

Scottish Hydro Electric Power Distribution

Shetland Enduring Solution

DSO Recommendation – Updated Addendum

December 2019



Purpose of addendum

This document sets out updates to SHEPD's Recommendation which have arisen since it was shared with Ofgem in November 2018 and published in May 2019, which we consider are significant and of interest to stakeholders. The section numbering in this document corresponds with references added to SHEPD's original Recommendation document (red script). Where:

- there have been updates further to those set out in May 2019, this is confirmed in the relevant section ("*updated*");
- significant new information has arisen, a new section has been added ("*new*"); and
- there have been no updates further to those set out in May 2019, the section title is unchanged.

Key updates

a. Recommended Shetland contribution value

Applicable throughout document

Further to refinement of SHEPD’s analysis, the recommended Shetland contribution value has been updated from the original value of £249m to £251m. This value replaces £249m throughout the Recommendation.

The refinements apply to two of the ‘fair value service’ contribution elements, Control Services and Losses, as set out in the revised version of original Table 1 (Shetland DSO Recommendation, p.6), below.

Recommendation Table 1: Stacked fair value contribution to a whole system solution

Service	Value of service	Revised values
Year-round control services	£115.6m	£117.5m
Reduced losses	£9.7m	£10.2m
Peak demand support	£123m	(No change) £123m
Total contribution value	£249m	£251m

The revised Control Services and Losses values replace the original recommended contribution values throughout the Recommendation.

b. Value of savings to consumers identified through Shetland Recommendation

Applicable throughout document

A direct consequence of the revision to the contribution value noted in Section a is the associated update to the value of savings identified by investing in a Shetland transmission link-based solution compared to the cost of the best value alternative, identified by Baringa and SHEPD as £394m.¹ The value of savings is updated from c.£145m to c.£143m. £143m replaces £145m throughout the Recommendation.

¹ In the 2017 Shetland New Energy Solution (NES) process, a distribution link and standby was identified as the lowest cost solution offered under the competitive process to meet Shetland’s security of supply needs. As part of the analysis supporting SHEPD’s Recommendation the 2017 cost benchmark was updated using a methodology developed by Baringa Partners, concluding that the present value (PV, 2018) cost to consumers to provide a distribution link would be £394m, and this remains the preferred NES option. Within SHEPD’s Recommendation this therefore represents the counterfactual cost to consumers if connection to a transmission link is not successful. The distribution link is therefore the benchmark against which the transmission link-based solution has been assessed. £394m may therefore be considered as the contribution “cap”, beyond which level consumers would be better off with the counterfactual.

c. Engaging stakeholders - *updated*

Page 7; applicable throughout document

Over late 2018 and during 2019 SHEPD has carried out extensive stakeholder engagement across the three Scottish island groups, including with local councils, and all developers that we are aware have expressed interest in or made commitments in relation to connecting to the island transmission links. Our intent in doing so was to raise awareness of the pan-island contribution proposals, recognising the limited time and opportunity available in which to realise the benefits of the proposed contributions. We have engaged with stakeholders with Ofgem’s support. A list of stakeholders with whom we have met and shared our contribution proposals is set out below.²

Addendum Table 2: Updated stakeholder list

Pan-island	Western Isles	Orkney	Shetland
BEIS	Western Isles Council	Orkney Islands Council	Shetland Islands Council
Scottish Government	EdF	Hoolan Energy	Peel Energy
NGESO	Forsa Energy	DP Energy	Statkraft / Energy Isles
SHE Transmission		Aquatera	Viking Energy

In April 2019 we also published a [summary of our Whole System Recommendation](#) on SSEN’s website, outlining the rationale for our approach, methodology and associated proposed contribution values, for Shetland, the Western Isles and Orkney. We published further information on the [Orkney](#) and [Western Isles](#) recommended contributions in summer 2019 – more information on this recommendation is set out at Section m.

SHEPD has had significant further engagement with NGESO and SHE Transmission over 2019 in the development of the contribution implementation proposals. More information on this is included at Section l.

