

Grant McEachran
RIIO - Electricity Distribution – Systems and Networks
Ofgem Glasgow

By Email: grant.mceachran@ofgem.gov.uk

08 June 2018

Dear Grant,

Consultation on the costs of the extended interim energy solution for Shetland

Element Power (EP) appreciates the opportunity afforded by Ofgem to respond to the consultation on the Shetland New Energy Solution (SNES).

Our response is divided into 5 parts:

1. Introduction to Element Power & Maali interconnector
2. Response to Question 1
3. Response to Question 2
4. Response to Question 3
5. Question 4

1. Introduction to Element Power & Maali Interconnector

Element Power (EP) develops renewable energy generation and additionally projects to enable the effective integration and transmission of renewables in the United Kingdom and Northern Europe. In under ten years of operation in Northern Europe, Element Power has developed, financed, constructed and now operates over 200MW of wind assets raising over €400m of finance and with projects in the pipeline of over 1.2GW. Element Power was one of eight companies to achieve an Enhanced Frequency Response contract with National Grid in 2016 and has commissioned the 25MW battery project at Tynemouth with sale to ENEL.

Element Power is the developer of the Greenlink Interconnector which has received Ofgem Cap and Floor IPA, is in the European 3rd list of Projects of Common Interest (PCI) and has received funding under the Connecting Europe Facility (CEF).

Element Power is developing the Maali Interconnector which has been recognised in the European Ten Year Transmission Plan¹ (TYNDP 2016) with an annual welfare benefit of €50-90 million and an estimated capital cost of ~€600 million.

By linking the Shetland Isles with Norway, the Maali HVDC interconnector project would link Norway to the north of Scotland and the rest of Great Britain via the proposed Shetland to Scottish Mainland transmission HVDC link. In the process, Maali would reduce electricity costs for GB consumers, deliver increased security of supply to Shetland, and provide a means to export surplus wind power in Shetland and Scotland to Norway; reducing north-south flows and transmission bottlenecks in Great Britain; increasing decarbonisation of energy supplies and economic welfare in all these localities. In BEIS 'call for evidence' for 'A Smart, Flexible Energy System'² interconnectors are recognised as a tool which makes it possible for the UK electricity system to operate more efficiently and thereby reduce costs to consumers.

2. Response to Question 1

Q1. Do you agree with our minded-to position on the costs – level and treatment – for the extended interim energy solution?

We are not privy to and/or familiar with all the relevant operation and cost data that Ofgem and SHEPD have access to. We note that the costs proposed are £172m over 6 years, i.e. £29m/year which is considerably lower cost than £40m/year cost of the NGSLL-Aggreko Solution. Based on the information provided and the assumptions made, the level of costs appear to be justifiable.

Regarding the treatment of costs:

- We estimate that the cost of electricity generated on Shetland is of the order of £140/MWh +/- £20/MWh (in 2012/13 prices).
- We note that the amount of renewable electricity used in the Shetland system is less than 10% despite the abundant and high capacity factor resources available.
- The 3.8MW Burradale windfarm has achieved a capacity factor of over 50% since its first full year of operation 2001.
- The Viking and Beaw Field windfarms have planning permission for over 500MW wind generation on Shetland.
- The costs of energy from Sullom Voe Terminal (SVT) are under negotiation.
- The carbon footprint of Shetland's electricity (whilst not published) must be one of the highest anywhere in Europe.

We note that since the process for Shetland New Energy Solutions was launched in October 2014 there have been major developments in power systems in the British Isles with regard to the integration of renewables i.e.:

- National Grid has specified, tendered and awarded 200MW of EFR which has been delivered by 8 providers at a cost reduction of about 60% compared to the previously prevailing frequency response costs.

¹ <https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202016/projects/P294.pdf>

² <https://www.gov.uk/government/consultations/call-for-evidence-a-smart-flexible-energy-system>

- The number of ancillary service providers in National Grid's FFR market has increased over ten fold.
- EirGrid has increased the SNSP (System Non Synchronous Penetration) on the all-Ireland grid to 65%.
- The GB grid has run on coal free periods for the first time.
- Carbon emissions from GB electricity generation have fallen dramatically.
- EirGrid is procuring DS3 services to integrate more renewables and reduce costs.

Based on these developments and opportunities, in our view there is the potential for SHEPD and Ofgem to:

- Further reduce costs of the interim solution through renewed engagement with developers.
- Consider interim solutions which can also have an enduring role when the HVDC transmission link(s) are built.
- Publish the carbon emissions of Shetland generation (g/kWh) and incentivise their reduction.
- Open the proposed bilateral negotiations with SVT to a tender process.

As a result we suggest that Ofgem should ensure that any process by SHEPD allows a competitive opportunity for technologies and services that can reduce costs, reduce carbon emissions and provide enduring services after the HVDC link(s) are completed.

3. Response to Question 2

Q2. Do you agree with our minded-to position on the level and treatment of the Shetland Enduring Solution Process Costs?

Regarding the Enduring Process we note that Maali (HVDC link to Norway) combined with the proposed HVDC transmission link to mainland Scotland would provide an n-1 security of supply for Shetland. This opportunity should be factored into SHEPD's assessment of the Enduring Solution.

Given the order of magnitude for the costs of the enduring solution (i.e. 40£m/year for the previous proposed solution) we believe it is pertinent to spend an appropriate sum to manage and reduce these longer term costs.

4. Response to Question 3

Q3. Do you agree with our minded-to position on the level and treatment of the SNES Residual Costs?

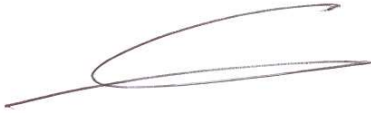
Regarding NGSLL costs incurred since being proposed as preferred bidder we would need to understand the contractual commitments and arrangements. It would be usual in any tender for tenderers to be responsible for their own costs. Following appointment of preferred bidder it would be normal to award an Enabling Works contract to progress the works prior to committing to the preferred contract.

5. Question 4

Q4. Do you have any comments on the associated informal licence drafting in Supplementary Annex 1?

We have not reviewed the licence drafting.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Guy Nicholson', written in a cursive style.

Guy Nicholson MIET MEI CEng
European Grid Manager

Contact Information

Guy Nicholson MIET MEI CEng

guy.nicholson@elpower.com

Jeanette Thomson
Head of Communications (Scotland)
Jeanette.Thomson@elpower.com

Element Power Northern Europe Developments Ltd
2nd Floor Meridien House
42 Upper Berkeley Street
London
W1H 5QJ

T + 44 207 121 0530 F + 44 207 121 0559