

# Chief Executive's Office

**Interim Chief Executive:** John W Mundell, OBE.

Council Offices, Kirkwall, Orkney, KW15 1NY.

Telephone: 01856 873535 Extension 2101.

Email: [chief.executive@orkney.gov.uk](mailto:chief.executive@orkney.gov.uk)

Web: [www.orkney.gov.uk](http://www.orkney.gov.uk)



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Office of Gas and Electricity Markets  
10 South Colonnade,  
Canary Wharf,  
London, E14 4PU

By e-mail to [FutureChargingandAccess@ofgem.gov.uk](mailto:FutureChargingandAccess@ofgem.gov.uk)

To whom it may concern,

## **Ofgem Consultation on Access and Forward-looking Charges Significant Code Review**

### **Background**

Orkney Islands Council (the Council) is grateful for the opportunity to respond to this consultation document. Renewable energy resources from the wind and sea in and around Orkney constitute significant concentrations of potentially exploitable renewable energy resources in the UK. The region is well placed to contribute to UK carbon reduction and renewable electricity generation targets if key regulatory barriers can be effectively addressed to facilitate deployment of renewable technologies.

Please note that the Council will be submitting 2 separate responses – one as a developer and this one as the local authority for the Orkney Islands with responsibility for delivering both economic development and a range of services to the local community.

The Council has been lobbying the UK government and Ofgem for over 2 decades to address concerns that the regulatory framework has hindered the development of renewable generation in the Scottish islands. This continues to hold back considerable private sector investment and prevent the Scottish islands meet its net zero targets.

The Council has invested considerable time and effort engaging with Government and Ofgem to develop measures to ensure renewable energy generators in the Scottish islands can compete to provide renewable electricity.

The timeline of our engagement with the Government and regulator demonstrates the lack of progress in reaching a solution. A summary of the main consultations and their outcomes concerning Scottish islands renewable energy is summarised in the table below.

Year	UK Government	Ofgem
2003	Transmission Issues Working Group (TIWG)	Transmission Investment for Renewable Generation (TIRG)

<b>2004</b>	Energy Act provides for island transmission charge capping (Section 185)	TIRG concludes no island investments.
<b>2005</b>	Government minded to use S185 to cap charges for all three island groups	
<b>2006</b>		Ofgem grants pre-construction funding for all three island links; considers competitive tendering of island links
<b>2007</b>		Ofgem consults on regulatory models for connecting the islands.
<b>2008</b>	Government not minded to use S185 for Orkney and Shetland, but postpones decision on Western Isles	Ofgem decides against competitive tendering of island links in the near-term. SHET submits case for Western Isles connecting in 2012 and Shetland connecting in 2013.
<b>2009</b>		Ofgem considers construction funding for Western Isles and Shetland
<b>2010</b>		SHET withdraws Western Isles request, decision on construction funding for Shetland deferred
<b>2012</b>	DECC sets up Islands Renewable Island Group, and commissions research.	
<b>2012</b>	Pentland Firth and Orkney Waters established as a Marine Energy Park	
<b>2013</b>	Baringa report published, recommends £115 strike price. DECC consults on island strike price, agrees and confirms £115 strike price.	SHET submits case for Western Isles, Ofgem sends it back due to policy uncertainty.
<b>2014</b>	Xero Energy Grid Access report published, DECC agrees to take forward work on issues identified.	
<b>2016</b>	No Islands CFD allocation. DECC consults again on island CFD strike price.	
<b>2017</b>	CFD allocation excludes island wind.	
<b>2019</b>	CFD allocation includes island wind	
<b>2019</b>		Ofgem conditionally approves Orkney transmission link – conditions to be met by December 2021
<b>2019</b>		Ofgem rejects majority of SSEN Orkney Alternative Approach Derogation proposals
<b>2020</b>	CfD Round 4 allocations announced. Remote Islands wind included.	
<b>2021</b>		Ofgem extends needs case conditions to December 2022 owing to delays caused by co-vid
<b>2021</b>	CfD auctions open December 2021	

The Council has significant concerns that the impact of Ofgem's minded to position contained within these proposals will directly contribute towards the failure of Orkney to secure a transmission connection and exacerbate levels of fuel poverty already existing in Orkney to the detriment of the local community.

