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Dear Colleague,

Decision on the RIIO-T1 Pre-construction Engineering Outputs ("PE Outputs") for prospective Strategic Wider Works – Substitution of PE Outputs - Scottish Hydro Electric Transmission plc

This letter sets out the decision of the Authority¹ on the Output Substitution ("OS") request from Scottish Hydro Electric Transmission plc (the "Licensee") relating to the Pre-construction Engineering Outputs for prospective Strategic Wider Works ("SWW") scheme of the RIIO-ET1 price control period.

Having completed our review and assessment of the Licensee's submission, we are satisfied, based on the supporting evidence provided, that the estimate of the efficient costs of the alternative PE Outputs are reasonable. We are satisfied with the PE Outputs contained within Table 1 for the purposes of reporting for assessment under RIIO-ET1 closeout².

During the closeout process we will assess this information and consider whether the Licensee has delivered on their commitments and demonstrated that they have efficiently incurred expenditure to deliver consumer benefits. The outcome of our assessment will then be used to calculate the total value of the financial adjustment (if necessary) that is to be given effect through the Annual Iteration Process.

The remainder of this letter sets out the detail behind this decision.

¹ The terms "we", "us", "Ofgem" and "the Authority" are used interchangeably in this letter. The Authority is the Gas and Electricity Markets Authority. Ofgem is the Office of the Authority.

² Elements of the RIIO-ET1 price control need to be settled (or "closed out") once the price control has ended and information on the actual efficient costs incurred or revenue received is available.

RIIO-ET1 PE Outputs

Under the RIIO-ET1 price control framework, the Licensee was required to put forward a well-justified business plan setting out what it anticipates delivering during the price control period. We assessed this plan as part of the making of the price control settlement. In the Licensee's business plan for RIIO-ET2, they identified clusters of prospective transmission reinforcements in their 'best view' plan that it considered suitable for future consideration under the SWW arrangements for delivery during the RIIO-ET1 period.

A total pre-construction allowed expenditure of £67.558m was originally set to enable the Licensee to deliver agreed PE Outputs across the following range of activities:

- subsea links to Shetland and Orkney isles.
- upgrades to specific electricity transmission network boundaries.
- connection of offshore wind located in the Inner Hebrides; and
- provision for future design works and potential public planning inquiries.

In broad terms, the PE Outputs were focussed on the delivery of activities to include: routing, siting and optioneering studies, project design, environmental assessments, technical specifications for cost tenders, and planning consents. The total value of the allowed expenditure available to fund pre-construction activities is fixed and cannot be increased or reduced, but the outputs can be changed (and allowed expenditure reallocated) to reflect the dynamic nature of SWW projects. In the event of non-delivery, an adjustment to baseline expenditure would be made to reflect the full value of the funding provision.

The original list of agreed PE outputs and the allocation of allowed expenditure was specified in Table 1 of Part A of Special Condition 3L of the Licensee's RIIO-ET1 licence³.

Developments since May 2018

The development of the Licensee's transmission network has continued to be affected by several factors, including movements in the generation outlook driven by the Contracts for Difference (CfD) auction process, concerns over affordability and viability of certain offshore and island generators, and a changing background for the delivery of transmission boundary upgrades driven by the annual Network Options Assessment (NOA) process.

³ Electricity Transmission Licence granted or treated as granted under section 6(1)(b) of the Electricity Act 1989 as in force prior to 1 April 2021

The factors have resulted in changes to the generation background across the transmission network and influenced the pace at which activities focussed on the scoping of specific reinforcements progressed within RII0-ET1. This has resulted in the Licensee re-evaluating its approach to development of certain schemes, including

- i. a pause in the pre-construction activities for some projects (Orkney, B0/B1 Boundary phase 1 and the Western Isles and Lewis) and a reduction in the associated pre-construction expenditure expected for some projects following regulatory decisions⁴ or direction from the NOA⁵.
- ii. a decrease in the scope of pre-construction activities and expenditure on a transmission boundary upgrade project (B0/B1 Boundary phase 2).
- iii. the addition of pre-construction activities for specific projects (B2/B4 Reinforcement and Shetland) requiring additional expenditure. The increases offset the collective decreases observed in other projects; and
- iv. the addition of pre-construction activity associated with the development of the proposed Skye reinforcement project⁶.

The OS does not create any implications for the remaining project (Kintyre-Hunterston). where the PE output has been fully delivered. The allowed expenditure for the project remains unchanged.

Detail on the need and justification for proposed changes are set out below.

