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Direct Dial: 020 7901 7046
Email: Thomas.Johns@ofgem.gov.uk
Date: 30 January 2017

Dear Colleague,

Determination on SHE Transmission's additional funding request and Opening Asset Value for the Beauly-Denny electricity transmission project

Beauly-Denny is an electricity transmission project to upgrade the capacity of the key strategic line between Beauly in the north of Scotland and Denny in central Scotland. The project was developed jointly by transmission owners (TOs) SHE Transmission and SP Transmission (SPT) to reduce generation constraints and losses on the network, and facilitate the connection of additional renewable generation. The project has been delayed by a Public Inquiry and subject to additional consenting requirements by both local councils and the Scottish Government. In November 2015 the project was energised ahead of final reinstatement works completed in the autumn of 2016.

Following our minded-to consultation in November[1], SHE Transmission has provided a final independent audit report on the cost of the project. This report sets out that SHE Transmission has overspent by £58.8m[2] on its part of the project, which is £3.3m less than identified at the time of the November consultation. It also identified some minor changes in the profile of expenditure across years.

In accordance with the approach proposed in our consultation, we have determined that £27.8m of this £58.8m additional expenditure will be recovered during construction and the five-years following construction. This figure is higher than the £26.9m figure we consulted on. This is due to an extra £0.9m being allowed for contractor costs. The reason for this updated figure is set out later in this letter.

This letter also confirms that the project's Opening Asset Value (OAV) following construction will be increased from £450.4m to £454.2m[3] to reflect the additional £27.8m of allowed expenditure. It should be noted that this OAV of £454.2m is higher than the £453.9m figure consulted on in November (this updated figure is again due to the additional £0.9m allowance for contractor costs). This letter also confirms that the construction period will be extended by one year to reflect that project delays now mean that certain reinstatement works had to be completed within 2016/17.

[1] https://www.ofgem.gov.uk/publications-and-updates/consultation-she-transmission-s-request-additional-funding-its-beauly-denny-project
[2] All figures in this letter are represented in £m 09/10 unless otherwise stated
[3] For the purposes of the TIRG licence condition, in which figures are shown in pounds thousand, this figure is represented as £454,195

Background on the funding mechanism and the November consultation

The Beauly-Denny project is funded under the Transmission Investment for Renewable Generation (TIRG) mechanism[4]. The TIRG licence mechanism allows Transmission Owners, under specific circumstances, to request additional construction funding for efficient overspends outside of their control. The TIRG licence condition refers to this as an Asset Value Adjusting Event (AVAE). An AVAE can only be awarded where the TO is able to demonstrate that additional efficient expenditure has been incurred on the project due to changes in the scope of work required on the project.

The TIRG mechanism also requires us to set the OAV for the project. This is the figure that determines project revenues for the five year period following the end of construction (the post-construction period). During the post-construction period, the TOs can retain the value of efficiency savings or losses against the allowed construction expenditure for the project. This gives TOs an incentive to deliver projects efficiently.

In November 2016 we consulted on our view that £26.9m of SHE Transmission’s overspend on the Beauly-Denny project should be reflected in the construction and post-construction revenues for the project.

We also consulted on our view that the £26.9m adjustment should be applied in line with SHE Transmission’s profile of actual expenditure on the project, and that the project’s OAV, which sets the revenues for the post-construction period, should be adjusted to £453.9m.

Detail of how we reached the figure of £26.9m can be found in Appendix 1 of the November consultation.

Consultation responses

We received two responses to our November consultation. SHE Transmission said there would need to be further discussion and work on the implementation of our proposal. British Gas referred to its view on the importance of us clearly identifying the likely revenue impacts of funding adjustments and on the information needed in order to fully assess our proposal.

Our consideration of these responses

Following further consideration and discussion with SHE Transmission on the implementation of the adjustment, we have determined that the adjustment should take place in the manner identified in the November consultation. This approach, which is consistent with previous AVAE decisions (such as for SPT’s Beauly-Denny project in 2014), is described in the “Funding and revenues” section of this letter below.

