

Consultation on costs of extended interim energy solution for Shetland

Scottish Hydro Electric Power Distribution

8 June 2018 (redacted)



Executive summary

Scottish Hydro Electric Power Distribution (SHEPD) welcomes the opportunity to respond to [Ofgem's consultation on the costs of extended interim energy solution for Shetland](#). As the licensee with responsibility for ensuring security of supply on the Shetland islands we are seeking an adjustment in allowances which allows us to deliver a continued high quality level of service. We face significant challenges in extending the operational life of existing plant and have been clear that this will require increased investment.

We do not agree that the minded-to allowances set out in this consultation provide for the required investment.

We consider that the reduction in allowances proposed in the consultation is unjustified on the following grounds:

- **Historical evidence:** expenditure during DCPR5 and RIIO-ED1 indicates a stable level of expenditure in ensuring continued operation of Lerwick Power Station (LPS). In some instances, costs have been increasing. These costs are exposed to the strong Totex incentive in place under RIIO-ED1. There is no evidence to support the conclusion that, as plant becomes increasingly aged, the operational costs can fall.
- **Forecast evidence:** we have provided granular forecasts of all the activities required to ensure continued energy security on Shetland. This has been consistent with all previous assessments (RIIO-ED1 Price Control Review and the New Energy Solution (NES) 2017). During the NES process in 2017 in response to supplementary questions we have provided a range of current invoice and purchasing information to demonstrate how we have built up individual forecast expenditure areas. This plus additional information has been provided for the extended interim energy solution assessment.
- **Inconsistent with good regulatory practice:** we acknowledge the challenge created when there are limited benchmarks on which to base cost assessment. It is for this reason we have adopted an approach to evidence that is well above normal price control practice. For Ofgem to consider a minded-to position different from this would require reference to some supporting evidence, it should not be speculative. We have provided a wide range and depth of information to support the continuation of current costs and targeted investment in an engine and battery. There is no evidence to the contrary. We therefore consider the cost reduction unjustified.
- **Incentivisation of the wrong behaviour:** cutting back on key maintenance and preventative spend at an ageing power station is not compatible with an obligation to extend operation to 2025. In respect of price efficiency, SHEPD already adopts procurement and investment processes to minimise expenditure; to achieve volume efficiency SHEPD would have to cut back on work carried out or services procured. This is not conducive to the effective management of ageing plant, nor will it facilitate further operation extensions. We are comforted that Ofgem has acknowledge the need for all the forecast activities. The information presented in this document demonstrates that we are already active in seeking price efficiencies and in some cases exposed to significant cost pressures.
- **Inappropriate application of additional incentivisation:** the Totex incentive mechanism already provides a strong incentive to SHEPD to underspend and retain a share of savings. The consultation goes further than RIIO-ED1 Final Proposals and concludes, "To incentivise SHEPD to minimise costs within their control, we propose to apply an efficiency reduction to all of the ex-ante allowances". With an existing Totex Incentive Mechanism, this additional efficiency incentive is not justified. It would be right for Ofgem to assess the cost efficiency of individual activities and adjust accordingly. However, no evidence or analysis has been presented within the consultation.

Furthermore, as noted above, and in the following pages, the forecasts already submitted are consistent with historic trends (LPS Operating costs), have been accompanied by external evidence and estimates (Engines, battery, LPS, SVT), are based on costings under formulaic contracts (SVT) and are referenced to recent procurement experience (LPS). Our commitment to minimising costs is clearly seen in its forecast for LPS costs which fall by 13% from 2017/18 to 2022/23.

- **Ineffective uncertainty mechanism; risk to SHEPD.** If Ofgem maintains the 10% efficiency reduction on the areas proposed, and the threshold for the reopener on the entire Totex allowance for LPS capex and opex is set at 10% (*[value redacted]*), there is a significant risk that it may not be triggered.

This response provides additional information and evidence which eliminates any uncertainty on the efficiency of our forecast costs.

