

Your Ref:
Our Ref: WS/Grid/CM Consultation Response



OFGEM
9 Millbank
London SW1P 3GE

D P Energy Ireland Limited
Mill House, Buttevant,
Co Cork, Ireland
Tel: (+353) (0) 22 23955 ext. 13
Fax:(+353) (0) 22 23027

28th May 2014

Dear Kersti,

RE: Consultation on Scottish Hydro Electric Transmission’s proposed transmission project between Caithness and Moray in northern Scotland

DP Energy welcomes the opportunity to provide information to support the Needs Case Assessment process for the Caithness – Moray reinforcement.

DP Energy is developing the up to 200MW Westray South tidal energy project in Orkney which holds a grid connection contract for 150MW. The project is being developed in a phased approach with a consent application for the first 60MW due to be submitted to Marine Scotland by early 2015 based on an assumed construction period of 2018-20. This initial phase has a grid connection date of October 2019 and is wholly dependant on the energisation of the Caithness – Moray link by 2018.

Responses are provided below to the consultation questions posed by OFGEM. However DP Energy believes wider benefits associated primarily with the likely socio-economic and environmental effects of an 8 year delay have not been accurately accounted for. The table below summarises some of the key project specific metrics associated with this with regard to the first phase of development of Westray South:

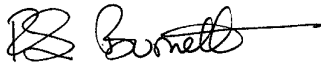
Measure	Westray South Effect	Consequence of an 8 year Delay on Westray South
CAPEX	£260M (offshore and onshore works)	Best case: Delay Worst case: Lost opportunity
FTE job creation (Operation and Maintenance)	60 created	Best case: Delayed employment Worst case: Lost opportunity
GVA	£2.656M / per annum	Best case: Delayed contribution of £21.252M over 8 years to local and wider economy Worst case: Lost contribution
TNUOS	£3.283M / per annum	Best case: Delayed revenue to SHE-T and NGET Worst case: Loss of revenue
Generation	131.4 GWhr per annum (25% CF)	Lost contribution to security of supply and environmental targets.

In addition to the above, it should be noted that no analysis has been presented illustrating the effect a delay to the Caithness – Moray reinforcement would have on further grid development infrastructure contracted for Orkney which is based on an HVDC connection from Orkney to the Scottish Mainland. Subsequent phases of the Westray South project and other marine renewable energy projects are dependant on this second reinforcement. If it is assumed that a delay to the present 2018 date for Caithness – Moray would follow through to the Orkney HVDC connection then this would again have significant economic consequences.

In summary we suggest that there are strong project specific and strategic arguments in favour of the subsea HVDC option. We believe that the analysis carried out to date has not considered a number of these factors or has in some instances not been able to capture the effect of benefits which are non-market goods, particularly those relating to some environmental benefits.

From a UK marine energy development perspective the lack of timely infrastructure reinforcement in the North of Scotland risks sterilising the substantial investments already made by national and local governments, enterprise agencies and the business community. Associated with this would be an inevitable negative effect on investor confidence which would be felt over a wide geographic and economic area. Delivery of the Caithness – Moray reinforcement by 2018 is a key building block in wider grid upgrades required to realise the marine and overall renewable energy potential of the North of Scotland, Scotland and the UK.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'R. Burnett', with a long horizontal stroke extending to the right.

Robin Burnett
Westray South Project Manager

Detailed Response

- 1. Do you consider SHE Transmission's proposed standalone subsea cable project to reinforce the transmission system in northern Scotland is an appropriate option for consumers at this stage? Please explain the reasons behind your views.**

DP Energy has focussed their response on providing information relating to their specific project in Orkney which is dependant on the proposed reinforcement. DP Energy believes it is not in a position to offer a wholly informed assessment with regard to this particular question. We believe though that the basis of the NPV comparison of the onshore and subsea options should assume a delay in excess of 8 years based on the timescales taken to design, consent and construct the Beaulieu – Denny reinforcement (minimum 14 years). In particular it should be noted that the scale of the onshore alternative option is significantly greater than Beaulieu – Denny. DP Energy believes that should an onshore option be progressed it is unlikely this would be energised prior to 2028.