SHEPD is continuing to conduct engagement with stakeholders on an ongoing basis.

d. Programme - *updated*

Page 8; section 8; applicable throughout document

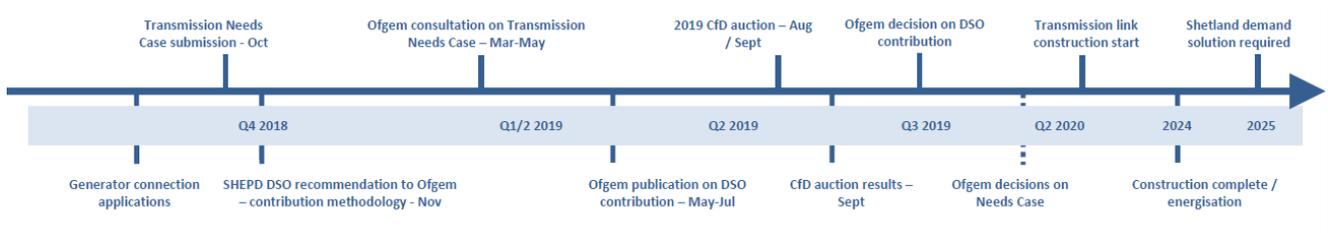
Figure 4 below has been updated to reflect changes to milestones and timing since its inclusion in the original Recommendation and the May 2019 Addendum. SHEPD notes that the figure reflects actual timings as well as SHEPD’s interpretation of required timings of milestones rather than confirmed timings, unless indicated otherwise. The changes are marked in light blue and are summarised as follows:

- [Ofgem’s consultation on the Shetland Transmission link Needs Case](#) was published on 19th March 2019, and closed on 31st May 2019.
- [Ofgem’s consultation on SHEPD’s Recommendation](#) was published on 29th May 2019, and closed on 10th July 2019.

² We have also had some engagement with the oil and gas industry on Shetland to seek to better understand future plans and potential future electricity requirements.

- Ofgem published update letters on the [Shetland](#) and [Western Isles](#) Transmission link Needs Cases, referencing the SHEPD Recommendation on contributions towards island links, in October 2019. Ofgem has published its [conditional decision](#) on the Orkney link Needs Case. More information on this is set out at Section n below.
- The CfD Allocation Round 3 2019 has now concluded. The [results](#) were published on 20 September 2019 and are summarised in Section o below.

Recommendation Figure 1: Indicative forward-looking timeline – updated December 2019



Recommendation Table 3: Outline regulatory process – updated December 2019 – Shetland link process

Activity	Date
SHEPD submission of recommendation to Ofgem	Nov 2018
Ofgem review of recommendation (incl any SQ process)	Nov 2018 - April 2019
SHEPD potential refinement of recommendation and associated analysis further to Ofgem review	Nov 2018 - April 2019
SHEPD recommendation workshop with Ofgem and consultants	Mid-Nov 2018
SHEPD further BEIS (/Ofgem) engagement on recommendation	Mid-Nov 2018 - October 2019
Ofgem November GEMA board	15/11/2018
Ofgem December GEMA board	13/12/2018
Ofgem minded-to consultation on costs / methodology of recommendation	May - July 2019
Ofgem review of consultation responses	June - Sept 2019
SHEPD potential refinement of recommendation and associated analysis further to Ofgem review of consultation responses	Some refinement to date; pending publication of Ofgem decision and consultation responses
Ofgem decision on costs / methodology of recommendation	December 2019
Implementation of contribution methodology - as far as required pre-auction (subject to contribution mechanism); potential refinement of certain assumptions	June-Dec 2019
Final execution of implementation and DSO contribution arrangements	Late 2019 onwards

Ofgem activities / Ofgem determination of dates and timing
 SHEPD DSO workstream

e. Information sharing - updated

Section 2.1.7; applicable throughout document

In our November Recommendation, we set out that “SHEPD has not shared recommendation values or the final proposed mechanism with any third parties” (section 2.1.7). During the intervening period, SHEPD has now shared more detail on its contribution proposals and values for Shetland, Orkney and the Western Isles with island stakeholders, including GB and Scottish Governments, MPs/ MSPs, local councils and developers, through direct engagement on each of the islands and elsewhere as required. Section c above provides more detail on this engagement. On 5 April 2019 SHEPD published its [Whole System publication](#), summarising the principles of its contribution approach, and proposed values for each of the islands; the Western Isles and Orkney contribution proposals were superseded by SHEPD’s July 2019 publications³ for these island groups.