- **Historic trend evidence:** for LPS we show that the totex investment (opex and capex) incurred in keeping LPS fully operational for the past 5 years is a stable reference for forecasting future costs.
- **Contractor price trends:** we also provide evidence of the changes we have experienced in our 3rd party contractor costs over recent years; this shows cost pressures rather than potential savings.
- **Calculation of future forecasts:** for our contract with Sullom Voe Terminal (SVT) we justify why it is correct to base our forecast on the current contract structure. With reference to the variables used to calculate the subsequent contract cost we demonstrate that the resulting annual costs must therefore be reasonable and justified.
- **Confirmation that 3rd party evidence is recent and applicable:** we can confirm that 3rd party estimates for a new battery are recent and therefore applicable to the forecast period.
- **Forecast costs are [redacted]:** by considering the Active Network Management (ANM) system, we show that we *[redacted]* already employ minimum labour resources. There is therefore no scope for further efficiency savings.
- **Lessons learned:** we demonstrate that, based on lessons learned from the previous NES process, we have reduced the future process costs associated with procuring a standby station. We also note that this is on the assumption that a full NES process is not required.

In the following sections, we set out further detail on specific areas of cost to which the efficiency reduction has been applied. This is submitted in response to the individual questions posed by Ofgem within its consultation, 11 May 2018. We note that the proposed licence drafting may require amendment as a result of the conclusions of this document: that the cost reductions proposed in the consultation are not justified.

Information provided here should be reference in conjunction with that provided through bilateral meetings, answers to supplementary questions under the NES process and evidence provided in support of this current cost submission.

Background – maintaining safe and secure energy supply for Shetland

We have provided Shetland with a secure supply of energy for many years, achieving this with stable controllable expenditure while maintaining an aged Lerwick Power Station (LPS). Supported by PPA contracts with Sullom Voe Terminal (SVT) and through facilitating the connection of significant levels of intermittent generation through the Northern Isles New Energy Solution (NINES) project, Shetland has experienced stable and secure energy supply for decades.

For the first half of RIIO-ED1 we have been managing an integrated energy solution based on totex and pass through allowances agreed at Final Proposals in 2014. This covered the regulatory years 2015/16 to 2018/19. In deriving these forecast costs, we projected the historic trend, reflecting the stable level of outturn costs experienced. Ofgem concluded the RIIO-ED1 settlement providing allowances which reflected the continued stable expenditure profile. Ex ante allowances for LPS operating costs (capex and opex) and SVT PPA costs were subject to the totex incentive mechanism. The licence also allowed for an uncertainty mechanism window (May 2017) for material variances in the operating costs of the Shetland solution. During this period, our costs have closely aligned with the original forecast. As a result of continued maintenance and successful negotiation of third party contracts the uncertainty mechanism was not triggered.

In 2017, we made a cost submission to Ofgem for allowances to manage existing arrangements to 2020. This was part of the recommended Shetland New Energy Solution (NES) process which required continued operation of existing energy arrangements until 2020-2021. These estimates for existing arrangements were again developed to reflect the stable outturn costs incurred. The estimates were revised several times to accommodate first delays to the start date, and subsequently [Ofgem's decision to reject the NES costs](#).

In revisions, the base level of expenditure for baseline arrangements with LPS *[redacted]* was held at a constant level. The exception to this was, in relation to the proposed final extension to 2025, defined amounts for an additional engine and battery, and significant power station works which could no longer be deferred in the context of a further 4 years of operation.

In its consultation, Ofgem has proposed a minded-to position to reduce our allowances for 2019/20 to 2022/23 for maintaining and operating LPS (excluding staff costs), Shetland ANM operational costs, our process to identify an enduring solution for Shetland, and SVT PPA costs post-2020, by 10%.

Responding to Ofgem’s proposed efficiency reductions

1. New large capital items – Engine and Battery

Autumn 2017 Indicative view: Extension of Shetland energy arrangements to 2025

In autumn 2017 Ofgem requested that we provide a high level indicative view of the opportunity for and costs associated with maintaining security of supply by extending generation arrangements to 2025. We were careful to highlight that extending operations beyond 2020 would carry additional risk of significant plant failure and may require investment in complying with increased environmental regulation and / or securing alternative temporary energy solutions. The forecast costs were therefore reflective of the low risk to supply security that the network was prepared to consider for its customers.

We developed our initial proposal in a short timeframe, and in the context of reflecting on the needs and limitations of LPS and wider arrangements, and the responsibility of maintaining security of supply for an additional extended period.

