Funding Sole-Use and Shared-Use Connections Infrastructure

(February 2012 Update)

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This paper sets out SHETL's approach to funding Sole-Use and Shared-Use Connections Infrastructure projects that are required to facilitate the connection of generation to our Transmission network over the RIIO-T1 period. Definitions of the types of projects covered by this mechanism are provided in our Business Plan, published in July 2011.

Background

Connections Infrastructure projects are, by their very nature, uncertain and outside of SHETL's control. The driver for this type of investment is the facilitation of the connection of third parties' projects, which can be subject to a wide range of factors that SHETL is not party to. Examples of these factors include discovery of protected flora / fauna; archaeological concerns; delays in obtaining planning consents; challenges in securing site access; and poor weather. In our experience, most of these result in a delay and/or a reduction in the size of the developer's project. These factors are not exclusive and do, on occasion, combine to make projects particularly challenging for the developer to bring forward.

In our July Business Plan, we proposed an Uncertainty Mechanism, based on the Revenue Drivers adopted in TPCR4, to ensure that SHETL has a suitable mechanism to fund the delivery of these Connections infrastructure projects at a time that is appropriate and efficient, and consistent with the progress of the underlying connection project. Mindful of our licence obligations to deliver timely connections, we believe it is fair and proper that the mechanism adopted provides sufficient incentive to ensure prompt and efficient delivery to meet the needs of generators, without encouraging early or inefficient investment.

The details of this mechanism have gone through a number of reiterations as we have worked with Ofgem to ensure we effectively manage the uncertainty associated with these projects, whilst minimising the impact on electricity consumers.

Our July Business Plan

In developing our Business Plan, we compiled two lists of the projects (Sole-Use and Shared-Use Connections Infrastructure) that we are currently aware of and are likely to be required to facilitate the connection of third parties' projects during the RIIO-T1 period. We then adopted an „Uncertainty Factor' to calculate how much funding we should request for this work on an ex-ante basis.

In line with our commitment to prudent and efficient expenditure, we proposed ex ante allowances based

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on the ENSG's „Slow Progression' scenario, with an additional Revenue Driver mechanism to fund further projects up to and beyond the „Gone Green' scenario. We also proposed a mechanism to allow our ex ante allowance to be returned to consumers in the event that a lower volume of projects were delivered.

Ofgem's Initial Assessment

In its Assessment of our Business Plan, Ofgem stated that they had "*found that SHETL has clearly set out the funding mechanisms it was requesting for its capex programme and that it has engaged well with its stakeholders in coming up with its plans*." However, Ofgem also stated that "*further analysis is needed to finalise SHETL's baseline and the design and parameters of mechanisms*."

Further work since July

Since July, we have been reviewing the design of the mechanism for funding these projects and this paper is intended to outline our revised proposal. We are aware that this is a complex mechanism and have agreed with Ofgem to republish this paper in order to provide greater clarity on areas that may have caused confusion.

We maintain our belief that it is not appropriate to request funding for all of the currently known projects for the RIIO-T1 period as, experience to date, suggests that the projects that we will deliver over this period will vary from those that we are currently aware of. The challenge is to derive a „reasonably certain' volume that would be funded through an ex-ante allowance and then less certain developments that could be funded through an automatic Revenue Driver mechanism.

We have therefore pooled the projects we know about into Sole-Use and Shared-Use Connections Infrastructure Groups. We then considered projects falling within each group on an aggregated basis to determine an average unit cost on which our funding calculations are based.

Within the respective groups of projects are a small number of projects that have a particularly high cost per MW they are anticipated to deliver (Atypical Projects). To ensure that these atypical projects don't distort the treatment of the remainder of the projects, these were removed from the pool.

Ex-ante allowance

We have used the unit cost derived from known projects (as described above) as the basis for determining our proposed ex ante allowance. We strongly believe it is our duty to not pick „winners and

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losers' but also believe it is essential to use all available information to inform our view. We have therefore reviewed which schemes are required for projects where the developer has achieved planning consent. This assessment indicates that the Sole-Use schemes we are likely to be required to deliver have a higher Unit Cost Allowance (calculated as total costs divided by MW (or MVA) facilitated) have a higher UCA than the average across the group of projects we currently have sight of.