SHE Transmission favoured an approach that does not adjust revenue allowances in historical years and incorporates the £27.8m as an addition in 2017/18 that would then be recovered during the five year incentive period. In comparison to SHE Transmission’s proposed approach, we consider that the approach proposed in our consultation best protects consumers. In response to the changes in scope (eg the reprogramming of the SPT

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[4] “The TIRG mechanism” and “The TIRG licence condition” are both used in this letter to refer to Special Condition 3J of SHE Transmission’s electricity transmission licence

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works), SHE Transmission underspent in the early years of the project. Failure to adjust historical revenues as part of the AVAE to reflect this would provide SHE Transmission with an undue financial benefit from receiving some of the project revenues earlier than required.

In response to the points raised by British Gas, we have updated the tables in Appendix 2. The adjusted tables should provide a clearer representation of the indicative impact of our decision on SHE Transmission revenues.

In Appendix 3 we have also provided the calculations behind how the 2011 AVAE adjustment[5] corresponds into the £456m figure referenced in Appendix 2.

Update to the figures on which we consulted following final independent audit report

In the November consultation we identified specific costs that we considered eligible for an AVAE, and other specific costs that were not eligible. In addition we identified £23.1m of costs relating to contractual renegotiation that were partially eligible for an AVAE. We proposed to treat this £23.1m as eligible for an AVAE in proportion to the amount of the rest of the overspend that met the criteria for an AVAE.

As referred to above, the £62.1m overspend figure in our consultation included an estimated £3.3m expenditure on a risk allowance for additional mitigation which, the final independent audit report shows, SHE Transmission has not in fact incurred. Applying the approach from our consultation, the effect of this has been to increase the proportion of the contractual-renegotiation costs that we have treated as eligible for an AVAE (an increase of £0.9m). This is because the proportion of the rest of SHE Transmission's overspend (ie. everything except for the contractual-renegotiation overspend) that is eligible for an AVAE has increased from 43.3% to 47.3%, due to the removal of the £3.3m overspend on the risk allowance.

[5] https://www.ofgem.gov.uk/sites/default/files/docs/2011/09/beauly-denny-shetl-avae-determination-final.pdf

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Table 1 –Updated calculation of percentage of contract renegotiation costs that we consider driven by changes in scope

	Total overspend(£m) - November consultation	Total cost to be included in AVAE (£m) - November consultation	Percentage of total cost to be included in AVAE (%) - November consultation	Adjustment from audited final costs	Total overspend(£m) - This decision	Total cost to be included in AVAE (£m) - This decision	Percentage of total cost to be included in AVAE (%) - This decision
Additional cost not driven by changes in scope	22.1	0	0%	-3.3	18.8	0	0%
Additional cost driven by changes in scope	16.9	16.9	100%	0	16.9	16.9	100%
Subtotal	38.9	16.9	43.3%	-3.3	35.7	16.9	47.3%
Remaining contractual costs:	23.1	*=43.3% × 23.1* = 10.0		0	23.1	*=47.3% x 23.1* = 10.9	
FINAL TOTAL	**62.1**	**26.9**	**43.3%**	**-3.3**	**58.8**	**27.8**	**47.3%**

Funding and revenues

The required adjustments to SHE Transmission's annual revenue allowances for the project will be applied through the restatement of historical and future allowances within its revenue reporting model. Adjustments applicable to historical years will flow through the correction factor within SHE Transmission's revenue model. This mechanism is designed to allow over or under recovery in previous years to be factored into allowed revenue for future years. Adjusting revenue allowances in previous years will alter the over or under recovery position in that year, and this will flow into future revenue allowances within the remainder of the RIIO-T1 period.

Our determination

We have carefully considered the information provided to us, including the AVAE notice, final audited costs the responses to the November 2016 consultation and other relevant information. We are satisfied that all criteria and requirements in the TIRG condition have been met.

For the reasons set out in Appendix 1 of this letter, and in accordance with Special Condition 3J.6, the Authority determines that a TIRG AVAE has occurred. The £27.8m AVAVE relates only to additional expenditure that meets the following AVAE criteria:

1. The works result from a relevant amendment to the scope of construction works;
2. The costs in the licensee's notice are expected to materially increase or decrease the average asset value for the relevant construction years compared to the existing allowance;
3. The costs are expected to be incurred or saved efficiently; and
4. The costs cannot otherwise be recovered under the TIRG revenue allowance

This AVAE will adjust SHE Transmission's revenue allowance for the transmission investment project, Beauly-Denny, to reflect the £27.8m increase in allowed expenditure

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within the construction period (2010/11 – 2016/17) and the five year incentive period that follows it (2017/18 – 2021/22).