Projects experiencing reduced levels of expenditure on pre-construction activities

The Licensee's planned island links are dependent on connection applications from specific generation schemes that can underwrite the liabilities and associated security requirements needed to secure capacity on future transmission links.

Development of island generation schemes has been impacted by uncertainty over the commercial viability of the wind and marine generation schemes on all the Scottish islands

⁴ <https://www.ofgem.gov.uk/publications-and-updates/orkney-transmission-project-conditional-decision-final-needs-case>, <https://www.ofgem.gov.uk/publications-and-updates/shetland-transmission-project-decision-final-needs-case-and-delivery-model> and https://www.ofgem.gov.uk/system/files/docs/2019/09/update_letter_western_isles_and_shetland_1.pdf

⁵ changes in the NOA on two large East Coast reinforcement projects ECU2 (Alyth Substation and OHL upgrade) and ECUP (Kintore Substation and OHL upgrade).

⁶ in line with Ofgem's expectation as set out in the May 2018 Direction that the generic PE output category will be replaced with a named project.

within existing electricity generation support frameworks.⁷ As a result, the contracted position on the islands continues to change.

The OS request confirms that the continuing uncertainty over financial viability has had an impact on the progress of the proposed transmission links to the islands.

For Orkney, following the conditional approval of the Needs Case in 2019⁸, the final pre-construction activities to develop the scheme for delivery were stopped as it was not economic or efficient to continue with these works, pending the outcome of the conditional approval. The result is a decrease in pre-construction expenditure and the Licensee is seeking refinement of the allowed expenditure associated with the delivery of PE Output for this project.

In the case of the Outer Hebrides (Western Isles and Lewis) project, a competitive tendering exercise for the link based on a revised project scope was completed and certain pre-construction activities were undertaken (e.g. revalidation of the preferred solution and additional subsea survey costs).

However, the outcome of the UK Government's 2019 Contract for Difference (CfD) auction did not reduce the uncertainty around the financial viability of the project and activities to develop the scheme for delivery were stopped as it was not efficient or economic to progress with the required development. The Licensee is therefore seeking refinement of the pre-construction works and a reduced allowance to deliver the associated PE Output.

Development of B0/B1 transmission boundary upgrade project (phase 1) has also been impacted by changes to the generation and transmission background and was put on hold. The licensee confirms that the expenditure incurred across the T1 period is comparable to the level of allowed expenditure allocated in May 2018. The Licensee is proposing a small downward adjustment to the existing level of allowed expenditure to deliver the associated PE Output.

Phase 2 of the B0/B1 upgrade work was put on hold following the NOA assessment in 2016. The previous OS submission highlighted the possibility that this position may change based on future NOA assessments and pre-construction funding would be required to develop this scheme economically and efficiently. However, the signal from the subsequent NOA assessments has remained at a hold position, as it is deemed uneconomical when assessed against the Future Energy Scenarios background. The Licensee is requesting a reduction in the baseline expenditure to deliver the associated pre-construction output on this scheme.

⁷ Including: CfD, Feed-in-Tariffs and the Renewables Obligation.

⁸ See footnote 11.

Projects experiencing increased levels of expenditure on pre-construction activities

In the case of the Shetland link, given the uncertainty of the progression of future generation on the islands and the influence of government policy (e.g. CfD auctions) and other requirements (e.g. planning consents), the development works for the project have been sporadic.

Following the approval of the Needs Case in July 2020⁹ and the decision of the connecting generation to progress with a 2024 connection date (despite not qualifying for a CfD), there was a requirement to refine the scope of the project. The Licensee explains that this development required a large amount of the works carried out previously to be revalidated to ensure consents, design and scope still met requirements (and the contractual connection date).

As a result of updated information, the scope of pre-construction development works on Shetland changed and resulted in a material increase in expenditure incurred against the modified baseline in 2018. The Licensee therefore proposes to increase the value of allowed expenditure associated with the delivery of the associated PE Output.

The B2/B4 transmission boundary upgrade project has also seen an increase in costs. This increase has been driven by the NOA process and further development works on the East Coast 275kV reinforcement project (NOA code: ECU2), the East Coast 400kV reinforcement project (NOA code: ECUP)¹⁰. The increase has not been offset by the reduced pre-construction activities associated with the EHVDC link within the T1 period.¹¹

The signal from the NOA assessment for both the ECU2 and ECUP reinforcement projects changed from a hold position in 2014 to 'Proceed' in 2018, due to a change in the generation background. The project restarted in June 2018.