### The Orkney Distribution Grid

There is no transmission link from Orkney to the Scottish mainland connection, instead there are two 33kV submarine cables (installed in 1982 and 1998). With an annual demand between 8.7 and 33MW, and an export limit of 38MW, generation on the island was first constrained in 2003. This was when the connection capacity for distributed generation was first reached, which led to the granting of non-firm connection offers (non-compensated curtailment). Following repeated failures the Pentland Firth East cable was replaced with a 33kV cable in 2020. The cable developed a fault following installation resulting in reinstatement of the diesel powered power station to supply the islands electricity needs.

The grid constraint and difficulty securing additional grid capacity led to Orkney becoming a focus area for smart grid and active network management, through multiple innovations which allowed extra generation capacity to be added to the network without installing another subsea cable. The first example was an inter-tripping solution implemented by the Distribution Network Operator (DNO) Scottish Hydro Electric Power Distribution (SHEPD) in 2004, which allowed a further 20MW of capacity to connect to the network.

The current level of capacity was only made possible by the design and installation (from 2006 to 2009) of an Active Network Management (ANM) system by SHEPD and the University of Strathclyde, which unlocked the connection of a further 24.2MW of (wind) distributed generation and 5MW of microgeneration. This system monitors the flow of power around multiple points on the network, more accurately controlling generation to match the real-time available network capacity. With a large amount of generation from wind turbines, a nascent wave and tidal industry and a constraint on the amount of energy that is possible to import and export via a submarine cable to the mainland, Orkney was seen as an ideal location to trial the concept of energy storage. In 2013, a 2MW lithium ion battery was connected to the distribution grid. The trial was primarily a commercial investigation of commercial incentives to encourage an Energy Storage Provider (ESP) to locate an Energy Storage System (ESS) to manage network constraints.

Orkney currently has 77MW of generation, made up from 72MW of distributed generation and around 5MW of microgeneration. Orkney has one of the highest densities of onshore wind in the UK in part due to the uptake of micro generation. Despite these innovations, grid access remains a substantial barrier with the existing distribution grid at capacity. Curtailment levels have been many times higher than predicted in generation offers, with one (wind) generator seeing a 70% curtailment level. There has been a moratorium on new grid connections on Orkney since **September 2012**. In 2016, Orkney achieved 120.5% of its electricity consumption from renewable energy.

### Transmission Charging

Transmission Network Use of System (TNUoS) charges are paid by all electricity generators connected to the electricity transmission system in Great Britain. In addition, generators on the islands are required to pay for 'local works', which include the connections from the Scottish mainland to the islands. This latter charge will be the major component of charges for all grid projects on the Western Isles, Shetland and Orkney.

From the South of Orkney you can easily see the North of Scotland coastline – the stretch of water is only 6 miles wide. To demonstrate the difference in transmission charges, two identical tidal projects, one based in the waters off Orkney and the other off the Caithness coastline, charges have been calculated:-

#### Projected Annual Grid Charges for Marine Energy Projects in 2020<sup>1</sup>

	MW	Local Circuit Charge	TNUoS Charge	Total Annual Grid Charge
Orkney Waters	100	£7,900,000	£1,526,000,000	£9,426,000
Pentland Firth	100	£0	£1,526,000,000	£1,526,000

Using a methodology adopted by the Offshore Renewable Energy Catapult for the Offshore Wind Programme Board<sup>2</sup>, it is estimated that local works equate to a cost per MW of £14.70 for Walney-2 and £10.90 for West of Duddon Sands offshore wind farms respectively. Taking only the local circuit element of the proposed Orkney transmission connection, the estimated cost would be £19 per MWh. Island renewable projects are not competing on a level playing field for contracts for difference with offshore wind.

