

To: Interested stakeholders

Date: 29 June 2018

To whom it may concern,

Notice of decision on allowed costs for Scottish Hydro Electric Power Distribution (SHEPD) of Extended Interim Energy Solution for Shetland from 2019/20 to 2022/23

Background

In November 2017, we set out our decision to reject the costs of the Shetland New Energy Solution (SNES).¹ This was based on external developments and new information, which affected our assessment of the best energy solution for Shetland. Following this, it was agreed that Scottish Hydro Electric Power Distribution (SHEPD) would manage an extension of services to meet electricity demand on Shetland to 2025, and would prepare a revised cost submission setting out the estimated cost of doing so to the end of the RIIO-ED1 price control (31 March 2023), and indicative costs to 2025.²

We recently consulted on our minded-to position with regard to the proposed costs for the period in the current RIIO-ED1 price control (2019/20 to 2022/23). We proposed to allow £118m (2012/13 prices) for three key cost areas: the extended interim energy solution (£110m); the preparatory work for an enduring solution post 2025 (£3m); and the costs incurred by NG Shetland Link Ltd (NGSLL) since the publication of our minded-to decision on the SNES in July 2017 (£5m). Further detail on these costs and the background to the current interim solution is set out in the consultation document.³

SHEPD originally submitted costs of £133m for this period (£181m to 2025), which were subsequently revised to £123m following our review. The £118m we proposed to allow was 11% below the original submission and 5% below the revised submission.

Around a third of the proposed allowed costs are classified as pass-through, i.e. the costs recovered from consumers are the costs incurred by SHEPD. These costs are outside of SHEPD's control and therefore there is little scope for efficiency improvements. The remaining two-thirds of the costs form part of the totex cost allowances and are subject to our totex incentive mechanism, where the benefit of underspend or burden of overspend is shared between SHEPD and consumers. Due to the level of uncertainty of these costs and

³ https://www.ofgem.gov.uk/system/files/docs/2018/05/shetland - interim solution cost assessment.pdf

¹ https://www.ofgem.gov.uk/system/files/docs/2017/11/shetland new energy solution decision - final 0.pdf

² As the latter costs fall into the RIIO-ED2 period, which will begin on 1 April 2023, they will be considered as part of the RIIO-ED2 price control review.

the need to ensure security of supply in this interim period, we proposed an uncertainty mechanism for the Shetland extended interim energy solution costs that form part of the ex-ante totex cost allowances. This mechanism can be triggered where actual costs incurred are materially more or materially less than the allowance, and would be considered as part of the RIIO-ED1 close out assessment.⁴

Our consultation and responses

We asked four questions in our consultation:

- Q1. Do you agree with our minded-to position on the costs level and treatment for the extended interim energy solution?
- Q2. Do you agree with our minded-to position on the level and treatment of the Shetland Enduring Solution Process Costs?
- Q3. Do you agree with our minded-to position on the level and treatment of the SNES Residual Costs?
- Q4. Do you have any comments on the associated informal licence drafting?

We received seven responses. We summarise below the responses to the first three questions, and provide our views and decision in respect of each. We received no responses to question 4.

Annex A to this document provides a more detailed summary of the responses. Five of the responses have also been published on our website.⁵ The other two are confidential.

Question 1: Do you agree with our minded-to position on the costs – level and treatment – for the extended interim energy solution?

All seven respondents commented on the proposed level and treatment of costs for the interim solution. Other than the SNES Residual Costs (which are discussed under Question 3 below), there were no comments on the pass-through costs and all other comments related to the ex-ante allowances. Table 1 below (on page 7) details the cost treatment of the different areas.

Three respondents were broadly supportive of our minded-to position; two were not; and the remaining two raised issues without stating a clear position of support or otherwise.

The responses to this question can be grouped into two broad themes: costs and flexibility of cost allowances, and the role of renewables.