f. Security of supply standards - updated

Section 4.2

Engineering Recommendation P2 has been in place since the 1950s and has played a major role in the development of secure, reliable distribution networks. P2 is a deterministic standard and is largely focused around ensuring sufficient capacity is available to meet the peak demand and that loss of supply is recovered within defined timeframes. [P2/7](#) (Security of Supply), the successor to P2/6, is now in place. In addition, Engineering Report 130 (Guidance on the application of Engineering Recommendation P2, Security of Supply) includes a methodology for assessing the economic efficiency of investing in infrastructure in excess of the basic requirements of Engineering Recommendation P2. This methodology is likely to be significant in determining future security of supply arrangements for the island groups.⁴

g. Shetland contribution range analysis

Section 6; update to Recommendation contribution analysis

SHEPD undertook scenario modelling to look at how the impact of changes in the input assumptions affected the Shetland contribution value and, specifically, the capacity support value. Such sensitivities included higher and lower consumer demand, different levels of power output from the transmission-connecting wind farms, different costs for the transmission link, and the inclusion of diverse renewable generation such as predictable tidal power. Two key variables are the size of the peak demand on Shetland and the power production of the on-island renewables at low load. Together this will determine the probability that the link meets on island demand in any one year.

1. Peak demand

Five scenarios were considered:

³ The July 2019 Orkney and Western Isles publications can be read [here](#) and [here](#).

⁴ SHEPD has applied this methodology in its assessment of the need for distribution assets to meet security of supply on Orkney and the Western Isles.

- Demand of 50MW - Reference Scenario
- Central case from demand forecast produced for 2017 NES
- High case from demand forecast produced for 2017 NES
- Low case from demand forecast produced for 2017 NES
- High-High case, with additional industrial demand spurred by economic development brought by the link.

For the Reference Case the capacity support value is calculated using an island demand of 50MW as a proxy for the anticipated island demand during the life of the link. 50MW was chosen because it is the level of granularity available in the data supplied by SHE Transmission on wind farm generation at low load, and it is very close to the forecast peak demand forecast (Central case) for Shetland over the life of the link.

SHEPD stands by the demand forecast used in the analysis as it was agreed by Ofgem for the NES process, and is the best available data. However, the relevance of the demand forecast is limited because it was undertaken for an island system with electricity provided by a power station, so demand is constrained by cost and technical limitations. The connection of Shetland to mainland GB would change that situation, making low cost electricity available to all customers on the islands, which is expected to boost demand and be a catalyst for economic development. Shetland Council, local political representatives, business and island groups recognise that removing the limitations on demand on the Island permits a wider range of economic development. Informal engagement with stakeholders leads SHEPD to believe that multi-MW increases in demand may arise in the oil and gas, and cruise ship sectors, and also through the electrification of heat and transport.

The demand forecast Central case is based on the average of the maximum demand over the years 2023 to 2030 which is a peak demand 47.4MW. Attempting to extrapolate the wind turbine production data between demand of 50MW and 47.4MW will not necessarily produce a more representative value. The use of the Central case demand from the demand forecast reduces the contribution by 1%.

The low demand case has been included for completeness but SHEPD notes a range of sources which consider demand reduction is not a credible future energy scenario, especially given the likely boost to demand once a link is established. Ofgem has most recently summarised this view within its RIIO-2 Sector Specific consultation:

“In terms of electricity transmission and distribution networks, our current assessment is that we expect the advent of electrified transport and/or heat could create additional demand for network capacity. Low demand scenarios are not impossible, but would require large proportions of energy users to generate their own power or to purchase locally off-grid. We currently assess this as a low probability scenario.”