Schedule C of the TIRG condition sets out the annual average asset valuation ($FTIRGC_t^i$ term) of each project and associated annual depreciation ($FTIRGDepn_t^i$ term). These terms are used in paragraph 3J.5 to calculate the correct allowed revenue for each TIRG project. In order to adjust SPT's revenue allowance to reflect the additional allowed expenditure, it is necessary to adjust the annual valuation of these terms accordingly. The licence allows for these terms to be adjusted through our determination of AFFTIRGCt (to adjust the $FTIRGC_t^i$ term) and AFFTIRGDepnt (to adjust the $FTIRGDepn_t^i$ term).

For the relevant TIRG years, the determined values of the $AFFTIRGC_t$ and $AFFTIRGDepn_t$ terms are shown in Table 6 of Appendix 2.

In addition, this AVAE also adjusts revenues during the post-construction efficiency period. The adjusted figures can be seen in tables 7 and 8 of Appendix 2.

Next Steps

Our decision will adjust SHE Transmission's revenues from 1 April 2017. If you have any queries regarding this determination, please contact Thomas Johns (thomas.johns@ofgem.gov.uk).

Yours faithfully,

Kersti Berge
Partner, RIIO Networks

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Appendix 1 – SHE Transmission's funding request and our findings

SHE Transmission's AVAE request was for an additional £58.8m in construction funding. The drivers for this increase were identified by SHE Transmission as:

- Additional cost of tower foundation and slope stability works: £13.6m
- Impact of Scottish Power Transmission reprogramming its works: £5.2m
- Additional cost of securing land access: £8.8m
- Costs of renegotiating contract with principle contractor: £32.9m
- Decreases in other cost areas: -£1.7m

For us to determine that an AVAE has occurred, we must be satisfied that:

1. The works result from a relevant amendment to the scope of construction works;
2. The costs in the licensee's notice are expected to materially increase or decrease the average asset value for the relevant construction years compared to the existing allowance;
3. The costs are expected to be incurred or saved efficiently; and
4. The costs cannot otherwise be recovered under the TIRG revenue allowance

The table below identifies the costs originally asked for, the proposed adjustment identified in our November consultation and our subsequent final determination:

Table 2 – Breakdown of SHE Transmission funding request and determination of our final revenue adjustment (£m 09/10 prices)

Area of overspend	AVAE request	Proposed Adjustment in November consultation	Final determination of adjustment
Tower Foundation/ Slope stability	13.6	11.7	11.7
SPT re-programming	5.2	5.2	5.2
Land Access	8.8	0.0	0.0
Other Costs	-1.7	0.0	0.0
Contractual negotiation costs	32.9	10.0	10.9
Total	**58.8**	**26.9**	**27.8**

Reasons for our findings:

Below we provide an overview of each of these areas of cost alongside our findings. Aside from an update to the "Other Costs" category and subsequent impact on the percentage of each contractor-related cost area that we determine to fall within the AVAE, the reasons below have not changed from the equivalent section of the November consultation.

Additional cost of tower foundation and slope stability works: £13.6m

Once access had been gained for tower sites and other locations along the route, detailed survey data and site investigations identified that additional cost and work was required to stabilise the new towers and maintain slope stability.

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In the case of tower foundations, the type of terrain along a route will have a significant bearing on the type and subsequent cost of its foundations. SHE Transmission found that ground conditions, including the level of rock along the route, were worse than expected. This meant that it had to install significantly more mini-pile and steel-driven tube foundations than it had anticipated. These are more robust foundation designs that are more expensive than the conventional foundation design usually employed. SHE Transmission's original estimate, based on a small sample of sites indicated that 67 mini-pile foundations and zero steel-driven tube foundations would be required across the 539 foundations that were actually delivered. This sample was based on conventional design assumptions for foundation design, British Geological Survey records, site visits and peat probing, but not the more detailed site investigation that became available only once full access to the tower sites was secured. In practice, 221 had to be mini-pile and nine steel-driven tube.

