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Date: 06 July 2010

Dear Colleague

TIRG open letter consultation: Asset Value Adjusting Event for the transmission investment project 'Beauly-Denny'

On 12 March 2010, Scottish Hydro Electric Transmission Ltd (SHETL) submitted to the Authority a notice that it considers a Transmission Investment for Renewable Generation (TIRG) asset value adjusting event has occurred in respect of transmission investment project, Beauly-Denny. In accordance with the relevant provisions of the transmission licence, the Authority is required to determine:

- Whether an asset value adjusting event has occurred;
- Whether the investment project remains economically efficient as a consequence of the TIRG asset value adjusting event;
- If necessary, an adjustment to the asset value of the project (AFFTIRG), and
- If necessary, an adjustment to the depreciation associated with the asset value of the project (AFFTIRGDepn).

This open letter consultation seeks views from interested parties on SHETL's request to decrease the average asset value of transmission investment project Beauly-Denny for financial year 2010/11, in accordance with Special Condition J3 – Restriction of transmission charges: Transmission Investment for Renewable Generation, of its Transmission Licence (SLC J3)[1] for financial year 2010/11. It should be noted that SHETL anticipates that there will be a material increase in the forecast construction costs in future years.

Background

SLC J3 sets out the restrictions upon transmission licensees in relation to revenue associated with TIRG. The TIRG mechanism provides funding to connect a large volume of renewable generation that was not forecast at the time that the relevant price controls were set for the transmission licensees. The TIRG mechanism provides explicit revenue

[1] For a copy of this licence condition please see the following link: http://epr.ofgem.gov.uk/document_fetch.php?documentid=13682

allowances and associated output measures in the transmission licences (Schedule C to SLC J3) for a range of projects related to the connection of renewable generation.[2]

When Ofgem's final proposals for TIRG funding were published in December 2004, they were based on project specific allowances for four reinforcements. We recognised, however, that the inherently uncertain volume and nature of the new connections required adjustment mechanisms to be included in the transmission licence as a means of correcting funding allowances if they proved inappropriate.

On 28 September 2005, SHETL applied for planning consent to install a double circuit 400 kV overhead transmission line from Beauly to Denny. The new line would replace an existing 132 kV line: one circuit to operate at 400 kV to provide a high capacity circuit between Beauly and Denny and the other circuit to operate at 275 kV to provide a circuit into which much of the generation in the area between Beauly and Denny could be connected.

As the proposed Beauly-Denny line would pass through a number of cultural and historical sites, it has attracted significant local interest. Objections to the line arising from the planning process have resulted in the project becoming subject to a planning inquiry. After two years of deliberation, the inquiry reporters submitted their final report to the Scottish Government on 19 February 2009.

Following consideration of the report, the Scottish Government granted planning consent to the Beauly-Denny line under section 37 of the Electricity Act 1989 on 06 January 2010, with conditions imposed in relation to mitigation of the visual and environmental impact. Moreover, Scottish Ministers considered that the terms of the consent could be varied every six months in order to meet unanticipated issues that may arise.

In light of Scottish Ministers' consent conditions, SHETL proposes to adopt a two-fold approach to avoid further delays to the Beauly-Denny project. SHETL does not consider it is able to finalise the overall scope of works, and hence capital cost, of the Beauly-Denny project until the work necessary to satisfy the key consent conditions has been undertaken. To allow this to occur, SHETL is asking the Authority to process an asset value adjusting event for the first year of construction (t=0, 2010/11), and has asked the Authority to consent to a later submission date for an asset value adjusting event for the remaining years of construction (t=1 to t=n, 2011/12 onwards), by 31 December 2010. The Authority agreed to this request on 28 May 2010[3].

Asset Value Adjusting Event Notice – Beauly-Denny

SHETL considers that the revised forecast construction costs for 2010/11 will be £49.6 million. This is around £0.6 million in 2004/05 prices lower than the £50.2 million projected costs currently specified in Schedule C to SLC J3 of the transmission licence, as set out in table 1 below. The reduction reflects the more restricted scope of works SHETL intends to undertake in the first year of construction due to the constraints imposed as they seek to satisfy the key consent conditions. SHETL anticipates that the consenting work will highlight material increases in the forecast construction costs to comply with the consent conditions in future years. In addition, there are a number of activities in 2010/11 that relate more to complying with consent conditions than construction of the Beauly-Denny line, which complicate further any reconciliation between the activities behind the cost allowances in the licence, and the current programme of works that constitutes SHETL's notice.