Given the length of time that had lapsed since the projects were placed on hold, the licensee reviewed and revalidated the existing development work. Elements of work were then redesigned to reflect changes driven by system operability requirements and engineering standards. The associated key activities included the installation of reactive compensation equipment (moving substation asset types to a Gas Insulated System system), further environmental studies due to the change in technology and revised

⁹ <https://www.ofgem.gov.uk/publications-and-updates/shetland-transmission-project-decision-final-needs-case-and-delivery-model>

¹⁰ the NOA status of these schemes changed from a 'Delay' in 2014 to 'Proceed' in 2018, due to a change in the generation background. Given length of time between the signal change, further work has been required to revalidate previous work.

¹¹ In 2019, the annual NOA process recommended an alternative landing point in the north east England. Further studies and marine survey work are required, as well as additional consenting. However, the licensee indicates that the activity and costs will be captured under RIIO-ET2 timescales.

planning applications due to the impact on substation design. For ECU2 there was also additional condition assessment work of the 275kV overhead line.

The amended signals from the NOA process have increased scope of development works and resulted in an increase in expenditure incurred against the modified baseline agreed in 2018 for the ECU2 and ECUP projects. The Licensee is therefore requesting an increase in the allowed expenditure allocation to deliver the associated PE output ("B2/B4 reinforcement project").

OS Request

The Licensee proposes to fund the additional costs of the proposed Shetland link and the B2/B4 reinforcement project by re-allocating a proportion of the value of allowed expenditure made available from the following steps.

- i. The collective reductions in expenditure when measured against the current allowed expenditure allocation for the following four PE Outputs.
 - Orkney Isles
 - Western Isles and Lewis, and
 - 'phase 1' and 'phase 2' works deemed necessary to upgrade the B0/B1 boundary.
- ii. The removal of the generic 'prospective future SWW' PE output category.

Skye reinforcement

The Licensee has confirmed its intention to add pre-construction activity associated with the development of the proposed Skye reinforcement project to the PE Outputs.

The scope and complexity of the Skye reinforcement project has developed significantly throughout the RIIO-ET1 price control period. The original project - an additional single wood pole circuit from Skye to Fort Augustus alongside the existing single circuit OHL - was put on hold as there were non-load requirements on the existing line which needed to be considered to deliver the most economical and efficient solution. The project was therefore not considered as part of the May 2018 OS request.

In 2019 the scope changed from an additional wood pole line to replacing the existing line with a steel tower double circuit. The proposed route passed through areas of scenic, environmental and conservation status, increasing the complexity and level of pre-construction works (e.g. environmental studies, consent preparation and more detailed design works on tower alignment and access construction). This revalidation and redesign of PE outputs has incurred additional expenditure.

The Licensee proposes that the Skye reinforcement project development activities are captured under a new Skye Reinforcement PE output category with a baseline allowance of £3.008m.

Table 1 sets out the Licensee's proposed reallocation of the fixed baseline allowance that was included in Part A of SC 3L of their RIIO-ET1 Licence.

Table 1: summarising the licensee's adjustments

Proposed PE Outputs 2009/10 price base	A: Current baseline allowance	B: Proposed adjustment to baseline allowance	C: Proposed baseline allowance (A+B)
Orkney Isles	13.840	-3.157	10.683
B0/B1 boundary reinforcement Phase 1	5.764	-0.015	5.749
B0/B1 boundary reinforcement Phase 2	4.993	-2.742	2.251
Outer Hebrides (Western Isles and Lewis)	9.971	-1.233	8.738
Prospective future SWW PE Outputs	9.547	-9.547	0
<i>SUBTOTAL: i</i>	44.115	-16.694	27.421
Skye Reinforcement	n/a	+3.008	3.008
Shetland link	7.569	+10.428	17.997
B2/B4 boundary reinforcement	14.723	+3.258	17.981
Kintyre Hunterston	1.151	0	1.151
<i>SUBTOTAL: ii</i>	23.443	+16.694	40.137
TOTAL (i+ii)	67.558	0	67.558

The assessment process

We allowed £67.558 million in the RIIO-ET1 price control for the Licensee to deliver engineering activities in preparation of constructing infrastructure projects expected to be considered under the SWW arrangements.

The Licensee raised a request in April 2021¹² to amend the details of the PE Outputs prescribed in the RIIO-ET1 licence through an OS request. The Licensee submitted that there had been a significant change in the future outlook for generation connections or demand requirements and that to deliver certain PE Outputs that were contained within in Table 1 of Special Condition 3L of their RIIO-ET1 licence was no longer economical and efficient

¹² An initial request was raised in July 2020. Given the resource demands throughout the Draft and Final Determinations for RIIO-T2 assessment of the OS was postponed. An updated OS request, taking into account the actual expenditure for the final year of RIIO-ET1, was submitted in April 2021.