### Orkney Islands Council

The public sector plays a significant role in Orkney's economy. The Council, along with other local authorities, has faced unprecedented reductions in Government funding since 2011. Service pressures and an increasing demand for services, particularly from the most vulnerable, has meant the Council has had to make significant budget savings in response. The continuing requirement and scale of budget savings will present an increasing challenge for the Council. The reduction in public sector funding will have a disproportionate impact in the Scottish islands unless a new source of income can be identified to fund public services.

The Council is investing in developing its own onshore wind farms capable of generating 90MW. The development cannot proceed without a transmission connection to Mainland UK. All profit arising from the development would be reinvested in the delivery of public services including addressing fuel poverty and fostering economic development on our islands.

The Council is risking considerable public sector funds to obtain consent for these projects. One of the greatest project uncertainties is the current approach to access and charging for use of the transmission system. The Council has consistently raised concerns over the relatively high cost of these charges (compared to similar generators elsewhere in the UK), the year-on-year volatility of charges and the difficulties in being able to accurately forecast charges. The current consultation has created further uncertainty about future charges, Ofgem are effectively creating a barrier to the development of renewable energy in the Scottish islands.

### Consultation Questions

Recently Ofgem announced that the Transmission charge reforms would enter consultation with a view to delay their introduction until April 2023. The changes to the Distribution charges will still be introduced from April 2022.

The regulatory and planning timelines for renewable energy in the Scottish islands differ from that on the Mainland UK. Islands connections generally require longer lead times – 4 years from needs case approval. Any delay in this process pushes connection dates back accordingly. The most recent estimates for energisation of the Orkney connection is 2025, after the proposed changes to Ofgem's charges reform.

<sup>1</sup>[http://4f553fa71f6b11e5f9b0e9e5be702ded16836c4ccca0ea3e9a9c.r68.cf3.rackcdn.com/uploads/publications/120917\\_swimming\\_against\\_the\\_tide\\_2.pdf](http://4f553fa71f6b11e5f9b0e9e5be702ded16836c4ccca0ea3e9a9c.r68.cf3.rackcdn.com/uploads/publications/120917_swimming_against_the_tide_2.pdf)

<sup>2</sup><https://ore.catapult.org.uk/wp-content/uploads/2016/05/Transmission-Costs-for-Offshore-Wind.pdf>



As a local authority, the Council is not qualified to answer the majority of the complex technical questions and navigating the impacts of these changes has been extremely challenging.

Question 3c: What are your views on the effectiveness of the current arrangements in facilitating the efficient development and investment in distribution networks? How might this change under our proposals where network companies are required to fund more of this work?

The Council has consistently called for Ofgem to provide certainty over connection costs and charges for islands developers. The majority of current generation already operates under active management for the distribution network without compensation for curtailment. The proposals contained within this consultation must not adversely impact on those generators who are connected to this network. We would therefore request that Ofgem undertake an impact assessment on any changes to DUoS charges for those connected to the Orkney distribution network.

Question 3e: What are your views on whether we should retain the High Cost Cap? Is there a case for reviewing its interaction with the voltage rule if customers no longer contribute to reinforcement at the voltage level above the point of connection?

We are not qualified to respond to this question

Question 3f: What are your views on the recovery of the costs associated with transmission that are triggered by a distribution connection? Does this need to be considered alongside wider charging reforms or could a change be made independently?

Given the current transmission access and charging discriminates against the Scottish islands, and the analysis undertaken by Ofgem specifically excludes consideration of the impact the proposed changes will have on the Scottish isles we do not have sufficient information on which to respond. We request Ofgem provides this detail to allow a considered response.

Question 3g: What are your views on the likelihood of inefficient investment under our proposals (e.g., an increase in project cancellations after some investment has been made)? What are the arguments for and against further considering introducing liabilities and securities to mitigate this risk?

We have consistently held the view that the risk of stranded assets is low in areas where there is rich renewable energy resources.