[2] For a copy of Schedule C please see the following link:
http://epr.ofgem.gov.uk/document_fetch.php?documentid=11539
[3] The Authority's notification can be found at the following link:
http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/TIRG/Documents1/EXTENSION%20OF%20THE%20DEADLINE%20FOR%20NOTIFICATION.pdf

Costs breakdown

The original cost estimate for Beauly-Denny was prepared in early 2004, and based on a desktop assessment of the electrical reinforcement that had been identified by the system studies undertaken as part of the Renewable Energy Transmission Study (RETS) project. At the time, no pre-construction works had been identified or undertaken. Consequently, the cost estimate was based on an unconstrained 'greenfield' development using the best cost information available at the time.

SHETL commenced detailed pre-construction work in 2004 and has continued this work through the consultation and planning process. A copy of the key reports can be found on the public inquiry website (www.beaulydenny.co.uk), including the Environmental Impact Assessment. Pre-construction work undertaken in preparation for, and in response to issues raised at the public inquiry, has identified technical, engineering and planning constraints. Many of these constraints (for example access, noise and environmental concerns such as visual amenity) form the basis for the conditions of consent.

As a result of the consent conditions and the technical, engineering and planning constraints identified during pre-construction work, SHETL's planned activities will alter, and in the first year will focus on a number of consenting issues before physical construction commences, with the expectation being that overall there will be a material increase in the cost of the project. SHETL considers that the main contributing cost increases will be:

- The additional costs associated with the species and habitat mitigation requirements set out in the conditions of consent to the project. This includes the costs of specialist independent environmental advisors; the preparation and implementation of species management and monitoring plans; and specific works required for the mitigation of bird strikes;

- The additional costs associated with the rationalisation schemes and visual impact mitigation works as set out in the conditions of consent. This includes the preparation and approval of schemes; and the removal, replacement or undergrounding of named overhead lines;

- The additional costs associated with environmental mitigation requirements set out in the conditions of consent. This includes the surveys, reports and working arrangements associated with ten areas of specific environmental designation; restrictions on working in forestry and woodland areas; and mitigation arising from the Geological Conservation Review;

- The additional costs arising from the requirement to alleviate public road constraints and access restrictions as set out in the conditions of consent. This includes undertaking the baseline engineering survey of public roads; the costs of road widening and junction improvement schemes; the costs of reinstatement and/or compensation to local authorities; required traffic management schemes; and implementation of an agreed access strategy;

- The additional costs arising from the management of constraints within the programme. The works programme must be revised to take account of constraints on activities, in particular outage availability and access restrictions. Access restrictions include a range of factors such as the breeding bird season, landowner/community consent and traffic management, and

- The additional costs associated with the general discharge and satisfying of consent conditions and the commitments therein.

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In addition, the delay to the project as a result of the duration of the consenting process has resulted in a delay to the procurement of plant and contract award to construction contractors. During this time, SHETL considers there has been a significant movement in the market for raw materials (including fuel) and labour.

A high-level breakdown of SHETL's forecast costs of the planned construction works and the associated costs and expenses forecast to be incurred in TIRG relevant year t=0 is provided in Appendix 1. The revised costs are forecasts based on estimated costs and remain subject to final tendered contract prices. Further supporting information on the nature of the activities planned for year t=0 is detailed in Appendix 2 and 3.

Table 1 below illustrates the effect the asset value adjusting event has on the licence provisions in relation to Beauly-Denny.