Two High case demand scenarios have been modelled, including an estimate of the medium-term demand boost a connection to mainland GB would drive (based on informal discussion with demand customers on Shetland). SHEPD considers the establishment of a link to move the balance of probabilities to the higher end of the demand forecast values.⁵ SHEPD anticipates, based on recent [publications](#) and stakeholder engagement,

⁵ We would assume that new demand connections >2MVA which currently are liable to pay the full, unsubsidised cost of electricity generated on Shetland under BEIS’ “Shetland 2MVA Direction” would revert to paying the same costs as other demand connectees when Shetland has access to GB priced electricity supplied by the link, and a share of standby costs; however the application of the Direction in this scenario would require to be confirmed by BEIS.

that demand interest from industry could be substantial, representing a step change increase materially beyond SHEPD's highest demand cases.

2. Output of renewables

SHEPD tested scenarios to determine the probability that on island renewable generation would be insufficient to supply peak demand. The variables considered were:

- Installed capacity of renewables
- Different sources for estimates of the probability of low output from wind farms
- The addition of predictable tidal generation

SHEPD has used two sources of data for the production characteristics of large wind farms to identify the probability that they would not be able to generate enough output to meet Shetland peak demand, without support from the link. The Reference case is based on the data used for the link Needs Case submitted to Ofgem. The alternative data was supplied by the transmission-connecting developers of wind farms on Shetland. The values are similar, but those from the developers are slightly lower.

SHEPD also included an evaluation of the impact of exchanging intermittent wind generation capacity for increasing amounts of predictable tidal capacity. SHEPD does not believe that this is a credible scenario on which to base the capacity support mechanism, as wind capacity is expected to fully utilise the link before any significant tidal projects are developed.

3. Conclusions

SHEPD consider the Central case of the demand forecast to be an underestimate of the demand following the establishment of the link. Stakeholder views, as well as National Grid's Future Energy Scenarios, and Ofgem's RIIO-2 Sector Specific position on demand, support this position. The data from the Needs Case has limited granularity so using the demand forecast values requires the data to be extrapolated using curve fit methods. SHEPD does not believe that this value necessarily delivers a more representative value. In the absence of better data SHEPD is of the opinion that the approximation of 50MW is the most appropriate value to use as the Reference case and sees no obvious advantage in using the demand forecast Central value of 47.4MW or the High case of 51.5MW instead.

The data provided by wind farm developers may be more representative. However, SHEPD would note that one of the developers who provided data noted that even after a year of site monitoring differentiating between low load generation levels would be a highly uncertain number.

SHEPD believes that the Reference case of a peak demand of 50MW, a fully utilised link with 600MW of transmission connected wind capacity, and averaged forecast production data from the link Needs Case strikes the right balance of a reasonable assumption of peak demand on Shetland, a reasonable renewable energy assumption for Shetland and reliable wind turbine production data. SHEPD would note that the difference between the various sensitivity cases is small.

h. Period considered by analysis

Section 5.3; Baringa report

SHEPD's fair value assessment, and associated contribution, is calculated on the basis of the DSO acquiring 45 years of usage of the transmission asset, whereas the evaluation of the costs and benefits of the distribution link and the transmission link undertaken by Baringa used a 20 year horizon. The net result of Baringa's cost benefit analysis can be turned into a 20 year annuity. To calculate the contribution value based on 45 years of usage, a 45 year present value of this 20 year annuity was calculated. This approach and calculation has been sense-checked by Baringa.

i. Transmission link cost

Section 6.5.1

SHEPD's contribution value calculations utilise the latest cost value provided by SHE Transmission in the public domain. We refer stakeholders to the most recent information published on the link cost within Ofgem's [consultation](#) on the Final Needs Case and delivery Model for the Shetland transmission project and Ofgem's [September](#) and [October](#) 2019 update letters.

j. Cost recovery - updated

Section 9

We have been working under the assumption that the [policy decision](#) to move Shetland subsidy recovery from North of Scotland distribution consumers to GB-wide recovery using the existing HBRS mechanism remains. As part of its [three-yearly review](#) of the Common Tariff Obligation and Hydro Benefit Replacement Scheme, BEIS consulted on the proposed approach for implementation in summer 2019 which would deliver this revised funding arrangement for Shetland costs from April 2020 onwards. SHEPD has been assisting BEIS through the provision of information on costs of interim Shetland energy arrangements and existing cost recovery mechanisms.