Costs and flexibility of cost allowances: respondents' views

Two respondents expressed concerns surrounding costs. These were that:

- The totex cost allowances are too low. Respondents stated that, as Lerwick Power Station (LPS) is approaching the end of its operational life, its maintenance and operational costs will be higher than in the past; there was no information to demonstrate lower costs were possible; and low costs could incentivise the wrong behaviour, e.g. underinvestment or procuring lower cost equipment that risks only lasting until 2025 rather than equipment that optimises lifetime costs.
- The 10% cost reduction on the totex cost allowances is unjustified. Respondents stated that the totex incentive mechanism already provides a strong incentive for

⁵ <u>https://www.ofgem.gov.uk/publications-and-updates/costs-extended-interim-energy-solution-shetland</u>

⁴ The level of materiality will be defined as part of the close out process for RIIO-ED1 and will be subject to a formal consultation.

efficiency; that combining an ex-ante efficiency reduction with a reopener with a materiality threshold means there would be a significant risk that this would not be triggered and thus would be ineffective; and any efficiency savings should be targeted to where there were clear grounds for savings.

Respondents raised other views on flexibility that are pertinent to the costs of the interim solution. These were that:

- Other solutions could emerge during the interim period that could address both the interim and enduring energy needs on Shetland, and could be cheaper, cleaner, more sustainable, and contribute to addressing fuel poverty. They urged Ofgem to consider this possibility before committing to the costs for the whole interim period or at least provide some flexibility if a more cost-effective approach was found.
- There is a risk that costs could increase if Sullom Voe Terminal (SVT) does not contribute towards supply on Shetland, or if associated fuel costs escalate significantly.

Costs and flexibility of cost allowances: Ofgem views and decision

The totex cost allowances comprise capital investment (a new engine, battery storage), operational investment (the extension of the LPS work programme, the SVT third party power purchase agreement (SVT PPA) costs), other LPS costs, Shetland Active Network Management (ANM) costs and costs to prepare for the new enduring solution (Shetland Enduring Solution Process Costs).

Having considered the responses, and in light of both additional data and a clearer presentation of that data from SHEPD, we have decided to make some changes to our minded-to position on the following cost categories:

- **New engine**: following further evidence that the forecast costs presented in SHEPD's submission was based on more than a single supplier quote (an issue also raised by one respondent), we are now satisfied that the costs presented by SHEPD represent value for money. Accordingly, we have decided not to apply a 10% efficiency reduction to the baseline allowance.
- Extension of LPS work programme, insurance costs and SVT PPA costs: following the clearer presentation of data, we are satisfied that efficiencies have been made in the past and that SHEPD forecasts for the four years from 2019/20 to 2022/23 include further cost savings. As such, we have decided not to apply a 10% efficiency reduction to the baseline allowance.
- **Shetland ANM costs**: there is scope to apply an efficiency reduction on the ANM baseline allowance, but only for some sub-categories of those ANM costs. Therefore, we retain a proportion of our minded-to reduction in relation to the ANM upgrade costs, but have decided not to apply the 10% efficiency reduction in other areas.
- Shetland Enduring Solution Process Costs: we want to ensure that sufficient allowances are provided to cover the costs of SHEPD preparing for the enduring solution. SHEPD argued that the original costs put forward represented an efficient benchmark and provided additional evidence of cost reductions based on lessons learned from the previous SNES process. Given its importance and wider support from respondents, we have decided not to apply a 10% efficiency reduction to the submitted costs (see below for further details).

We are now satisfied that the costs presented in SHEPD's revised submission in these areas represent value for money for consumers and will ensure the right level of investment necessary to safeguard security of supply for Shetland in the interim period. That is not to say there is no possibility of further cost savings on the baseline allowances as savings can always be made. We believe the totex incentive mechanism, where the benefit of underspend is shared between SHEPD and its consumers, provides a sufficient incentive for SHEPD to seek ongoing efficiencies.

Battery storage

In respect of battery storage, we welcome it as part of the mix for the extended interim energy solution but we are still not fully satisfied with the evidence presented on the costs. The quote for two 4MW batteries is from one source. This does not provide assurances that the costs are most efficient, but neither does it suggest they should be lower. Given the level of uncertainty involved, we have decided to allow the revised costs without the 10% efficiency reduction, however, these specific costs will be ring-fenced and provided on a 'use it or lose it' basis, i.e. any part of the allowance which is not spent on battery storage will be returned to consumers.