The recommended option proposed at that stage was to continue to meet demand through a combination of LPS and SVT, with the addition of two large thermal engines (one installed immediately, and the second introduced in 2020), and an 8MW/6MWh battery to ease strain on existing ageing LPS engines, provide contingency in the event of engine failure, and accommodate renewable output. The function of the engines, and the battery to an extent, is to provide alleviation of running of older plant at Lerwick Power Station, to allow the management of forced outage rates and other failures, and to provide alternative capacity in the event of material plant failure.

May 2018 Consultation

In the period up to Ofgem’s consultation, we provided further refined forecast costs and activities. We also responded to a number of Ofgem supplementary questions on the derivation of forecasts and technical need. We provided draft detailed proposals and cost estimates for the extension arrangements to Ofgem in February, refining these over the following months.

Through this process and discussions on the applicability of uncertainty mechanism we were able to reduce the total allowance adjustment proposed by removing from its forecast one of the new engines at LPS. The following table summarises the information provided in respect of the engines and battery and how this was reflected within the consultation document.

SHEPD submission	Ofgem consultation
Justification: Detailed narrative on need for capital items; technical assessment of their role in extension arrangements; LoLE security of supply modelling with range of scenarios;	Agreement with need
Forecast: Granular detail provided – unit cost, shipping, installation, O&M; component-by-component level; third party consultant / supplier quotes and documents on estimated cost; outline battery CBA	Does not identify any specific inefficiencies or failure to justify need
Benchmarking: Use of external quotes / estimates for new activities	No reference to external benchmarks / evidence; no specific challenge to forecast In bilateral, Ofgem challenge on age of quote, to ensure up-to-date cost – confirmed as 2017/18 quote (see below)

SHEPD submission	Ofgem consultation
Licence / Incentive arrangements: Approach consistent with RIIO-ED1 Final Proposals: incentive through Totex Incentive Mechanism, uncertainty mechanism to provide for material changes in outturn cost	Applies efficiency stretch in addition to Totex incentive mechanism (double incentive); uncertainty mechanism trigger threshold too high
SHEPD proposal: We have provided evidence to justify the need for an additional engine and battery. It has also provided recent and independent sources against which the cost of these investments can be benchmarked. There is no justification for any adjustment to forecast allowances.	

We will undertake formal procurement processes to secure the capital items. Given the early stage in defining and procuring these items there could not be detailed third party quotes on which to base cost benchmarks. However, this is not in itself evidence that the estimated costs are inflated. Rather, the tendency for 3rd parties to attract potential clients through targeted estimates would indicate the potential for cost increases is more likely. The Totex incentive mechanism will incentivise running these tender exercises in order to achieve efficient costs; the uncertainty mechanism will provide a means for material variances in total Totex item costs against the original allowance value.

We proposed the removal of the second engine from the ex-ante allowance forecast. This was proposed after a period of reflection on the level of installed capacity which was *preferable* to have available, considering potential material failures in the short term and potential loss of supply through the SVT PPA, and that which was *necessary* to have available in the short term. This was prompted both through Ofgem’s analysis of the costs, and further detailed Loss of Load Expectation (LoLE) analysis carried out. In addition to this we secured more recent evidence of engine costs and provided a consultant note on this to Ofgem as supporting evidence. Forecast allowances were revised accordingly.

Treating the need for a second engine at LPS under an uncertainty mechanism is a logical approach to address the risk associated with the extended operation of Lerwick. Refinement of the engine unit costs following additional consultant evidence is a symptom of moving from the initial high level estimate of incremental costs to a more refined basis. Neither of these changes should or could be inferred to mean that the final forecast costs are inflated. Rather, the process of considering operational need and sourcing further external evidence should add confidence to the forecast expenditure submitted. Furthermore, there is no rationale to extend any uncertainty from the forecasting of incremental capital expenditure to the stable, ongoing and enduring operational and capital costs for LPS.

We understand that Ofgem does not have any information which would infer that our forecast engine and battery costs is inefficient. Ofgem has indicated that its believed the battery quote provided as part of our evidence was from 2016/17 and may no longer reflect a market-current cost estimate. We can confirm and would highlight that the quote shared is dated October 2017. We do not believe that there is clear evidence to demonstrate a market reduction in cost over the 6-month period to our submission.

Furthermore, during the supplementary question process we note that we did not have any direct contact with Ofgem’s technical advisors and were therefore not permitted to address any of the concerns which may have been raised during the internal review. We believe we would have resolved these issues more readily if this had been permitted.