k. CMP 303 - updated

Section 7.5

[CMP303](#) is a proposed modification to the Connection and Use of System Code (CUSC), which was raised by EDF Energy, submitted to the CUSC Modifications Panel for its consideration on 27 July 2018. The proposal argues that the methodology in place to determine the costs of transmission links passed on to generators may unfairly charge generators costs for functionality they may not require. The modification proposes a number of ways to change the calculation methodology, including an option similar to the fair value contribution approach and mechanism set out in SHEPD's Recommendation - see WACM 4, and also hybrid proposals WACMs 5, 6 and 7, in the Final Modification Report. In June 2019 the Authority issued a "Send Back" Decision in response to the Final Modification Report submitted to it for consideration, setting out the requirement for further analysis to

be completed, and for the legal text in the proposed Mod to be made more robust.⁶ Since then, further analysis has been completed and a Final Modification Report has been submitted to Ofgem for approval.

SHEPD responded to the consultation to note that it could be beneficial to consider CMP 303 and the island contribution recommendations in the round, if Ofgem (and stakeholders) agree with SHEPD's whole system proposals, and consider that CMP 303 could offer a route for its implementation. We have also confirmed to Ofgem our view that that any positive decision on CMP 303 which comes after a positive decision on SHEPD contributions towards the island links, and which proposes further cost carve-outs or contributions relating to value to distribution systems, should be considered on a case-by-case basis to ensure no duplication of cost reduction and that the value to distribution system customers identified by SHEPD continues to be reflected.

I. Contribution implementation - *new*

Sections 2, 7; applicable throughout document

SHEPD's 2018 Recommendation set out the means by which the contribution is put into effect, approaching this consideration with the support of independent industry specialists. We set out specifically that:

- the DNO-DSO makes an upfront capital contribution to the cost of the link through a payment to the TO⁷;
- the TO reduces the "Base Circuit Capital Cost" which it notifies to the ESO as the base cost for the calculation of the expansion factors used to calculate the local TNUoS charges for the HVDC link⁸;
- any totex payment made by the DSO would increase the Regulated Asset Value (RAV) of the DSO, and any offsetting contributions received by the TO reduces its RAV additions.⁹

In its consultation, Ofgem confirmed that "we agree the principle of DNO contributions towards a transmission link and consider that there may be circumstances in which we would approve SHEPD making a contribution towards the cost of a transmission link, where this was shown to benefit consumers."¹⁰ Ofgem set out the principles proposed by SHEPD within its May 2019 consultation and posed specific questions on the implementation approach (notably question 3):

- "SHEPD proposes that the contribution would be paid to the relevant Transmission Owner (TO) on completion of construction of the transmission assets";
- "SHEPD proposes that the contribution would have the effect of reducing the capital cost confirmed to National Grid Electricity System Operator (NGESO) for the purposes of calculating the local circuit element of the Transmission Network Use of System (TNUoS) charge for local generators";

⁶ <https://www.nationalgrideso.com/document/145236/download>

⁷ This contribution will be made when a technical test is met which demonstrates that the link has entered service and can meet the Distribution system requirements. SHEPD's current view is that the test may be associated with the Interim Operational Notification described [here](#) and referenced in the Grid Code. The link cost value which is proposed to be utilised in the calculation of the contribution is the latest total cost estimate available at the point at which the technical test is met.

⁸ With specific reference to CUSC 14.15.75, 14.15.76 and related sections.

⁹ *Scottish Hydro Electric Power Distribution: Shetland Enduring Solution - DSO Recommendation*, 16 November 2018, Sections 7.4 and 7.5

¹⁰ https://www.ofgem.gov.uk/system/files/docs/2019/05/shepd_contribution_consultation.pdf, p.4

- “This in turn would allow those generators to reflect those lower charges”; and
- “The value of the payment would be added to SHEPD’s regulatory asset base and would be recovered from consumers over 45 years”.¹¹

Ofgem also set out the two areas where they required further information or clarity, being i) changes to industry codes and ii) changes to licences. We discuss each of these areas below.