We have reviewed the cost increase relating to the change in foundation design, and the supporting justification from SHE Transmission's consultants, and find that the additional costs incurred on foundation work relate to a change in the scope of work required, above and beyond the level previously funded in SHE Transmission's construction allowance. We therefore determine that the associated additional costs due to foundation design changes are efficient and are considered a change of scope that is eligible for additional funding through an AVAE.

In the case of slope stability, additional works were required that had not been expected. At 55 sites, owing to the difficulty of the terrain in which the project was situated, additional work was required to protect construction workers or public roads from materials dislodged during construction above them.

We have determined that this qualifies as additional work above and beyond the scope anticipated and funded at the start of the project. We also consider that there is no evidence that the associated cost incurred are inefficient, and therefore determine that this should be funded through an AVAE.

Our analysis found that £1.9m of the £13.6m related to interface and land access delays. We do not consider that this is related to an additional scope of work. Therefore this is not incorporated within the AVAE.

Impact of Scottish Power Transmission reprogramming its works: £5.2m

In December 2014, we approved an AVAE for SP Transmission's work on the project. This included an extension of the construction period to reflect a need to re-programme the project due to additional mitigation works and delays that had occurred through the public enquiry process. This had a knock-on impact on SHE Transmission's project work.

The interface with SP Transmission's network occurs at the very south of SHE Transmission's work on the project. Therefore, when the re-programming was identified, SHE Transmission adjusted the order in which it completed its work to minimise the impact of SP Transmission's changes on to its work by re-deploying staff from its overhead line contractor, to the central section of the new line. However, due to the extent of the impact, SHE Transmission was unable to avoid some delay costs being passed on by its contractor. SHE Transmission also carried out additional works in the central section to ensure that

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security of supply was maintained on SP Transmission's networks during the re-phasing of the works.

SHE Transmission was able to clearly identify the associated costs incurred as a result of the change to SP Transmission's programme and demonstrated that it had negotiated to reduce its exposure to the cost of delays incurred as a result of the SP Transmission reprogramming. Our findings are that the additional costs relating to the SP Transmission reprogramming qualify as a change in the scope of the work that it needed to deliver as part of the project. We therefore determine that the associated costs will be adjusted through an AVAE.

Additional cost of securing land access: £8.8m

Negotiating access to privately-owned land affected by the project was a difficulty that SHE Transmission faced, particularly in the early stages of its project work. Ongoing negotiations meant that SHE Transmission had to start its construction work at various points along the new line, rather than sequentially working down from Beauly towards Denny as it had planned. This, along with the lengthening of negotiation periods, due to the increased use of land agents by land owners and other programme delays, meant that access was required to certain areas of land at times that are usually avoided, such as shooting season. The overall impact of this was to increase the cost of gaining land access.

In addition, a number of landowners sought to pursue claims relating to the long-term impact of the new line on the value of their property once completed. These claims are often referred to as "Injurious Affection" claims. SHE Transmission's original strategy was to secure land access through compensation for construction disturbance before settling the injurious affection claims once the project became operational. In practice, certain landowners withheld access to their land until their injurious affection claims had been dealt with. This meant that SHE Transmission was sometimes faced with a decision on whether to pay compensation upfront to land owners, or incur additional contract costs from its overhead line contractor due to its inability to access sites.

Following our initial review of these additional costs, we challenged SHE Transmission to justify why it felt that these costs reflected a change in the scope of the work that needed to be delivered, rather than what appeared to be additional costs for achieving the expected access to land. Following further consideration, SHE Transmission now accepts that these costs do not meet the criteria for funding through an AVAE. We therefore determine that these costs are not reflected in revenue allowances during construction and the post-construction period through an AVAE.

Other cost increases: -£1.7m

This cost category covers a range of small cost areas of which the scope was not clearly defined in SHE Transmission's submission. SHE Transmission originally anticipated a project overspend of £1.6m in this category. It subsequently concluded that these costs do not meet the criteria for inclusion within an AVAE and therefore withdrew them from consideration. The final audit of the cost information revised this figure down by £3.3m. This means that SHE Transmission has actually underspent on this category by £1.7m, driven by the estimated cost of a risk that did not materialise.