Conclusion:

- Refinement of our indicative extension assessment to the final cost proposals cannot and should not infer that the final proposed costs are unjustified. Rather, the process of sourcing further technical and

cost evidence should **increase the confidence** in the forecast provided. The consultation cost reductions proposed are not justified and should not be applied.

2. Lerwick Power Station capex and opex

Pre-consultation: Shetland New Energy Solution and indicative view, Autumn 2017

The process of forecasting and evaluating the necessary extension in allowances for LPS capex and opex for the period post 2019/20 has been ongoing for a number of years. As alternative proposals for securing Shetland demand have progressed and changed on the basis of the proposed New Energy Solution for Shetland (NES) the need to evaluate appropriate allowances for LPS has been ongoing.

Most recent iterations include:

- In 2017, we presented allowance estimates for years 2019/20 to 2022/23 on the assumption that the NES would be in place in 2020.
- A further submission was made when the NES start date was subsequently extended to May 2021. At this stage, Ofgem analysed the costs, progressing through a Supplemental Queries (SQ) process.

During these periods Ofgem interrogated our costs, adopted an SQ process and discussed the basis of forecasts through bilateral meetings. At no point has there an indication that Ofgem considered there was evidence which justified a conclusion that there are potential for savings to be realised, that costs are too high, or that an efficiency reduction was considered appropriate or necessary.

May 2018 Consultation

Following Ofgem’s rejection of the costs of the NES, we revised our view on costs to take into account the requirement to run generation arrangements on to 2025 instead of 2021. In the forecast cost submission (February 2018), we held the same level of LPS capex and opex costs (excluding new large capital items) as proposed throughout 2017. The only increment being the inclusion of an annual value for additional mitigative works at the power station to facilitate the further extension period. This was highlighted in the submission and justification of the need provided.

The following table summarises the information provided in respect of the enduring costs at LPS and how this was reflected within the consultation document. The following sections provide additional evidence and detail demonstrating why the forecast costs are justified and efficient.

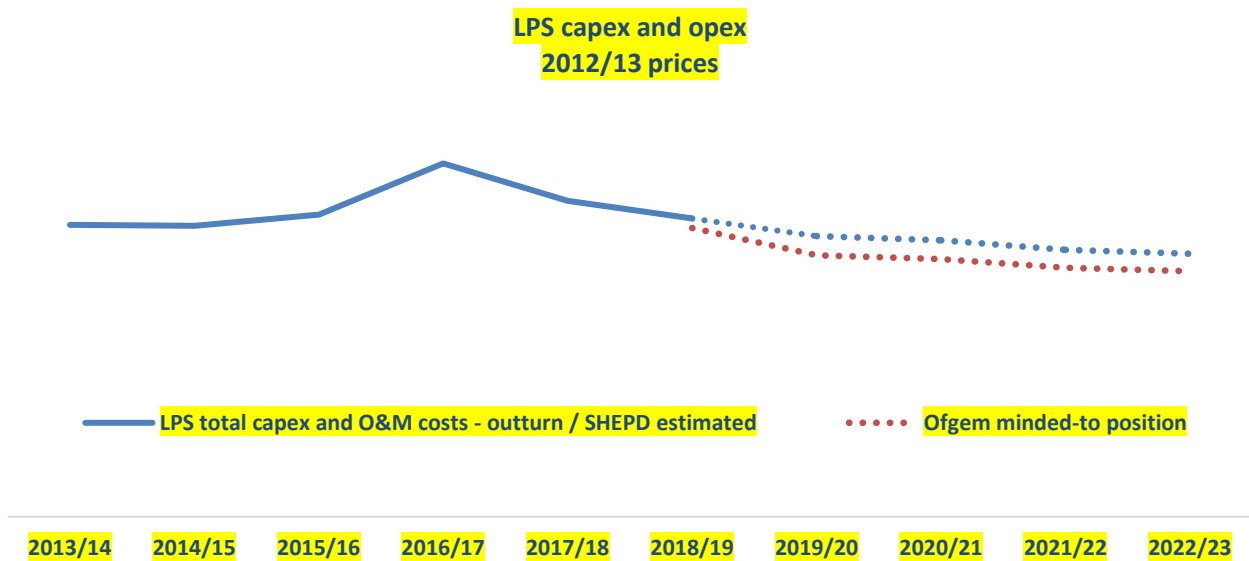
SHEPD submission	Ofgem consultation
Justification: Detailed narrative on LPS maintenance and operational costs; granular cost estimate detailing staffing, maintenance, spare parts, consents and permits, insurance; technical assessment of LPS role in extension arrangements, including challenges associated with forced outage rates and ageing plant; LoLE security of supply modelling with range of scenarios	Agreement with need
Forecast: Granular detail provided – individual task cost - component-by-component level	Does not identify any inefficiencies or failure to justify need
Benchmark: Historical trend; quotes / invoices for specific areas of cost; example evidence packages for overhauls	No reference to external benchmarks / evidence; no specific challenge to forecast