Changes to industry codes

In its consultation, Ofgem set out SHEPD’s view at that time that no changes would be required to the CUSC to facilitate our proposals, and that we considered, for reason of simplicity and speed in the tight timescales, that a change of interpretation of the CUSC methodology for calculating local circuit charges would be sufficient, with a transfer of funds between SHEPD and SHET. Ofgem noted that was not clear to them from our engagement with the NGESO that this approach is viable without changes to the CUSC. Ofgem also noted that if it is determined that changes to industry codes are required, these would likely be considered through standard industry code governance arrangements in order to most efficiently manage any interactions with other areas of work.

The specific drafting of interest within the CUSC is at sections 14.15.75, 14.15.76 and related text. These sections says that:

14.15.75 AC sub-sea cable and HVDC circuit expansion factors are calculated on a case by case basis using actual project costs (Specific Circuit Expansion Factors).

14.15.76 For Calculation of HVDC circuit expansion factors, and AC sub-sea circuit expansion factors, shall include only: the cost of the converters (where applicable); and the cost of the cable; and a percentage of the total overhead project costs, defined as the combined costs of the cables and converters (as relevant) divided by the total capital cost of the project.¹²

NGESO’s concern is that “actual project costs” at CUSC 14.15.75, the application of this value and the consequent effects within TNUoS charging are open to interpretation - e.g. as to whether it represents a total cost value or a value from which some costs have already been netted off - without formal clarification within the CUSC drafting.

Following further engagement with NGESO and Ofgem on this issue, and in better understanding NGESO’s concerns with a no-CUSC modification route as noted above, which would remain in spite of a positive policy decision from Ofgem, we have decided to progress implementation via a modification of the CUSC. Assuming a positive decision from Ofgem, SHEPD’s understanding is that Ofgem’s decision would confirm, further to the specific content of SHEPD’s Recommendation and its consultation on implementation, that:

- the DNO-DSO makes an upfront capital contribution to the cost of the link through a payment to the TO on completion of construction of the transmission assets¹³;

¹¹ https://www.ofgem.gov.uk/system/files/docs/2019/05/shepd_contribution_consultation.pdf, p.2, 3, 7, Annex 2

¹² CUSC 14.15.75 and 14.15.76, as amended by CMP 301.

¹³ In the actual implementation of the contribution SHEPD will work with Ofgem to ensure that the value is consistent with the methodology approved by Ofgem and is recovered in a way to ensure that consumers remain NPV-neutral to how and when the final payment is made.

- the TO reduces the “Base Circuit Capital Cost” / capital cost which it notifies to NGENSO as the base cost for the calculation of the local circuit element of the TNUoS charges for local generators;
- this will be reflected in TNUoS charges;
- any totex payment made by the DSO would increase the Regulated Asset Value (RAV) of the DSO, and any offsetting contributions received by the TO reduces its RAV additions; and
- a CUSC modification will be progressed in order to make the CUSC drafting change which clarifies the impact upon “actual project costs” and the associated consequential effect on the “circuit expansion factors” in Sections 14.15.75 and 14.15.76, in order to apply the cost reduction correctly across the local circuit and wider charge elements.

As Ofgem has consulted on these principles, assuming a positive policy decision, they can be set out in the CUSC modification and preserved as that process takes its course.

With NGENSO, SHEPD has agreed to progress the preparation of a CUSC modification which identifies the CUSC defect and develops a proposed modification. NGENSO consider the CUSC drafting change should be straightforward in the context of SHEPD’s proposals, comprising a simple change to provide clarity that in some circumstances “actual project costs” could represent a value net of a contribution confirmed by the Authority and that this would reduce the circuit expansion factors. SHEPD has drafted a CUSC modification which is currently under internal review and will be progressed over the coming months in order to be in place before the relevant TNUoS charges are in effect. Discussions are ongoing with NGENSO and Ofgem on wider implementation details which follow the policy decision. The impact of the contributions on SHEPD and SHE Transmission RAV and revenue in the context of future price controls, for example, will require to be worked through once all of the parameters of those future price controls are consulted upon and determined by Ofgem, as discussed below.

Changes to licences

In its consultation Ofgem noted that it had not received sufficient detail about the scope of proposed licence changes related to the contribution proposals, and wider regulatory considerations such as financeability.