Table 2 below summarises the key details of the OS request received from the Licensee, covering five categories:

- no change to the description or to the allocation of allowed expenditure.
- removal of the generic PE output category and replacement with a new PE output associated with activities required in the preparation of constructing a specific reinforcement project on the licensee's system.
- establish a level of allowed expenditure associated with the delivery of the new PE output formed in step ii to reflect the value of costs incurred within the RIIO-ET1 period.
- identify the collective reduction in the actual level of pre-construction expenditure across four existing projects to deliver the PE Outputs relative to the level of allowed expenditure allocated; and
- reallocation of the remaining proportion of the fixed allowed expenditure made available because of steps ii, iii and iv. The reallocation is spread across activities required in the delivery of PE outputs for three existing projects requiring additional expenditure.

Table 2: summarising the licensee's OS request¹³

Driver	Current PE Outputs	Current allowed expenditure	Description of proposal	Proposed allowed expenditure	£m change
i.	Orkney Isles	13.840	No change	10.683	-3.157
ii.	Shetland link	7.569	No change	17.997	+10.428
iii.	Prospective future SWW Pre-construction Engineering Outputs	9.547	Skye Reinforcement	3.008	-6.539
iv.	B0/B1 boundary reinforcement Phase 1	5.764	No change	5.749	-0.015
v.	B0/B1 boundary reinforcement Phase 2	4.993	No change	2.251	-2.742
vi.	B2/B4 boundary reinforcement	14.723	No change	17.981	+3.258
vii.	Kintyre Hunterston	1.151	No change	1.151	-
viii.	Outer Hebrides (Western Isles and Lewis)	9.971	No change	8.738	-1.233
		£67.558m		£67.558m	0

¹³ All financial values are shown in the 2009/10 price base.

Ofgem decision

In assessing the licensee's OS request we reviewed the notice and supporting material, as well as supplementary responses provided by the licensee to our follow up queries. We examined the information provided in the OS request to confirm that the scope and quality of the information are appropriate. We also considered the costs of the main activities and/or deliverables involved in each project to get a break down of total pre-construction costs to ensure these are economical and efficient.

We relied on supporting information provided by the licensee about the scope of tasks included in each activity to determine the specific costs incurred in relation to progressing only pre-construction works. We sought additional information in instances where the breakdown of common activity was not sufficiently explained.

On 1 April 2021, the Licensee's Electricity Transmission Licence was modified to implement the Licensee's RIIO-2 price control settlement ("RIIO-ET2"). As such, we have conducted this assessment in accordance with the legacy terms of the Licensee's RIIO-ET1 licence¹⁴.

Special Condition 3L of the Licensee's RIIO-ET1 licence¹⁵ provided for the circumstances where an Output Substitution ("OS") would have effect (Part B) and the assessment procedure for the Authority in assessing the OS request.

We have assessed the Licensees OS request in accordance with Part B and Part C of Special Condition 3L of Licensee's ET's RIIO-ET1 licence, as it was in force prior to 1 April 2021. Following this assessment, and based on the information provided, we are satisfied that OS request is justified as being economical and efficient.

Any impact of this decision on closeout will be consulted on as part of the statutory consultation on RIIO-ET1 closeout in due course.

In terms of the closeout process,

- we require the licensee to submit a report on any variance between actual costs and outputs and those specified in table 1 of this letter.

¹⁴ Electricity Transmission Licence granted or treated as granted under section 6(1)(b) of the Electricity Act 1989 in force prior to 1 April 2021

¹⁵ Electricity Transmission Licence granted or treated as granted under section 6(1)(b) of the Electricity Act 1989 in force prior to 1 April 2021

- in the event that the licensee does not deliver or only partially delivers one or more of the prescribed PE Outputs, the associated level of allowed expenditure will be further considered as part of the RIIO-ET1 close out process.
- we will set out the outcome of our assessment and adjust baseline expenditure to return any unspent allowance to consumers.

As the Licensee's RIIO-ET2 Licence will not be modified following this decision, this decision letter gives effect to our decision on the OS request from the Licensee relating to the PE Outputs for prospective SWW scheme of the RIIO-ET1 price control period.

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Steve McMahon,
Deputy Director, Networks
Duly authorised on behalf of the Authority

30 July 2021