Table 1 – comparison of existing average asset value in Schedule C of the transmission licence with the revised forecast costs

Project costs (£ 000) 2004/05 prices	t = 0
Relevant year	2010-11
From Schedule C	
Forecast construction costs	50,200
Average asset value during construction period ($FTIRGC_t$)	25,100
Depreciation during construction ($FTIRGDepn_t$)	-
Revised forecast	
Forecast construction costs	49,610
Average asset value during construction period ($FTIRGC_t$)	24,805
Depreciation during construction ($FTIRGDepn_t$)	-

SHETL proposes that an adjustment to the average asset value ($AFFTIRG_t$ adjustment) in respect of TIRG relevant year t=0 is allowed in response to this TIRG asset value adjusting event, amounting to an average asset value adjustment in year t=0 of -£295k , in 2004/05 prices, as shown below in table 2:

Table 2 – proposed adjustment to the average asset value in Schedule C of the transmission licence

Project costs (£ 000) 2004/05 prices	t = 0
Relevant year	2010-11
Adjustment to the average asset value during construction period ($AFFTIRGC_t$)	-295

Note: Depreciation numbers are incurred with a one year lag, and hence do not feature in the first year of construction.

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Next steps

We would like to hear the views of any interested parties regarding the issues raised in this letter. Responses should be made on or before Friday 03 August 2010 to:

David Hunt
Senior Manager – Electricity Transmission Policy
Office of Gas and Electricity Markets
9 Millbank
London
SW1P 3GE

or by email to david.hunt@ofgem.gov.uk.

Following closure of this open letter consultation, and careful consideration of respondents' views, we will either determine the value of the relevant adjustment or may consult again.

Yours faithfully,

Hannah Nixon
Partner - Transmission and RPI-X@20

Appendix 1- Relevant licence provisions

The following paragraphs summarise the relevant licence provisions relating to TIRG asset value adjusting events. The full provisions of the licence can be found on Ofgem's website in the electronic public register.[4]

Asset Value Adjusting Events

SLC J3 of SHETL's electricity transmission licence sets out the asset value adjusting event provisions. Paragraph 6 of SLC J3 sets out that a TIRG asset value adjusting event means relevant additional preconstruction works or a relevant amendment to the scope of construction works that the Authority is satisfied is expected to cause costs and/or expenses to be incurred or saved in relation to a specific transmission investment project, provided such costs and expenses:

- Are expected to result in a material increase or decrease to the average asset value for the relevant years t=0 to t=n;
- Are expected to be efficiently incurred or saved; and
- Cannot otherwise be recovered under the existing TIRG revenue allowance.

Where the licensee considers, and can provide supporting evidence that a TIRG asset value adjusting event has occurred, it shall give notice of that event to the Authority as soon as is reasonably practicable, together (unless otherwise agreed by the Authority) with the particulars required by the licence. Following consideration of the notice and supporting documentation, and after consultation with the licensee and relevant parties, the Authority will determine whether such an event has occurred and determine what the asset value adjustment ($AFFTIRG^{i}_{t}$) should be, either the amount requested by the licensee, or a different amount, at its discretion. In addition, the depreciation calculation for the relevant project will be affected by any adjustment to the asset value, such that the associated depreciation term ($AFFTIRGDepn^{i}_{t}$) would also need to be adjusted via an Authority determination.

Determination by the Authority that an asset value adjusting event has occurred and the amount of the adjustment does not involve an amendment to the licence condition. To give effect to any income adjustment, the Authority must determine the value of the $AFFTIRG^{i}_{t}$ and $AFFTIRGDepn^{i}_{t}$ terms in the licence, but the values that they take do not appear within the licence. Therefore there is no change to the content of the licence and consequently no requirement to invoke the statutory modification procedure. When a determination is made, the Authority must publish a notice stating the income adjusting allowance, giving reasons for the determination.

Future licence changes

In addition to the changes described above, in the event that the adjustment is approved by the Authority, subsequent licence changes will be necessary for the period following construction, in accordance with the provisions of the TIRG revenue restriction in the transmission licence.

The annual TIRG revenue restriction for relevant year t, for relevant project i is the sum of the following revenue streams:

[4] Please see the following link: http://epr.ofgem.gov.uk/index.php?pk=folder97241.