SHEPD provided draft licence changes to Ofgem in June 2019.¹⁴ With reference to these and consideration of the impacts of wider policy and regulatory decisions, e.g. on future price control parameters, we consider that the decision as to what is the best value enduring solution should be taken first, and that detail of financial and regulatory arrangements can be determined following this. As Ofgem stated, aspects such as these would need to be considered in future and Ofgem and SHEPD are engaging on relevant regulatory, financial and legal areas ahead of any future decision.

Further to the additional analysis and review which has been undertaken, industry code changes, licence changes and associated detail will be subject to their own established consultative processes and open to public review (to the extent to which specific matters have not already been determined by Ofgem); therefore we consider that there is no impediment to Ofgem’s decision-making on the policy and principles of island contributions at this stage.

Application within TNUoS methodology

¹⁴ SHEPD has also provided Ofgem with analysis of the impacts of the proposals on our licence and the wider regulatory framework supported by our legal advisers.

The contribution is based on, and calculated using, the total cost of the whole link. Therefore, the whole of the contribution cannot be applied to reduce the circuit expansion factor cost. SHEPD has proposed that only a percentage of the contribution (the contribution allocation ratio¹⁵) is used to reduce the circuit expansion factors. The contribution allocation ratio effectively shares the application of the contribution to the costs attributed to generators and consumers pro rate with the proportion of the costs of the link. These costs are attributed to generators included within the circuit expansion factors, and to the consumer base within the wider charge element, according to the pro-rating applied in existing TNUoS methodology. This delivers a fair and transparent application of benefit. This aspect of implementation has been discussed in detail with NGESO, SHET and Ofgem. This pro-rating approach applies to both HVDC links such as those proposed for Shetland and Western Isles, and for AC links, such as the one for Orkney.

In the context of TNUoS methodology, SHEPD's recommendation proposes a change only in the value of the link cost which is applied within existing TNUoS methodology to determine how much customers are charged, and that the contribution is applied to TNUoS charges according to the pro-rating effect of existing TNUoS methodology. As such Ofgem's May consultation, having consulted on the principle and value of a contribution by a DSO towards a TO asset, has consulted adequately to allow the proposal to be progressed, the only formal change which has been identified to be required in connection with TNUoS methodology being the CUSC modification discussed in this section, which will permit a cost value to be used from which a contribution has been netted off, and will include a formula to determine how much of the cost reduction effective in the link cost value is applied to reduce the expansion factors described in 14.15.76.

m. Pan-island analysis - new

Sections 2, 6.4, 8

Ofgem's consultation set out that SHEPD's proposal to contribute towards another licensee's project also applied to the Western Isles and Orkney links, noting that the contribution methodology for these cases was different in some key aspects to the proposed methodology for the contribution to the proposed Shetland project, reflecting the specific and differing circumstances of security of supply on those islands. Ofgem set out SHEPD's position that there is currently "no near-term, material or critical distribution need for the Western Isles or Orkney which a transmission link would meet, as both island groups have existing links to mainland Scotland with associated embedded generation to maintain security of supply", and confirmed that, because of this, we propose to recommend a contribution based instead on the value of the avoided costs of investment in the Distribution system that these transmission links could allow to be realised. Specifically, Ofgem reflected on the anticipated reduced cost of operating on-island backup generation which we identified in our analysis, and SHEPD's estimates of provisional contribution values of £20m to £26m for the Western Isles, and £15m for Orkney. Ofgem's consultation set out that they considered that for Western Isles and Orkney, the methodology did not yet sufficiently justify why any contribution is appropriate, nor provide sufficient justification of the value of any contribution, should such a contribution be appropriate. Ofgem noted that they would require further justification on these matters from SHEPD, including evidence on the validity of avoided costs and detail on the timing and likelihood of replacement of existing assets, before considering and being able to confirm whether any provisional contribution value is necessary or appears appropriate, and included specific questions on these aspects.¹⁶

¹⁵ The contribution allocation ratio is the percentage of the total project costs represented by the expansion factor costs.