SHEPD submission	Ofgem consultation
<p>Licence / Incentive arrangements: Approach consistent with RII0-ED1 Final Proposals: incentive through Totex Incentive Mechanism, uncertainty mechanism to provide for material changes in outturn cost</p>	<p>Applies efficiency stretch in addition to Totex incentive mechanism (double incentive); uncertainty mechanism trigger threshold too high Ofgem agreement that SHEPD should not reduce maintenance carried out. Therefore, Ofgem challenge is on SHEPD ability to realise efficiencies on prices of goods and services – see below.</p>
<p>SHEPD proposal: We have provided a cost forecast which is fully aligned with the multiple submissions in recent years and evidence of costs incurred. There is no engineering logic which would suggest aging plant will be less expensive to maintain. Furthermore, the additional evidence provided in this response demonstrates the cost pressures faced and the existing steps taken to deliver stable costs. There is no justification for any adjustment to forecast allowances.</p>	

Consistent, evidenced level of costs to date

The figure below shows the costs incurred for LPS capex and opex cost items to date, and the estimated costs proposed in blue, and the impact of Ofgem’s efficiency reduction on allowance values in red.

Figure 1: historic and forecast expenditure. Lerwick Power Station



[Figure redacted]

Ofgem’s proposed allowance values undermine the base level of forecast cost required to maintain LPS in safe working order over the extension period. The efficiency reduction should not be applied to these costs, for the reasons noted below.

Need for LPS capex and opex activity

Granular forecast demonstrates robust forecast process: we have provided Ofgem with a granular forecast to 2023. Each work activity and individual major engine overhauls are itemised. These estimates are in line with the historical Totex trend to date. As noted above, the submission document and subsequent technical report set out the requirement and justification for the maintenance regime, including overhauls, spares holding, and additional mitigative works.

Forecast reductions in line with programme of works: we estimated allowance for LPS capex and opex at 2022/23 is £[value redacted]m. This is 17% lower than 2017/18 actual costs of £[value redacted]m. This change is driven by the detailed programme of major engine overhauls. This is not a forecast of potential savings through lower cost maintenance work. Rather, it clearly shows that the forecast expenditure to achieve operation to 2025 has been carefully constructed to include only those works deemed necessary and has not speculatively held maintenance costs at 2017/18 levels.

Ofgem's minded-to allowance for 2022/23, taking into account the 10% efficiency stretch, is £[value redacted]m. In order to meet this allowance value, we would be required to achieve a 22% reduction on 2017/18 actual costs. This is equivalent to eliminating at least one major engine overhaul over the period.

Plant criticality: we articulated in our 2018 submission, and in more detail in a subsequent technical report, that forced outage rates (FORs) are a major concern for LPS on an ongoing basis. Worsening plant performance is expected over time. We shared analysis on FORs and impact on security of supply, which indicates that if we do not proactively implement further positive changes at LPS to manage FORs over the extension period, the Loss of Load Expectation (LoLE) is modelled to increase beyond the required standard of 3 hours per year [redacted] if there is a material engine failure at LPS.

Forced outage rates are the main driver for the recommended contingency measures which have been proposed. If these contingency measures or their equivalent are not implemented in the suggested timescales, LPS may not be able to perform as required, and we may not be able to meet our obligation to meet security of supply to the agreed standard.