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1. $IPTIRG^i_t$ – representing the annual preconstruction and contingency revenue allowance for the relevant TIRG project for relevant years t=p to t=-1;

2. $TIRGIncAd^i_t$ – representing the sum of one or more preconstruction and contingency revenue allowance adjustments for a TIRG income adjusting event as determined by the Authority;

3. $FTIRG^i_t$ – representing the annual construction revenue allowance for the relevant TIRG project for the period between relevant year t=0 to t=n;

4. $ETIRG^i_t$ – representing the annual incentive revenue allowance for the relevant TIRG project for relevant years t=n+1 to t=n+5, and

5. $ATIRG^i_t$ – representing actual annual revenue allowance for the relevant TIRG project for relevant years t=n+6 to t=n+20.

The average asset value adjustment ($AFFTIRG^i_t$) and the adjustment to depreciation value for the TIRG project during construction ($AFFTIRGDepn^i_t$) terms are components of the $FTIRG^i_t$ term above and apply during the construction period only.

Consequently, further adjustments will need to be made to the post-construction revenue terms, $ETIRG^i_t$ and $ATIRG^i_t$. These adjustments are effected by altering the average asset value for the life of the assets such that any return and depreciation is calculated on the correct basis for the post-construction period.

To do this, the Authority needs to determine the value of the adjustment factor to the average asset value for the relevant transmission project, represented by the term $SAFRTIRG^i$ (a component of $ETIRG^i_t$). This adjustment factor amends the asset value in accordance with the Authority's determination of $AFFTIRG^i_t$. However, the $SAFRTIRG^i$ term is only relevant for the first five years after the project is completed (from relevant years t=n+1 to t=n+5). The Authority would not need to direct any change to $SAFRTIRG^i$ until after the relevant post-construction report has been received from the transmission licensee. Hence any determination of $SAFRTIRG^i$ will not take place as part of this determination process, but will follow upon completion of the project.

In addition to determining a value for $SAFRTIRG^i$, the Authority would also need to determine a value for post construction revenues to apply to subsequent relevant years following relevant year t=n+5. The asset life agreed for the TIRG projects is 20 years, hence a determination for relevant years t=n+6 to relevant year t=n+20 is made using the $ATIRG^i$ term in the licence. The Authority would therefore need to determine the value of the actual annual revenue allowance, $ATIRG^i_t$, which will enable efficiently incurred costs to be recovered by the licensee, and is required under the licence to do so by relevant year t=n+5.

If the Authority makes a determination that an asset value adjustment has occurred, the Authority will also need to publish further determinations for the purposes of revising $ETIRG^i_t$ and $ATIRG^i_t$ to reflect the revised post-construction revenue streams in due course.

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Appendix 2 – Notice of TIRG Asset Value Adjusting Event

The following tables provide a simplified breakdown of the key activities SHETL plans to undertake on the Beauly-Denny project for TIRG relevant year t=0, 2010/11, presented in 2004/05 prices.

Table 1: breakdown of the planned construction works and the associated costs and expenses forecast to be incurred in TIRG relevant year t=0

Project costs (£ 000) 2004/05 prices	**t = 0**
Relevant year	2010-11
Consent conditions	3,637
Survey and design works	5,462
Construction works	
Access activities	21,570
Diversionary works	1,731
Procurement	5,827
Substation works	6,656
Legal	961
Project management	3,763
TOTAL	**49,610**

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Appendix 3 – Description of works forecast during 2010/11

The following sections provides SHETL's description of the activities they plan to undertake on the Beauly-Denny project in TIRG relevant year t=0, 2010/11.

Legal and consents
Ongoing legal support is required to deal with all outstanding consents, permissions and agreements and also deal with injurious affection claims. Pre-construction requirements include for issuing of notices and payments associated with consent conditions.

Rationalisation schemes
It is intended to progress the required mitigation scheme plans for submission and approval in line with the conditions of consent. Once approved, it is intended to commence detailed route surveys and environmental work, including assessment of access arrangements to progress the dismantling work in Cairngorm National Park at the earliest opportunity.

Environmental technical specialists
It is intended to engage a number of environmental specialists to carry out specific surveys and assessments as required by the consent conditions. This includes Noise Assessments, Landscaping and Visual Assessment, Hydrological Assessment and Forestry Consultancy.

Balfour Beatty
It is necessary to continue with the development work and mobilisation of the main Contractor to ensure the start-up programme can be maintained. Once the Construction Contract arrangements are finalised, this cost will cover early activity including detailed survey and micrositing of towers. A number of interim tasks are also required to support the compliance and discharge of the necessary consent conditions.

