmission companies' (GBSO and TOs) costs, National Grid believes that it is appropriate to charge all parties using the system the residual element.

The residual could be charged out in one of two ways:

1. Charged on a MWh (possibly extended to all users) basis; or
2. An annual charge based on capacity (kW).

Clearly there are pro and cons, and winners and losers with both of these options. However the exact mechanism needs to be considered in more detail against the charging objectives. Before taking forward either approach National Grid would expect to discuss the merits of the approaches at TCMF.

"Local" infrastructure asset charges

In addition to the increased balancing costs from providing early access, there will also be a 'local' infrastructure asset cost. These works are referred to as the directly consequential works (DCW) in CAP148. The costs of DCW are essentially a subset of the TNUoS charge.

National Grid initially identified three options for charging of local assets (DCW) which were presented to TCMF:

1. A local ICRP based charge;
2. One-off advancement costs;
3. An annual advancement cost.

National Grid indicated at TCMF that the advancement cost appeared to strike the appropriate balance between complexity, transparency and stability, thus initially appears to better facilitate the charging objectives of being cost reflective and facilitating competition in an efficient manner. The case for one-off or annual needs to be considered in further detail, although in terms of administration a one-off cost would clearly be more efficient.

Summary and Next Steps

This open letter has highlighted National Grid's initial thoughts on the appropriate charging arrangements for DTEC, they are:

- Introduction of a cost reflective short-term charge;
- Equal sharing of the residual TNUoS element;
- One-off advancement charge for local assets.

Should the Authority approve CAP148 or one of its alternatives, National Grid would progress discussion and development with the industry through the appropriate forums. Prior to introducing a charging change, National Grid is required to consult with CUSC parties and the Authority has the option to veto any proposed changes to the charging methodologies.

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National Grid understands from the CAP148 working group that it would have up to three years from the date of approval before the first DTEC would be granted. National Grid would seek to have approved charging methodologies within the first year and then if required use the remaining period to develop and implement new systems.

National Grid is aware that all of the three elements above have also been discussed in relation to other access products[5].

Yours sincerely,

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[5] TASG report: http://www.nationalgrid.com/NR/rdonlyres/4C0DE54C-D268-4420-9432-21F44E3E3F21/19753/TASGReportV10.pdf