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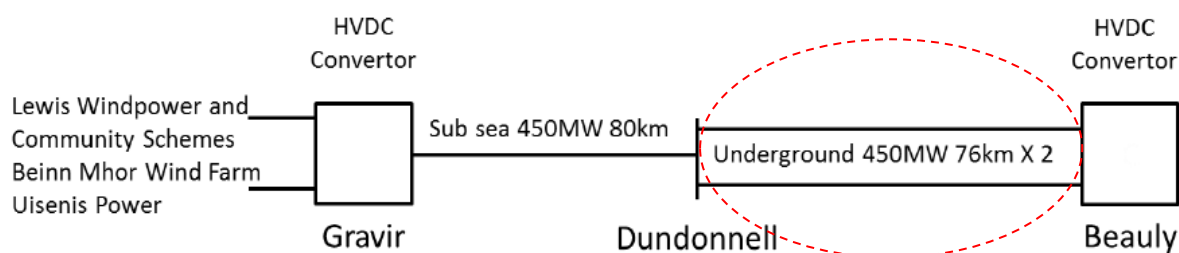
15 June 2015

Dear Industry colleagues,

## Treatment of Anticipatory Investment in Determining the Local TNUoS tariff for the Western Isles Link

The Transmission Network Use of System (TNUoS) methodology, as laid out in Section 14 of the Connection and Use of System Code (the CUSC) recovers the costs of transmission investment. CUSC modification proposal CMP213, approved in July 2014, developed a methodology for the treatment of HVDC cable transmission links to islands in the TNUoS charging methodology.

The Western Isles Link is one such proposed HVDC cable transmission link from Beaulieu to Gravir on the Isle of Lewis. This 450MW connection will connect future renewable generation development on the Western Isles. It is proposed that it will be comprised of a 76km HVDC underground cable laid from Beaulieu to Dundonnell on the mainland, and an 80km HVDC sub-sea cable from Dundonnell to Gravir. The treatment of this equipment, and also the associated HVDC converter stations, is laid out in Approved CUSC modification proposal CMP213, and will be applied to such a Western Isles link as constructed.



It was proposed that an additional second 450MW rated HVDC cable section be laid between Beaulieu and Dundonnell (circled in the diagram above). Installation of the second 450MW underground cable at the same time as the first represents significant efficiencies in terms of cost and environmental impact. It is currently understood that a second cable would not provide any extra redundancy or other benefit to the development, and as such this represents a purely anticipatory investment. The treatment of anticipatory investment is not made clear in Section 14 of the CUSC.

In December 2014, National Grid published an open letter<sup>1</sup> to inform our proposed treatment of such anticipatory investment. Two options for charging were presented:

<sup>1</sup> <http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=38331>

**Option one – 50% of costs between Beaulieu and Dundonnell included in local circuit tariff** (i.e. total circuit cost / 900 or ½ of circuit cost / 450)

At the September Transmission Charging Methodology Forum (TCMF) meeting Baringa Partners presented a paper commissioned by Uisenis Power. Broadly the option presented assumed that 50% of the total costs of the HVDC cable between Beaulieu and Dundonnell were included in the local circuit tariff for the first Western Isles link. The assumptions used by the authors resulted in an indicative local circuit tariff for the Western Isles HVDC link of around £91/kW.

**Option 2 – Costs of single circuit solution between Beaulieu and Dundonnell included in local circuit tariff** (i.e. taking the total cost of both circuits, minus the incremental cost of adding the 2<sup>nd</sup> cable, and dividing this by 450)

This option was used in the development of indicative island tariffs for approved CUSC modification proposal CMP213. Broadly it assumes that the full costs of a single circuit solution are included in the local circuit tariff for the first Western Isles link and that this tariff will change if and when a second link is developed. This resulted in an indicative local circuit tariff for the first Western Isles HVDC link of around £108/kW.

The open letter published by National Grid asked industry colleagues for their views on the two proposed options, and also whether they believed the treatment of such anticipatory investment needed to be made more explicit in the CUSC. Respondents were also invited to submit any further comments or options.

9 responses<sup>2</sup> were received in response to the open letter, of which 7 supported option one and 2 supported option two. Key arguments put forward included:

- Option 1 follows the existing principle of generators not paying for **oversizing** on AC circuits.
- The issue of **potential discrimination** between current and future generators under option 2 (later generators pay lower charges under option 2 and hence option 1 providing greater stability of charges).
- The **current benefit** to generators under option 1 - whereby they are paying less in TNUoS than if the extra capacity had not been built.
- One respondent felt that option 2 followed the logic of island charging as laid out in the CMP 213 final modification report.

The majority of respondents felt that guidelines (rather than a formal CUSC modification) would be appropriate to clarify the treatment of anticipatory investment within the CUSC.

A summary of responses was presented to the Transmission Charging Methodologies Forum on 12<sup>th</sup> March 2015, together with National Grid's proposal to progress with option one. This decision was made in light of the points made by respondents regarding consistency with oversizing on AC circuits, and also the positive impact on charging stability that option one would lead to.

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<sup>2</sup> <http://www2.nationalgrid.com/UK/Industry-information/System-charges/Electricity-transmission/Transmission-Network-Use-of-System-Charges/Tools-and-Data/>

As such, this letter communicates our intention to treat projects involving anticipatory investment in accordance with option one. Should there be a variation on the option considered here (for example, 3 cables laid at one time) the local circuit charge would be treated in accordance with the principles of option one (e.g. for 3 cables, a third of the overall cost would be used to calculate the charge on one cable).

Since the presentation at TCMF, SHE Transmission have indicated that the latest 'best view' of design and cost for the reinforcement between the Western Isles and the Scottish mainland is now likely to be a single circuit solution. Any impact on indicative charges will be established on completion of a retender exercise by SHE Transmission later this financial year. If a single circuit design is implemented, the normal TNUoS charging methodology for calculation of local circuit expansion factors (as detailed in section 14.15 of the CUSC) will apply.

Please let us know if you would like to discuss further.

Yours faithfully,

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