Site investigation
It is intended to commence the detailed site investigation works for the main overhead line build, based on the first 200 priority towers.

Environmental works
It is intended to commence the required environmental works in line with the current programme and conditions of consent. The scope will cover: Archaeological Investigations, Stage 2 Ecological Surveys, Provision of Private Water Supplies risk assessments for all council areas and limited auditing. The costs also include for provision of contract Clerk of works required to supervise the works.

Civil design works
It is necessary to progress design works for the substations and Invermoriston jetty, including the necessary underwater surveys and permissions. A portion of this will be required to allow clearance of the substation planning conditions and commencement of works in line with current programme.

Public road improvements
It is intended to commence the public road improvement works in line with the current programme. The current programme requires early contract commitments.

Forestry and tree-cutting
It is intended to commence the forestry and tree cutting works in line with the current programme. The current programme requires early contract commitments.

Access tracks

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It is intended to commence the access track works in line with the current programme. The costs represent the Year 1 requirements.

Diversionary works
It is intended to commence the diversionary works associated with the existing transmission and distribution infrastructure in line with the current programme. These are constrained by outage availability and a comprehensive plan has been agreed for this years requirements. Any missed opportunity could result in a delay risk to the overall programme.

Beauly substation works
It is intended to commence the substation works at Beauly in line with the current programme. This build is on the critical path of the overall programme.

Substation works
It is intended to commit to the remaining substation works in line with the current programme. Works are required in 2010 to ensure integration of construction stages and line works in subsequent years.

132kV cabling
It is necessary to commit to the 132kV cabling for Beauly substation, due to lead times, to ensure design and installation in time for a key double circuit outage in October 2010. This work is critical to allow the substation build to progress and maintain current overall programme.

Voltage support
The SVC equipment for Beauly is required in 2012. They carry a 24 month lead time and it is intended to place a contract and commence design works to ensure they can be procured in line with the current programme requirements.

Transformers
It is intended to place the main transformer contracts to ensure they can be procured within the current programme requirements.

Switchgear
It is intended to place the 400kV and 275kV switchgear contracts to ensure they can be procured within the current programme requirements.

Reactors
It is intended to place the Reactor contracts to ensure they can be procured within the current programme requirements.

SCADA
Control, signalling and protection works are required associated with the diversionary works and related system changes.

Telecoms
Telecoms works are required associated with the diversionary works and related telecoms infrastructure changes.

Utility diversions
Various utility diversions are required as a result of the public road and access track construction works.

Wayleaves
Ongoing expenditure is required to conclude landowner compensation and commitment

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arrangements and also deal with changes of ownership and servitude arrangements. This cost also includes for settlement of any damage claims.

Project management

Jacobs Engineering has been appointed to provide additional engineering management and CDMC support for the Project. A number of interim tasks are required support the compliance and discharge of the necessary consent conditions. It is also necessary to put in place specialist independent consultants to oversee certain activities, as required by the consent conditions.

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Appendix 3 – Additional Information Provided by SHETL

Following receipt of SHETL's notice on 12 March 2010, Ofgem requested additional information on the nature and scope of the activities forecast for year t=0. SHETL's response is below.

Changes to the forecast scope of activities in TIRG relevant year t=0 (2010/11)

In our notice of 12 March 2010, SHETL forecasts capital expenditure of £49.6 million (in 2004/05 prices) on transmission investment project Beauly-Denny during 2010/11. A breakdown of the activities forecast to be undertaken was enclosed with that notice (and is considered further below).

Schedule C of SHETL's transmission licence states that forecast construction costs for TIRG relevant year t=0 (2010/11) are £50.2 million (in 2004/05 prices). This forecast was prepared in 2004 based on the prevailing market conditions as applied to an unconstrained development. Since then, market conditions have changed and a significant number of constraints have been identified that affect the Beauly-Denny project. These constraints are described in our notice of 12 March 2010.

Relative to the 2004 forecast, the main changes to the forecast scope of activities in 2010/11 are:

- **Additional work required to satisfy the conditions of consent**

  The conditions of consent place a number of obligations of material impact on SHETL that were not foreseen at the time of SHETL's acceptance of the TIRG Final Proposals of 20 December 2004.