Uncertainty and efficiency of ex-ante cost allowances

We have also decided to retain our minded-to position for a specific uncertainty mechanism for the Shetland extended interim solution totex costs. If, by the end of the price control period in 2023, SHEPD's costs have exceeded the ex-ante cost allowances by more than a pre-defined materiality threshold, SHEPD can apply for the allowances to be revised upwards. Ofgem can also trigger the mechanism to revise costs downwards, to reflect actual efficient cost incurred. This gives considerable flexibility to SHEPD, over and above that provided by the wider totex cost allowances. It helps to ensure that genuine efficiencies are shared, but also allows SHEPD to be remunerated when justified overspend is required to implement a different interim solution to that originally envisaged which is in consumers' short, medium and long term interests. This mechanism, including the level of the materiality threshold, will be consulted on as part of the close out of the RIIO-ED1 price control.

Flexibility of cost allowances

With regards to flexibility of cost allowances, in reaching our decision on baseline totex cost allowances, this in no way restricts SHEPD from adopting other solutions that emerge during the interim period that could meet both the interim and enduring energy need on Shetland. As the costs within SHEPD's control form part of the wider totex cost allowances, SHEPD and its consumers share the benefit of underspend or the burden of overspend. Therefore, we expect SHEPD to consider other solutions that may emerge, with a view to maximising value for consumers.

This principle also applies to the SVT PPA costs. As they form part of the totex cost allowances and the ex-ante Shetland extended interim costs, if for any reason SVT does not continue to contribute to meeting supply on Shetland, or if the fuel costs escalate, we expect SHEPD to adopt solutions that generate the most value for consumers.

Role of renewables: respondents' views

Three respondents provided views on the role of renewable generation as part of the interim solution. All considered that there are better alternatives to the interim solution which will allow greater access to low carbon generation. In particular, they noted that the solution could be more ambitious with storage to connect renewables, which has the potential for overall costs to be neutral to the interim solution but with greater long-term

benefits. They encouraged SHEPD to engage with representatives from the Faroe Islands to understand how they are achieving significant levels of renewable generation.

Further, it was suggested that in order to realise the potential of renewables when the enduring solution is implemented and to reduce costs for the interim solution, SHEPD must engage more with developers and that any process run by SHEPD should allow a competitive opportunity for technologies and services that could reduce costs.

Role of renewables: Ofgem views and decision

The consultation was on the costs of SHEPD's interim solution and not on the solution itself. However, if any developments occur during the interim period that would reduce the costs of the interim solution, we expect SHEPD to engage and consider such developments. The totex incentive mechanism and the ring-fenced uncertainty mechanism provide flexibility for SHEPD to take decisions that are in the best interests of current and future consumers in achieving the RIIO outputs, which include both reliability and environmental outputs.

Question 2. Do you agree with our minded-to position on the level and treatment of the Shetland Enduring Solution Process Costs?

Respondents' views

Four respondents made points relating to the enduring solution, specifically, the proposed 600MW HVDC link to Caithness, which the respondents supported stating it will provide renewable generation with access to the GB grid as well as providing supply to Shetland. They were broadly supportive of Ofgem's minded-to position on the level and treatment of costs for the enduring solution, noting that it would be important to spend an appropriate sum, which would minimise longer-term enduring solution costs. However, one respondent questioned the enduring cost element because an alternative solution may be possible which could work in the interim and for the enduring period.

Another key issue raised was timing. Two respondents questioned why the enduring solution has been delayed until 2025. Another noted that early commitment (i.e. in 2018) to a 2025 enduring solution will maximise the likelihood of delivery through the Contract for Difference (CfD) auctions in 2019. There was also a view that SHEPD should set out a clear delivery programme.

A further concern was that the interim solution could distort the process for determining the enduring solution and that the enduring solution should explore increased capital spending on renewables and storage now, because the risk profile is lower.

Ofgem views and decision

SHEPD is obligated to manage security of supply on Shetland and must do so in an economic and efficient manner. The interim solution and the associated consultation on costs has found an economic and efficient way to provide security of supply to the island for the interim period. At the same time, it provides sufficient allowances to cover costs for SHEPD to prepare for an enduring solution. Recognising the points raised by respondents regarding the importance of the enduring solution, we have decided not to apply a 10% efficiency reduction to SHEPD's submitted Shetland Enduring Solution Process Costs.