As well as ensuring that LPS is able to continue to perform going forward, some of the proposed additional measures (notably the additional Power Station Works proposals in our LPS Cost Estimate) represent means of pre-empting plant failure. The minimal additional works, noted above, extend beyond historic maintenance requirements. These are necessary to keep the plant safe, reliable and available for the extension period. We consider this as the only prudent action when dealing with plant that is simultaneously nearing 50 years old and one of the only sources of supply in an island system. Not carrying out these works will have knock on effect to the associated plant. Consequently, if we do not carry out these works, existing routine maintenance may not be able to be carried out efficiently and within forecast. This additional works estimate was not included in previous submissions because associated works could be avoided if the plant was running only to May 2021.

As an illustration of the challenges faced in maintaining LPS we have included a recent case study below.

Cost case study: Ruptured seawater pipe

[Detail redacted]

Efficiency of LPS capex and opex costs

Our engagement with Ofgem and the conclusions contained in its consultation indicate that the need for maintenance and operation at LPS was recognised and not in question. Consequently, the only alternative to achieving cost reductions through not carrying out these activities would be to carry them out at lower cost. We therefore take the opportunity to provide further information and evidence to demonstrate that price efficiency is already at the forefront of our practice and policy and consequently, further cost efficiencies cannot be achieved.

Efficient procurement of goods and services: The securing of goods and services for maintaining LPS have their basis in SSEN's formal procurement processes and frameworks. The following sections outline the approach for the major areas of cost within the LPS capex and opex estimate.

– *Maintenance*

1. Major overhaul works, detailed in the **R5 category** within the **Power Station Works element of our LPS Cost Estimate**, [detail redacted].
2. Day-to-day supporting maintenance, as detailed in **categories R1 to R4 in the Power Station Works element of our LPS Cost Estimate**, is carried out by mechanical, electrical and civil contractors, in addition to the LPS staff complement. These contractors are also on fixed-term, fixed price contracts, which are re-negotiated and pre-procured every several years. There is competition on Shetland for skilled workers, including with other industrial parties. It is important to note that we have already proposed some savings on this area in its submission [detail redacted].

The following graph shows [detail redacted]:

- [detail redacted]

Figure 2: [redacted]

[Figure redacted]

3. For large material failures / works, such as the recent seawater pipe repair^{1 2} and the items categorised as **C1 to C5 in the Power Station Works element of our LPS Cost Estimate**, we will carry out formal tender processes to identify the relevant party and cost. As would be expected, the tender process will normally focus on two key elements of assessment: competence, and cost.

It is worth emphasising that, since submission of our cost estimate, two material failures have occurred which were not included within the cost estimate at an estimated cost of £[cost redacted]k. See case study above.

– *Critical and non-critical spare parts*

[Section redacted]. Critical and non-critical spare parts are represented in the **LPS Cost Estimate in both the Power Station Works and Spares elements**.

The formal procurement processes outlined above secure the best pricing available on parts and labour that is available at the relevant time, in the context of also ensuring quality, competence, and buying in competitive (labour) and limited (parts) markets. Further, underpinning procurement strategies and processes is the Totex incentive mechanism, which incentivises us to achieve savings in order to retain these. The detail on historical capex and opex costs demonstrates a level baseline of costs to date. Ofgem has not set out how, in this context, further efficiencies in the order of 10% should be expected to be able to be achieved.

Conclusion:

- The **criticality of LPS** to the enduring security of supply on Shetland does not allow for any deterioration in the maintenance and overhaul programme for the station. We are encouraged that Ofgem accepts the need for all the activities set out in our submission.
- Forecast costs are **in line with historic levels** allowing for small variations due to maintenance cycles. Operating under an **existing strong Totex incentive** this demonstrates that SHEPD's

¹ See Appendix 1 Assessment of Proposed Change to Seawater Piping [appendix redacted]

² See Appendix 2 Seawater pipe repair estimate [appendix redacted]

activities to achieve cost efficiency are achieving steady state expenditure, not a downward trend.

- Our contractual process **already targets cost efficiencies** where and when available. Evidence shows that *[detail redacted]*.
- We are already **accommodating the risk** of operating aged plant as shown by recent failures of assets. Failure demonstrates the need for **continued maintenance** where possible and highlights the **variability of costs and risk already borne** by us.

3. Sullom Voe Terminal PPA post-December 2020 (confidential)

[Section redacted]

4. Shetland ANM

Similar to the forecast costs for LPS, the Shetland ANM system has been in operation for a number of years. This was introduced during the NINES trial and is central to the continued integration of intermittent generation on the islands. The following table summarises the information provided in respect of the enduring ANM costs and how this was reflected within the consultation document. The following section provides additional evidence and detail demonstrating why the forecast costs are justified and efficient.