- 2. What are your views on the timing and scale of SHE Transmission's proposed subsea link to reinforce the transmission system in the Caithness Moray area?**

The Westray South project holds a grid connection contract for 60MW of capacity to be connected on Mainland Orkney in October 2019 with the project being actively developed through the planning process on this basis. Due to its proximity to the adjacent EMEC tidal energy test site, relatively sheltered location and promising site conditions, it also represents an excellent early tidal energy site with significant interest from the established OEM's who are seeking routes to market in support of their substantive technology development commitments. The contracted position reflects a 2018 energisation date for the Caithness – Moray reinforcement and any delay to this will therefore be directly reflected in the target energisation date for the Westray South project.

DP Energy believes that the timescale proposed to deliver an alternative onshore option by 2026 is optimistic given recent experience with other similar developments in Scotland. Slippage of this reinforcement to 2026 would most likely result in the Westray South contracted date slipping to 2027/28.

It is unclear what the question regarding 'scale' is seeking views on. Using the assumption that this relates to the proposed transmission capacity of the reinforcement, DP Energy is supportive of the anticipatory assumptions used by SHE-T to justify the rating of the subsea elements at 1200MW. We note that DNVKema consider the SHE-T proposal in this regard to be 'reasonable'.

- 3. What are your views on the future costs of generation constraints in northern Scotland?**

DP Energy does not hold the required information to undertake an informed assessment of this type. We would suggest that this is an issue where it should be possible for such a calculation to be undertaken transparently by one organisation once all the key parties have agreed the methodology and assumptions that should be applied.

4. What are your views on the potential wider benefits of SHE Transmission’s proposed subsea link? How should wider benefits be measured and evaluated in the Needs Case assessment for a proposed transmission project?

The CBA submitted by SHE-T is not a public document so it has not been possible to review information already submitted with regard to wider benefits. For some factors there are significant challenges associated with capturing what are effectively non-market goods within an assessment process which ultimately places significant weighting on monetary values. This is particularly the case when considering issues relating to environmental matters, including visual and aesthetic potential effects. Based on the DNV Kema report it is entirely unclear how such potential effects are being taken into consideration beyond an assumption that the likely significant onshore environmental mitigation costs have been captured in the budget assumptions submitted by SHE-T. DP Energy believes the question of how wider benefits should be measured and evaluated within a Needs Case assessment is one which OFGEM should specifically consult on in a broader sense than just this specific proposal.

DP Energy considers below a number of generic and project specific aspects which we believe are relevant in the context of a Needs Case assessment.

- i. **Renewable Energy Generation Targets:** The DNV Kema review appears to have considered this aspect from the perspective that as achieving renewable generation targets is not driven by identifying specific projects it is not appropriate to place any substantive weight on the potential contribution of these projects to meeting these targets. Clearly a sequential approach such as this is not the basis of renewable energy project development nor of the planning process for such projects, which recognises that the driver behind legislation, from which targets emerge, is a broader goal of moving away from carbon intensive energy generation and that crucially ‘targets’ should not be treated as ‘caps’ on development. The valuation process needs to recognise both the potential contribution these projects could have to meeting targets and also that irrespective of targets they have intrinsic value as sources of renewable, indigenous generation.
- ii. **Marine Renewables – Socio Economic:** Many of the wave and tidal developments presently being developed are dependant on the Caithness – Moray reinforcement, including the DP Energy Westray South proposal. In order to realise the socio-economic benefits from this industry at a regional and national scale and maximise the substantive commitments already made by central and local governments, enterprise agencies and the business community it is vital that commercial scale projects (30 – 60MW) have a clear route to market based on energisation dates of 2019/20, particularly with regard to tidal power projects.

Analysis carried out by Baringa (DECC/ Scottish Government 2013) has estimated that connecting 180MW of renewable generation capacity on and around Orkney by 2020 would create 1563 FTE jobs across the UK as a whole, with tidal power accounting for 965 of these based on 93MW of installed capacity.