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As per our consultation, we continue to agree that these cost areas should not be reflected in an AVAE as there is no evidence to suggest that they relate to a change in scope.

Costs of renegotiating contract with principle contractor - £32.9m

In January 2011 SHE Transmission awarded the contract for the design and construction of the Beauly Denny overhead line to a contractor[6]. In order to secure a reasonable price for the contract, SHE Transmission decided to retain a number of key risks, including the risk of unforeseen ground conditions and land access restrictions. The initial contractual arrangement was established as a NEC Option C Target Price Agreement and envisaged a mechanism for sharing the responsibility for cost overruns with the principal contractor (the "pain-gain mechanism").

During the first years of construction the Contractor raised a number of claims for delays and changes to the scope of works which exposed SHE Transmission and consumers to significant cost increases. In particular, the costs associated with these claims were forecast to increase the overall cost of the overhead line contract beyond the level that would trigger SHE Transmission liability under the pain-gain mechanism. During the same period, it was also concluded that the original NEC Option C Target Price Agreement, under which the majority of risks were assigned to SHE Transmission, was no longer an effective approach for the project.

In 2013 SHE Transmission began a period of negotiation with the Contractor. Options for changing the contract from NEC Option C Target Price to NEC Option A Fixed Price were identified and discussed between the parties. As a result, new contractual arrangements (the "supplemental agreement") were put in place. The supplemental agreement capped SHE Transmission and consumer liability under the pain-gain mechanism. It also transferred residual risks to the Contractor and introduced a further incentive mechanism to help get the project back on schedule. SHE Transmission originally sought £32.9m of additional funding for the costs associated with negotiating the supplemental agreement. A breakdown of this £32.9m across the specific aspects of the supplemental agreement is presented below with our findings.

<u>Pain-gain mechanism – £15.8m</u>

Under the original contractual arrangement, SHE Transmission retained a share of liability for cost overruns between 100% and 110% of the value of the overhead line contract. Whilst the supplemental agreement was being negotiated, it became apparent the cost of the overhead line contract was forecast to exceed this threshold, triggering SHE Transmission's share of liability. In order to contain the exposure to further overrun, SHE Transmission decided to cap their liability under the Option C Target Price Agreement by removing the pain-gain mechanism. The cost of the cap was discussed with the Contractor and agreed at £15.8m.

We have reviewed these costs along with the supporting justification from SHE Transmission's consultants. Whilst we are satisfied that these costs are appropriate - SHE Transmission was largely successful in containing further pain-gain liability for the SP Transmission reprogramming overrun - we believe the costs are only partially driven by additional construction works. In our view the drivers for SHE Transmission's liability under

[6] Referred to as "the Contractor" for the rest of this letter

the pain-gain mechanism were changes to the work programme as well as the various delays experienced by the project, rather than just changes in the scope of works. We have therefore decided that these contractual costs will be incorporated in the AVAE to the extent that the remaining cost overruns were driven by changes in scope. We therefore determine that £7.5m of the £15.8m relating to the removal of the pain-gain mechanism should be included in the AVAE. This reflects the proportion of the remaining costs which don't relate to the contract negotiations that we consider were driven by changes in scope (47.3%). Table 1 within this letter sets out how this figure was calculated and how it has been updated since the November consultation due to the £3.3m reduction in spend identified by the final audit report.

<u>Transfer of residual risks to the Contractor – £9.8m</u>

Under the NEC Option C Target Price Agreement the majority of project risks were sitting with SHE Transmission. In order to achieve a more suitable risk allocation, SHE Transmission and the Contractor undertook a detailed assessment of project risks which resulted in a number of risks being included into the supplemental agreement, with the intention they would be transferred to the principal contractor. Contract risks, 1 month access delay risks and residual landowner and outage delay risks were amongst the risks transferred to the Contractor. SHE Transmission incurred in £9.8m of additional costs associated with de-risking their contractual position.

Following our initial review of these additional costs, we challenged SHE Transmission to justify why it felt that these costs reflected a change in the scope of the work that needed to be delivered, rather than what appeared to be additional costs for achieving a more favourable risk position. Following further consideration, SHE Transmission now accepts that these costs do not meet the criteria for funding through an AVAE. We therefore determine that these costs are not reflected in revenue allowances during construction and the post-construction period via an AVAE.