5. SHEPD submission	Ofgem consultation
Justification: Detailed narrative on Shetland ANM activities over period, including upgrades, additional connections, licence fees, staffing	Agreement with need
Forecast: Granular detail provided – individual task cost - component-by-component level	Does not identify any specific inefficiencies or failure to justify need
Benchmark: Quotes / invoices for specific areas of cost	No reference to external benchmarks / evidence; no specific challenge to forecast
Licence / Incentive arrangements: Approach consistent with RII0-ED1 Final Proposals: incentive through Totex Incentive Mechanism, uncertainty mechanism to provide for material changes in outturn cost	Applies efficiency stretch in addition to Totex incentive mechanism (double incentive); uncertainty mechanism trigger threshold too high

[Section redacted]

The table below summarises our perspective on the ability to realise efficiencies on these costs. This demonstrates that the opportunity to reduce costs by a further 10% do not exist and, consequently, the consultation proposals are unjustified.

Table 1: overview of potential for efficiencies in Shetland ANM costs

[Table redacted]

- *[Section redacted]*

6. Shetland Enduring Solution Process Costs

The following table summarises the information provided in respect of the Shetland enduring solution process costs and how this was reflected within the consultation document. The following section provides additional evidence and detail demonstrating why the forecast costs are justified and efficient.

SHEPD submission	Ofgem consultation
Justification: Narrative and presentations on enduring process activities over period, including DSO feasibility and standby procurement workstreams	Agreement with need
Forecast: Granular detail provided – individual task cost - component-by-component level	Does not challenge specific inefficiencies or failure to justify need
Benchmark: Benchmarks of NES costs	No reference to external benchmarks / evidence; no specific challenge to forecast
Licence / incentive arrangements: Approach consistent with RII0-ED1 Final Proposals: incentive to beat allowance value through Totex Incentive Mechanism, uncertainty mechanism to provide for material changes in outturn cost	Applies efficiency stretch in addition to Totex incentive mechanism (double incentive)

We submitted a granular cost estimate for two future areas of work associated with identifying an enduring solution for Shetland:

- (i) **a DSO feasibility workstream**, running through spring – winter 2018, focusing on assessing whether a contribution to a Transmission-based solution may be the optimum and most efficient means of meeting Shetland’s long-term energy needs, and
- (ii) **a standby procurement workstream**, running from autumn 2019 to autumn 2023 (incl. build phase), on the assumption that a Transmission solution progresses, and does so according to the timescales required by the Shetland generators (energisation by 2023/2024).

DSO feasibility workstream: the cost estimate was based on benchmark costs for similar services incurred through the NES competitive process workstream. We had an opening minimal allowance for the NES costs, and subsequently recovered all of the additional costs incurred as a result of our submission to Ofgem through the 2017 uncertainty mechanism.

In defining the DSO feasibility workstream estimate, we reflected on the intensity of consultant time expected to be required by the work packages, and we also applied a small measure of cost reduction on NES costs on specific areas of work where we considered that this was likely. We did not consider it justified to apply this widely, however, as we consider the NES costs as current benchmarks, and the DSO feasibility workstream as bespoke. We therefore consider these costs as representing an efficient benchmark.

Standby procurement workstream: forecast costs, which represent the majority of the total estimate value, were mapped against the process run for the NES. We rationalised activities, time and consultant costs where we have achieved learning through the NES, or anticipate lower levels of complexity to the NES process (i.e. assuming this process is not procuring services for all of Shetland’s requirements, on a multi-Lot, multi-contract and technology-agnostic basis). For the standby element, we therefore significantly pro-rated down estimated costs from the NES benchmarks. We consider the overall indicative effect of this pro-rating as around [value redacted]%, as set out in the table below.

Table 2: Indicative reduction of standby process cost against NES

Cost category	Indicative standby process cost vs NES	Rationale
Overall indicative reduction on NES costs	70%	

[Detail of table redacted]

Conclusion:

- We have **demonstrated material cost reductions** based on lessons learned from the preceding NES.
- Without alternative benchmark references to indicate how such a complex process can be procured at lower cost, there is **no justification for the 10% efficiency saving** applied.