Regarding timing, the suggested need for the larger HVDC link is primarily driven by the connection of the Viking wind farm, which is awaiting the outcome of the proposed CfD competition, expected to take place in Q1 or Q2 2019. There will necessarily be an impact on the design and timing of future processes for the enduring solution as this and other

information becomes available (e.g. about the LPS emissions restrictions). We expect SHEPD to provide us at a suitable time with a justified needs case supporting their preferred enduring solution. This will include the timing aspects of that solution.

We disagree that the interim solution will have a negative impact for the enduring solution. We will assess the needs case for any future enduring solution, including its benefits, when received from SHEPD, and we expect SHEPD to take into account the interactions of that solution with the interim solution and security of supply on the island.

Question 3. Do you agree with our minded-to position on the level and treatment of the SNES Residual Costs?

Respondents' views

Three respondents broadly agreed with our minded-to approach on the SNES Residual Costs, although it was noted that there was not enough granular detail to judge their level. It was noted that if parties spent money in good faith to prepare for the execution of their solutions, then it would not be unreasonable for them to be recompensed. It was also noted that the competitive process had provided enduring value to consumers by proving the value of a cable link with standby generation. Conversely, one respondent stated that it would be usual in any bid process for any tenderer to be responsible for their own costs and therefore that they would need to understand the associated contractual commitments and arrangements. One party raised concerns that these costs will be recovered from customers in the SHEPD area, and not from GB customers.

Ofgem views and decision

We note the comments from respondents on the recovery of NGSLL's costs. We consider that NGSLL legitimately incurred costs in the period between the publication of our minded-to decision on the SNES in July 2017 and our final decision in November 2017. The submitted costs were subject to an independent assessment that demonstrated that they were reasonably and efficiently incurred and provided enduring value for consumers, which included consideration of the potential value to any future energy solutions. As a result, we consider it appropriate to retain our minded-to position to allow these costs.

In relation to the question of from whom the costs are recovered, we note that this will depend of the Hydro Benefit Replacement Scheme. This scheme currently provides an annual cross-subsidy of £58m to consumers in the north of Scotland and is funded by electricity suppliers across GB. It is for the UK Government to take forward the review of the Hydro Benefit Replacement Scheme, the full details of which it expects to be able to confirm by the time of the next statutory review of the Hydro Benefit Replacement Scheme, which is scheduled to commence in late 2018.

Summary of Ofgem decision

Based on our analysis of SHEPD's cost proposals, the responses received and our principal objective and statutory duties, we have decided to:

- remove the 10% ex-ante efficiency reduction for the majority of the ex-ante allowance, including those relating to the enduring solution, although retain it for parts of the ANM costs;
- provide the battery storage allowances on a 'use it or lose it' basis;
- retain the proposed uncertainty mechanism for the ex-ante costs, which will provide flexibility during the interim solution whereby any material underspend is fully

returned to consumers and any justified material overspend that is in consumers' interests is reflected in revised allowances; and

• allow the recovery of the SNES residual costs as per our minded-to position.

As a result of this decision, we will allow \pounds 122.8m of allowances for the Shetland extended interim energy solution in the last four years of the current RIIO-ED1 price control. The detail of these final allowances is set out in the table below.

Table 1: To	tal Shetland e	xtended in	iterim so	lution allow	vances ove	er RIIO-ED1
(12/13 pri	ces) (£m)					

		Original	Revised	Minded-to	Final	
Category	Sub-category	proposal	proposal	allowance	allowance	Cost treatment
LPS	Capex & Opex	92.1	81.0	75.7	81.0	Ex-ante allowance
	Fuel	27.8	30.0	30.0	30.0	Pass-through
	EU ETS	2.3	2.3	2.3	2.3	Pass-through
	Consents & Permits	0.4	0.4	0.4	0.4	Pass-through
SVT PPA*	Commercially sensitive captured in LPS capex and opex costs above.					
ANM Costs	-	1.0	1.0	0.9	1.0	Ex-ante allowance
Enduring Solution Process	-	4	3.3	3.0	3.3	Ex-ante allowance
SNES Residual**	-	4.7	4.7	4.7	4.7	Pass-through
Total		132.3	122.8	117.1	122.8	

*These costs are commercially sensitive as SHEPD will enter negotiations in the coming months. **These costs were noted at £5.3m in our minded to position, but these were not in 2012/13 prices. These are now in 12/13 prices in line with the other costs and the price base on which RIIO-ED1 allowances were set.