¹⁶ https://www.ofgem.gov.uk/system/files/docs/2019/05/shepd_contribution_consultation.pdf, p.1, 4, 6, Annex 2

As noted in Section e, in July 2019 SHEPD completed further analysis on its proposed Western Isles and Orkney contribution proposals and published updated contribution values for these island groups, confirmed as £15m in each case.¹⁷ The revision from the range of £20m to £26m to the final recommended value of £15m was determined through more accurate analysis by Mott MacDonald of the operation and fuel costs for the standby power stations on the Western Isles, and refinement by SHEPD of associated estimated costs.

Our intention in providing confirmed contribution values and associated approach at this stage was to ensure a consistent opportunity for associated impacts on TNUoS charges to take effect for all island groups. We followed up on these publications with detailed supporting cost, technical and security of supply analysis shared with Ofgem and reviewed in bilateral engagement in July, August and September 2019, including analysis of the impact of moving key assumptions. In October we provided further analysis to support SHEPD’s Western Isles and Orkney proposals on the effects of potential movements in key assumptions on recommended contribution values, and security of supply and unserved energy, developed by Mott Macdonald.

We consider that a positive decision by Ofgem on the contribution principle confirms in principle that a similar approach may apply to the Western Isles and Orkney. As Ofgem set out, SHEPD’s contribution values recommended for the Western Isles and Orkney have been determined on an “avoided cost” basis. Under current arrangements, SHEPD would include relevant estimated costs for its Western Isles and Orkney activities within its RIIO-2 business plan and, subject to Ofgem review and consultation, would recover determined values as part of its allowances in the next price control. Under the contribution proposals, SHEPD will apply those funds to realising benefits from the transmission links instead. We understand that Ofgem will progress its decisions on the specific Western Isles and Orkney contributions in the near future, incorporating consultation as required.

n. Island link Needs Cases - *new*

Sections 8, 10

Ofgem has now published its [decision](#) on the Orkney link Needs Case, which approves the link on the condition of certain criteria being met by December 2021. Further to [interim updates](#) in September 2019, Ofgem has now published update letters on the [Western Isles](#) and [Shetland](#) link Needs Cases which invite the submission of revised Final Needs Cases in light of the 2019 CfD allocation round results and associated demonstration of commitment by developers.

o. CfD Allocation Round 3 outcome - *new*

Applicable throughout document

On 20 September 2019 BEIS published the [results](#) of the 2019 CfD allocation round. The Scottish Remote Island Wind projects which were successful in securing CfDs are as follows:

Island	Project name	Developer	Delivery year
Orkney	Costa Head Wind Farm	Costa Head Wind Farm Limited	2023/24
	Hesta Head Wind Farm	Hesta Head Wind Farm Limited	2023/24
Western Isles	Muaithabhal Wind Farm	Uisenis Power Limited	2023/24

¹⁷ The July 2019 Orkney and Western Isles publications can be read [here](#) and [here](#).

Island	Project name	Developer	Delivery year
	Druim Leathann Windfarm	Druim Leathann Windfarm Limited	2024/25

In the absence of securing a CfD at this stage, SSE Renewables and Viking Energy have set out their intentions to explore alternative options for progressing the Shetland anchor project. [Peel Energy](#) has reportedly stated that they will continue to actively work with stakeholders to find an alternative way of delivering their wind farms and the [Energy Isles](#) project continues to be developed following the investment by Statkraft in early October 2019.

SHEPD recommended to Ofgem that it should publish its decision on the contribution proposals before CfDs were required to be signed in order that, assuming a positive decision, the relevant TNUoS reduction effect in the case of each island link could be taken into account by the projects noted above. We understand that all of the issued CfDs were signed by 18 October.

p. Next steps - new

Sections 8, 10; applicable throughout document

Ofgem has invited the submission of revised Final Needs Cases for the Western Isles and Shetland. Given the recent success of island wind projects in securing CfDs, and the stated intentions of other significant RIW projects to progress their projects through alternative means, we look forward to swift positive decisions from Ofgem which allow the consumer benefits these developments bring to be capitalised upon, whole system arrangements to be progressed and, critically, Shetland's future energy requirements to be conclusively resolved at best value to consumers.