Question 4a: Do you agree with our proposal to introduce better defined non-firm access choices at distribution? Do you have comments on their proposed design?

Active management of a network has been proven to be cost effective to the consumer. The Council would be keen to see such innovation rolled throughout the GB network.

Question 4b: Do you agree with our proposal to introduce new time-profiled access choices at distribution? Do you have any comments on their proposed design?

We would support measures to introduce time profiled access so long as access and charging arrangements were fair to all generators, regardless of location. The introduction of flexible tariffs to promote electricity useage and/or storage at times of peak renewable production should also be incentivised.

Question 4c: Can you identify any benefits to shared access rights that we have not considered, which could impact likely take-up?

Ofgem's decisions should not inhibit innovation and indeed should incentivise such proposals both to generators and consumers within a defined network.

Question 4g: Do you have any views on our proposed timescale of 1 April 2023 implementation?

The proposed timescales create further uncertainty to developers on Orkney who have both transmission and distribution connection offers currently planned for 2025. Developers are committing considerable sums to consenting projects, budgeting for significant securities and liabilities whilst Ofgem considers implementing new access and charging arrangements which have an unknown effect on the viability of projects Scottish islands.

Question 5a: Do you have any evidence that SDG does not contribute to flows in the same way as large generation and, therefore, should not be charged on a consistent basis?

Whilst not technically qualified it is the Council's understanding that not all generation is exported out of the Orkney network in any period. Neither is it known where it is exported to within GB. It is therefore perhaps too simple to adopt a charging model based simply on the scale of generation or assumed extent of export.

Question 5b: Do you agree with our threshold for applying TNUoS generation charges of 1MW? If not, what would be a better threshold and why?

This once again feels like a simplistic approach taking no account of regional impacts and local demands.

Question 5e: Do you support our position that we should consider transitional arrangements? If so, do you have a preferred option and evidence to support the benefits or risks associated with each option?

The Council had expected greater analysis of the potential impacts of Ofgem's proposals to be made available in order to provide a measured response from consultees. We are particularly disappointed that Ofgem's proposals appear to have omitted assessments on the potential impacts for the Scottish islands. This is particularly acute given the timelines both for a transmission connection to Orkney and the timing of the CfD 4<sup>th</sup> Round auction. We would request Ofgem delays implementing changes for the Scottish islands until more detail is provided. We therefore ask for details of a coherent scheme of charging or details of proposed grandfathering arrangements.

We remain deeply concerned about the long term impact Ofgem's regulation has on the development of local renewable resources crucial to decarbonisation in the UK at a regional level, including future repowering of existing generation.

Question 5f: Have we identified all the options for administering TNUoS generation charges for SDG? If not, what options have we missed, and why would they be preferable to those we have identified? Can you provide any evidence regarding the implications of the different administrative options for your business?

This question is directed at generation businesses hence not appropriate for the Council to respond.

Question 5g: Are there any specific issues you think we need to consider, as part of our work on the future role of network charges? Why are these important to consider?

The Council has been lobbying the UK government and Ofgem for over 2 decades to address concerns that the regulatory framework has hindered the development of renewable generation in the Scottish islands. This consultation provided an opportunity for Ofgem to reconsider measures to remove the current discrimination. It remains the case that charges for renewable generation are highest at locations of greatest resources. Charges are still aimed at encouraging generation closest to areas of greatest demand. This is no longer practicable nor logical as the World attempts to move towards net zero. It also hampers efforts to decarbonise wider fossil fuel energy systems such as transport.

Ofgem needs to be more aware of the costs and timelines in developing renewable energy projects and the impact changes have at the local level. The Council is reliant on Ofgem approving investment in a vital transmission connection to Orkney, and the timeline for this connection, they also are responsible for setting the charges imposed on generators to use the cable – whether transmission or distribution connected. Orkney developers are therefore risking considerable sums whilst at the mercy of Ofgem.

**Orkney Islands Council,  
August 2021**

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