The Westray South proposal is a key project within the Orkney portfolio but as with all other projects on and around Orkney is wholly dependant on a timely Caithness –

Moray reinforcement in line with the present grid connection contract. A further overview of the need for grid reinforcements to enable commercial project development to occur in 2019/20 is provided in The Crown Estate commissioned report; *'Wave and Tidal Energy in the Pentland Firth and Orkney Waters – Delivering the First Phases of the Projects'*, The Crown Estate, September 2013.

DP Energy estimates the CAPEX to install and commission the first phase of the Westray South project (60MW) to be in the order of £260M (£4.3M/ MW installed). As a minimum delay of the reinforcement to 2026 would have a corresponding delay on capital expenditure.

Based on an assumed TNOUS charge of £54.71/kW/yr (DECC/ Scottish Government 2013) lost revenue from grid charges for every year of delay to a 60MW project on Orkney would be £3.283M.

Post construction, DP Energy estimates at this time that based on other similar developments approximately 35 direct full time jobs would be created, the majority of them local to Orkney. Applying a multiplier of 1.714 to account for indirect jobs a total figure of 60 FTE job is assumed. GVA accruing for a 60MW project based on this and an assumed value per job of £44,276 (Highlands and Islands Enterprise, 2011) is estimated to be £2,656M per annum. The majority of this figure would likely accrue within the local economy given the requirement for a local service base, most likely in Kirkwall. For this project alone a construction delay of 8 years would therefore result in up to £21.252M of benefit failing to accrue to the local and wider economy in the period 2019 - 2027.

- iii. **NPF3:** DP Energy notes that the plan of proposed NPF3 developments on page 19 of the NPF3 Proposed Framework (January 2014) clearly illustrates that it is a subsea connection from Caithness to Moray that is captured within the policy statement intent. DP Energy also notes that the DNV Kema analysis agrees that a subsea HVAC option is not appropriate.
 - iv. **Security of Supply:** It is unknown if any evaluation has been undertaken of the security of supply benefit that would accrue based upon a comparison of the respective commissioning dates of the HVDC and HVAC options. It would be expected that from this perspective early access to the renewable projects dependant on this reinforcement would be a positive outcome for consumers and would support the HVDC option.
 - v. **Diversity:** Similarly to point (iv) above it is unclear if any assessment of generation diversity and the benefits to consumers from this has informed the assessment process. Whilst the bulk of the generation is onshore wind there is predicted to be a growing portfolio of marine energy generation in the post 2019 period, initially dominated by tidal power but with a growing contribution from wave generation beyond 2020.
5. **Do you consider we (and our consultants) have identified the relevant issues to the Needs Case assessment for SHE Transmission's proposal? Are there any other factors you think we should examine in order to inform our views on the proposed reinforcement?**

As outlined above DP Energy believes the key relevant issues which do not appear to be fully captured are those relating to wider benefits, in particular the socio-economic effects of an 8 year delay and the environmental effects of an overland route. At best a delay of grid connection for Orkney based projects would defer spend, with the associated downside of impact on economic benefits that would otherwise have resulted, at worst it would send a negative signal of magnitude sufficient to deter future investment for a period of time significantly longer than the delay itself. A delay of this severity would make it increasingly difficult to visualise the UK maintaining the present first-mover advantage it holds with respect to the development of tidal and wave technologies and projects, particularly given the alignment for commercialisation of tidal power with the present grid contracted position of 2019.

6. Do you have any other comments on our initial views set out in this letter?

No.

References

- i. DECC/ Scottish Government May 2013 'Scottish Islands Renewable Project Final Report'
- ii. The Crown Estate September 2013 'Wave and Tidal Energy in the Pentland Firth and Orkney Waters – Delivering the First Phases of the Projects'
- iii. The Scottish Government January 2014 'Proposed National Planning Framework 3'
- iv. Highlands and Islands Enterprise January 2011 'Area Profile for Orkney'