- **Reduced scope of construction works**

  As a result of, in particular, the constraints imposed by the conditions of consent, SHETL has reduced the scope of construction works to be undertaken during the first construction year. Works not now being undertaken are:

  - Tower foundation installation;
  - Tower supply and erection, and
  - Access works.

  These works have been deferred into the second year of construction (2011/12).

Activities forecast in TIRG relevant year t=0 (2010/11)

In our notice of 12 March 2010, SHETL identified and described cost line items associated with activities forecast to be undertaken during 2010/11. These were split into four areas of work: associated with the consent conditions; survey and design works; construction works, and project management. The activities in each of these areas is described in more detail below.

Consent conditions

The main bodies of work associated with satisfying the conditions of consent are:

- **Legal**

  To issue all of the necessary notifications and payments associated with the consent conditions. To progress outstanding consents, permissions and agreements.

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- **Rationalisation schemes**

  The conditions of consent include four rationalisation schemes (Balblair, Cairngorms National Park, Errochty and Muthill Conservation Area) and one mitigation scheme (Auchilhanzie House). The rationalisation schemes are predominately the undergrounding of named overhead lines; the mitigation scheme relates to measures that would reduce the visual impact of the new line. For each scheme, SHETL is required to submit its proposals to Scottish Ministers for consent. Once approved, detailed route surveys and environmental works will be required to enable completion of the schemes.

- **Environmental works**

  The conditions of consent include requirements for additional environmental works to be undertaken prior to construction; for example, otter and wildcat management plans, pine martin, red squirrel, water vole and reptiles management plan, bat mitigation plan, osprey and merlin survey methodologies, and goose roosts mitigation plan. These works are to be undertaken in consultation with the relevant statutory body and be approved by Scottish Ministers. It is a requirement of the consent conditions to engage a number of environmental specialists to carry out the specific surveys and assessments.

Survey and design works

The main areas of survey and design works are:

- **Site investigation**

  It is intended to commence the detailed site investigation works for the main overhead line build, based on the first 200 priority towers.

- **Environmental works**

  The conditions of consent include requirements for environmental works associated with construction; for example, Forest Design Concept Plan, woodland mitigation, Geological Conservation Review, Noise Management Plan, Private Water Supplies Environmental Risk Assessment, and archaeological investigations. These works are to be undertaken in consultation with the relevant statutory body and, where required, be approved by Scottish Ministers. It is intended to engage a number of environmental specialists to carry out the specific surveys and assessments, and engage the required independent environmental contractor to supervise the works.

- **Civil design works**

  It is intended to progress design works for the substations and Invermoriston jetty, including the necessary underwater surveys and permissions.

In addition, we will be continuing development work and mobilisation of the main contractor to ensure the start-up programme can be maintained. Once the Construction Contract arrangements are finalised, early works will cover activities including detailed survey and micro-siting of towers.

Construction works

Construction works can be split into five areas:

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- **Access activities**

  In order to enable access to the construction site for the overhead line and substations, necessary public road improvements, construction of access tracks and forestry and tree-cutting works must be undertaken. Various utility diversions will be required as a result of the public road and access track construction works.

- **Diversionary works**

  The construction of the new line and substations requires some diversions to existing transmission and distribution infrastructure. These works are constrained by outage availability and a comprehensive plan has been agreed for this years requirements. Associated with these works are related control, signalling and protection works and telecoms works.

- **Procurement**

  It necessary to purchase long leadtime infrastructure items. This includes 132 kV cables, SVC equipment, transformers, switchgear and reactors.

- **Substation works**

  Substation works, particularly at Beauly, are on the critical path for the project and, hence, must be commenced this year. In addition to procuring long leadtime assets, on-site civil works will commence.

- **Legal**

  Ongoing legal work is required to conclude landowner compensation and commitment arrangements and also deal with changes of ownership and servitude arrangements. This cost also includes for settlement of any damage and injurious affection claims.

Project management

A number of interim tasks are required support the compliance and discharge of the necessary consent conditions. It is also necessary to put in place specialist independent consultants to oversee certain activities, as required by the consent conditions.

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