<u>Incentive mechanism – £7.3m</u>

In its initial AVAE submission, SHE Transmission sought funding for a number of costs incurred in relation to additional foundation works which were required after detailed investigations were carried out and ground condition became known. Amongst these costs, £7.3m were identified as costs associated with "Programme changes".

After discussing these additional costs with SHE Transmission, we found they were not directly related to foundation work. SHE Transmission has explained the additional costs are associated with an incentive mechanism which was agreed as part of the negotiation of the supplemental agreement and that was required in order to reach a settlement value with the Contractor. SHE Transmission has explained the costs have only been allocated to foundations as they reflect the commercial issues that arose from the change in scope of construction works and programme delay events which arose during the initial stage of the project, when foundation work was the main construction activity.

We find that these additional costs have been incurred in order to settle the value of the new agreement with the Contractor, which means they are predominantly driven by historical disputes over delays and changes to the work programme, rather than just changes to the scope of works. We therefore determine that these contractual costs should only be incorporated in the AVAE to the extent that they are driven by changes in scope.

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We therefore propose that £3.4m of the £7.3m relating to "Programme changes" should be included in the AVAE. This reflects the proportion of the remaining costs which don't relate to the contract negotiations that we consider were driven by changes in scope (47.3%). Table 1 within this letter sets out how this figure was calculated and how it has been updated since the November consultation due to the £3.3m reduction in spend identified by the final audit report.

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Appendix 2 –Adjustment to allowed expenditure as a result of this determination[7]

Table 3 shows how our finalised expenditure allowance compares to the previous funding decision, and annual expenditure that SHE Transmission has incurred on the project.

Table 3 – Previous expenditure allowance, actual expenditure and adjusted expenditure allowance following this determination (£k)

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	TOTAL
Allowance following 2011 funding decision (09/10 prices)	56,892	112,272	140,208	109,167	77,821	26,573		**522,933**
Actual expenditure (09/10 prices) from audited costs	28,123	112,278	169,484	140,340	90,604	29,925	11,027	**581,781**
Finalised AVAE adjusted allowance (09/10 prices)	26,624	106,293	160,449	132,859	85,774	28,330	10,439	**550,768**

Tables 4 to 6 demonstrate the calculation of the average asset value based on the previous funding decision in 2011 and our determination, in order to demonstrate the adjustment to the input that adjusts revenue within the calculation of SHE Transmission's allowed revenue.

Table 4 – Average asset value derived from previous 2011 funding decision (£k 2009/10 prices)

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
Opening	-	56,892	166,319	298,069	391,768	448,662	
Additions	56,892	112,272	140,208	109,167	77,821	26,573	
Depreciation	-	2,845	8,458	15,469	20,927	24,818	
Closing	56,892	166,319	298,069	391,768	448,662	450,417	
Annual average asset value before AVAE	**28,446**	**111,606**	**232,194**	**344,918**	**420,215**	**449,539**	

[7] All figures in Annex 2 are presented in £ thousands in 2009/10 price basis

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Table 5 – Average asset value determined from this adjustment to construction funding (£k 2009/10 prices)

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Opening	-	26,624	131,585	285,389	403,579	468,042	470,772
Additions	26,624	106,293	160,449	132,859	85,774	28,330	10,439
Depreciation	-	1,331	6,646	14,668	21,311	25,600	27,016
Closing	26,624	131,585	285,389	403,579	468,042	470,772	454,195
Annual average asset value after AVAE	**13,312**	**79,105**	**208,487**	**344,484**	**435,811**	**469,407**	**462,484**

Table 6 – Subsequent AFFTIRG and AFFTIRGDepn adjustments

Annual AVAE asset value adjustment (AFFTIRG)	**-15,134**	**-32,501**	**-23,707**	**-434**	**15,596**	**19,868**	**462,484**
Annual Depreciation adjustment (AFFTIRGDepn)	**0**	**-1,513**	**-1,812**	**-800**	**384**	**782**	**27,016**