The profile of the final allowances is as set out in Table 2 below. The revised Price Control Financial Model (PCFM) values will be directed by 30 November directly after each financial year.

Table 2: Shetland extended interim solution profiled allowances over RIIO-ED1
(12/13 prices) (£m)

Category	Sub-category	2019/20	2020/21	2021/22	2023/23	Total
LPS	Capex & Opex	29.1	18.0	17.2	16.7	81.0
	Fuel	7.9	7.5	7.3	7.3	30.0
	EU ETS	0.6	0.6	0.6	0.6	2.3
	Consents & Permits	0.1	0.1	0.1	0.1	0.4
SVT PPA	Commercially sensitive captured in LPS capex and opex costs above.					
ANM Costs	-	0.2	0.4	0.2	0.1	1.0
Enduring Solution Process	-	1.4	0.9	0.7	0.4	3.3
SNES Residual		4.7	0	0	0	4.7
Total		43.9	27.5	26.1	25.3	122.8

The remaining interim solution costs from 2023 to 2025 will be assessed as part of the RIIO-ED2 price control.

Yours faithfully,

SIGNED on 29 June 2018

Steven McMahon Deputy Director, Electricity Distribution and Cross Sector Policy

Annex A: Responses to consultation

We received seven responses to the consultation, two of which were marked confidential. The remaining five have been published on the Ofgem website. This annex sets out a summary of all of the responses.

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

All seven respondents commented on the proposed level and treatment of costs for the interim solution.

Of these respondents, three were broadly supportive of our minded-to position. One of the respondents noted that it represented a stepping-stone to an enduring solution. The second respondent highlighted that the proposed costs were significantly lower that the NGSLL-Aggreko solution and, based on the level of information provided, seemed justifiable. The third respondent recognised that there would be costs in securing supply on Shetland in the interim.

One respondent encouraged Ofgem to agree allowances that were sufficient for SHEPD to procure equipment that optimises lifetime costs and raised concerns that any reduction in funding could result in SHEPD procuring lower cost equipment that risks only lasting until 2025. In their view, assets such as the 8MW battery and 7MW engine at LPS will contribute to the enduring solution and they encouraged Ofgem to agree funding that has a longer lifetime.

One respondent did not agree that the minded-to allowances set out by Ofgem provided the required investment and that the proposed cost reductions were unjustified. The respondent argued this on the grounds that:

- historic and forecast information demonstrated the need for greater allowances and they provided further evidence of those costs using recent examples.
- it would be inconsistent with good regulatory practice as Ofgem had not provided information to demonstrate lower costs were possible
- the reduction of costs would incentivise the wrong behaviour i.e. under investment; and
- the use of a 10% additional efficiency reduction is not justified given the totex incentive mechanism already provides a strong incentive and combined with a reopener with a 10% threshold means there would be a significant risk that this would not be triggered and thus would be ineffective.

Another respondent expressed concerns with the 10% efficiency reductions applied to many of the cost items on the grounds that LPS was approaching the end of its operational life and therefore that its maintenance and operational costs will be higher. The respondent noted that any efficiency savings should be targeted to where there were clear grounds for savings.

Renewables

Three of the respondents raised views around the role of renewable generation as part of the interim solution. One respondent felt that there were better alternatives to allow access to low carbon generation, such as greater use of wind with additional battery storage beyond 8MW, that would be cost effective and that funding should not promote longer term use of LPS. The second respondent noted that there was an ample source of wind on Shetland with 9MW waiting to connect and that by designing a system now with more storage and renewables it has the potential for overall costs to be neutral but with greater

longer term benefits. The third respondents encouraged SHEPD to interact with representatives of the Faroe Islands to understand how they are achieving significant levels of renewable generation.