The calculation of revenue during the construction period is derived from the average value of the assets in place each year after depreciation. During the construction period the project revenue is calculated from the following formula under paragraph 3J.5 of the TIRG Condition[8]:

$$\begin{aligned}\text{Project revenue } = & \big((\text{TIRG rate of return (8.8\%)}) \\ & \times (\text{Annual average asset value before AVAE} \\ & + \text{Annual AVAE asset value adjustment in year})\big) \\ & + (\text{Annual depreciation in year} + \text{Annual Depreciation adjustment})\end{aligned}$$

[8] The calculation within the licence also includes an RPI adjustment (RPIF term) excluded from this example

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Table 7 – Average asset value during efficiency period derived from previous 2011 funding decision (£k 2009/10 prices)

Year:		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Opening Asset value	450,417						
Opening		450,417	424,270	398,123	371,977	345,830	
Additions							
Depreciation		26,147	26,147	26,147	26,147	26,147	
Closing		424,270	398,123	371,977	345,830	319,683	
Average asset value during efficiency period ($\mathbf{ETIRGC_t^i}$)		**437,343**	**411,197**	**385,050**	**358,903**	**332,757**	

Table 8 – Average asset value during efficiency period derived from proposed adjustment to construction funding

Year:		2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Opening Asset value	454,195						
Opening			454,195	426,657	399,119	371,580	344,042
Additions							
Depreciation			27,538	27,538	27,538	27,538	27,538
Closing			426,657	399,119	371,580	344,042	316,503
Adjusted average asset value during efficiency period ($\mathbf{ETIRGC_t^i}$)			**440,426**	**412,888**	**385,349**	**357,811**	**330,273**

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Appendix 3 – Deriving the annual allowance following the 2011 AVAE

Table 9 – Allowed expenditure following 2011 AVAE decision updated into 09/10 prices

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	TOTAL
2011 Funding decision (04/05 prices)	49,610	97,902	122,262	95,194	67,860	23,172		**456,000**
2011 Funding decision (09/10 prices)	56,892	112,272	140,208	109,167	77,821	26,573		**522,933**

Table 10 – Original values for project in Schedule C of TPCR4 licence (04/05 prices)

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Opening	-	49,610	147,100	224,590	222,830[9]	210,570
Additions	49,610[10]	100,000	85,000	10,000		
Depreciation	-	2,510	7,510	11,760	12,260	12,260
Closing	49,610	147,100	224,590	222,830	210,570	198,310
Average asset value	**24,805**	**98,355**	**185,845**	**223,710**	**216,700**	**204,440**

Table 11 – Derived allowance following 2011 AVAE (04/05 prices)

Year:	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Opening	-	49,610	145,032	259,859	341,564	391,117
Additions	49,610	97,902	122,262	95,194	67,860	23,172
Depreciation		2,480	7,435	13,489	18,307	21,641
Closing	49,610	145,032	259,859	341,564	391,117	392,648
Average asset value	**24,805**	**97,321**	**202,446**	**300,712**	**366,341**	**391,883**

[9] Assumed figures for during post-construction period used for 2014/15 and 2015/16

[10] This figure represents the original licence figure of £50,200 after it was reduced by £590 to £49,610 in September 2010 Link: https://www.ofgem.gov.uk/sites/default/files/docs/2010/09/shetl-b-d-avae-notice-determination_final_0.pdf

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Table 12 – Reconciliation of AVAE values from 2011 determination to derived allowances in table 8

	2011/12	2012/13	2013/14	2014/15	2015/16
Average asset value change (table 7 vs. table 6)	-1,034	16,601	77,002	149,641	187,443
AFFTIRGC value in Table 1 of 2011 decision	-1,034	16,600	77,001	149,640	187,442
Depreciation change (table 7 vs. table 6)	-30	-75	1,729	6,047	9,381
AFFTIRGDepn value in Table 1 of 2011 decision	-30	-75	1,729	6,047	9,381

Table 13 – Derived allowance in 04/05 prices updated to 09/10 prices

Year	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Derived 2011 allowance (04/05 prices)	49,610	97,902	122,262	95,194	67,860	23,172
Derived 2011 allowance (09/10 prices)	56,892	112,272	140,208	109,167	77,821	26,573

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