The third respondent raised the point that less than 10% of the islands electricity comes from renewable sources despite the abundance of resources and capacity available to achieve this. They noted that existing wind generation had achieved capacity in excess of 50% and based on this, and developments in GB with regards to integration of renewables, there should be greater engagement with developers which will further reduce costs for the interim solution and allow renewables to play a role when the enduring solution is implemented. For this reason, the respondent argued that any process run by SHEPD should allow a competitive opportunity for technologies and services that could reduce costs.

Enduring solution

Four respondents raised points relating to the enduring solution, specifically the proposed 600MW HVDC link to Caithness. One respondent questioned why the enduring solution had been delayed until 2025 and felt that the proposed length of the interim solution could therefore not be justified. They emphasised that the interim solution should not distort the process to determine the enduring solution.

Similarly, another respondent provided views on timings and noted that in order to provide value to the GB consumer then the enduring solution should be committed to as early as possible to maximise the likelihood of delivery through the CfD auctions in 2019. A third respondent noted that an HVDC link would provide renewable generator with access to the GB grid as well as providing supply to the island.

The fourth respondent encouraged Ofgem to ensure that any process by SHEPD allows a competitive opportunity for technologies and services that reduce costs and emissions and provides enduring services post completion of an HVDC link.

Other views

A number of respondents raised other views that were pertinent to the costs of the interim solution.

- One respondent suggested that there could be other solutions that could emerge during the interim period that could resolve both the interim and enduring need while being be cheaper, cleaner, more sustainable and contribute to addressing fuel poverty. The respondent urged Ofgem to consider this possibility before committing to the costs for the whole interim period or at least providing some flexibility if a more cost–effective approach could be found.
- One respondent noted that it was difficult to assess some of the costs in the document given a lack of detail in some areas. However, they noted that the total cost was understated as it was in 2012/13 prices and did not consider the costs beyond 2023 which would be part of the RIIO-2 price control.
- Another respondent queried whether there was a potential risk either that SVT would be either unwilling or unable to supply to Shetland or whether there would be a risk that associated fuel costs would escalate significantly.
- A third respondent questioned why the cost of the LPS engine was supported by a single quote and noted that this is not normal industry practice.

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

Four respondents were broadly supportive of Ofgem's minded-to position on the level and treatment of costs for the enduring solution.

One respondent stated that it is essential for the work on the solution to be completed in 2018 to inform remote Contract for Difference (CfD) bids, so the enduring solution is delivered as soon as possible. In their view, £3m represented fair value but they argued that SHEPD should set out a delivery programme. Similarly, a second respondent supported the allowance as underpinning the viability of a transmission link solution. Another respondent believed that the enduring solution should explore increased capital spending now, on renewables and storage, because the risk profile is lower.

A third respondent who supported the enduring solution costs noted that, it would be pertinent to spend an appropriate sum which they considered would minimise longer term enduring solution costs. They also set out that proposals for a future HVDC link to Norway combined with an HVDC link to mainland Scotland would provide the required security of supply to Shetland and that this should be factored into SHEPD's assessment of the solution.

One respondent argued that the original costs put forward represented an efficient benchmark and provided additional evidence of cost reductions based on lessons learned from the previous SNES process.

Another respondent questioned the enduring cost element on the grounds that an alternative solution may be possible which could work in the interim and for the enduring period.

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

Three respondents agreed with our minded to approach at some level.

One respondent, whilst agreeing that the costs were reasonable, stated that there was not enough information to judge their level. The same respondent noted that the process had provided enduring value to consumers by proving the value of a cable link with standby generation. Similarly, one respondent noted that it was hard to comment given a lack of detail but that, if other parties spent money in good faith to prepare for the execution of their solutions, then it would not be unreasonable for them to be recompensed. The third respondent while agreeing with the justification of the costs, raised concern that these costs will be recovered from customers in the SHEPD area and not from GB customers.

One respondent noted that it would be usual in any bid process for any tenderer to be responsible for their own costs and therefore that they would needed to understand the associated contractual commitments and arrangements.

Q4: Do you have any questions on the associated licence drafting in Supplementary Annex 1?

No respondents commented on the associated licence drafting.