We therefore propose a slightly higher UCA (the „pre-threshold UCA') as the means of deriving our ex ante allowance. Once this threshold has been achieved, we have proposed a slightly lower UCA („revenue driver UCA') that will be used to fund additional projects.

Delivering against these UCAs will be challenging for SHETL and will stretch us to be more innovative in our approach. We believe that the proposed approach therefore provides a fair balance between minimising the cost to consumers and ensuring we have sufficient funding to deliver our obligations.

Importantly, this does not mean that we expect all of these known projects to proceed to the value and timescale shown. Rather, based on past experience, we expect a different profile of projects to proceed to completion.

For both Sole-Use and Shared-Use Connections Infrastructure, we propose an Output (in terms of MW/MVA facilitated) for an ex-ante allowance. The respective details are as follows:

Sole-Use Connections Infrastructure

Output:	1,168 MW new generation capacity
Allowance:	£99 million
Pre-threshold UCA:	£85k/MW
Revenue Driver UCA:	£75k/MW
Atypical threshold:	£150k/MW

Shared-Use Connections Infrastructure

Output:	1,006 MVA new system capacity
Allowance:	£83 million
Pre-threshold UCA:	£83k/MVA
Revenue Driver UCA:	£83k/MVA
Atypical threshold:	£166k/MVA

Our proposed Outputs and Allowances differ slightly from those proposed in July due to the proposed separate treatment of atypical projects.

In the event that we are not required to deliver the capacity outputs set out above, the pre-threshold UCA

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will be used to calculate how much of our allowance we are required to return to consumers. In the event that we only deliver 1,000 MW of Sole-Use Connections Infrastructure, for example, we will return the revenue associated with 168 MW, equivalent to £114,280k (168MW x £85k/MW) of our ex ante allowance, adjusted by monies already returned to consumers through the totex incentive.

As with the rest of our proposals, this mechanism will then be subject to our proposed sharing factor of 50% and our proposed capitalisation rate of 90%. Further information is provided in our paper „Our approach to sharing risk during the RIIO-T1 period'.

Revenue Drivers

In the event that we exceed one or both of our capacity outputs, we propose the use of Revenue Drivers to provide the flexibility to fund additional projects. In other words, no money is provided up front for projects beyond the agreed outputs but the following mechanism is agreed to release additional funding if it is needed.

Using the revenue driver UCA for the type of project set out above, the Revenue Drivers will automatically derive an allowance based on the capacity that the project will deliver (in terms of MW or MVA) multiplied by the revenue driver UCA, e.g. for a 100MW sole-use connection, an allowance of £7.5 million (100MW x £75k/MW) would be made.

Under the Revenue Drivers, this allowance derived from the revenue driver UCA is then divided by the typical number of years that it takes to deliver connections infrastructure to derive a flat revenue allowance. This is four years for both Sole-Use and Shared-Use projects. Hence, for the 100MW example above, a totex allowance of £1.875 million per annum (£7.5 million / 4 years) will be made for four years, starting the year work commenced. As with projects under the ex-ante allowance, this mechanism will be subject to the sharing factor and the capitalisation rate.

Atypical Projects

As described above, we have excluded some atypical schemes from our calculations and this approach results in significant risk that very high unit-cost schemes could result in our proposed allowance being too low. As a proportionate and balanced approach to managing this risk, we are proposing a variation on the above mechanism for schemes with forecast unit costs above the respective atypical threshold (Atypical Projects).

Any projects brought forward during the T1 period that have a forecast UCA of >£150 k/MW for Sole-Use Connections Infrastructure or >£166 k/MVA for

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Shared-Use Connections Infrastructure (the „atypical thresholds') will automatically be subject to treatment as an Atypical Project, irrespective of progress against the respective output.

For Atypical Projects, we propose that the following Atypical UCAs are applied:

Sole-Use Connections Infrastructure

Atypical UCA: £294k / MW

Shared-Use Connections Infrastructure

Atypical UCA: £182k / MVA.

We propose that for Atypical Projects, 50% of the costs incurred by SHETL are passed through to consumers as they are occurred and the remaining 50% should be calculated on the basis of a variation on use of UCAs as set out in the above Revenue Drivers section.

As an example, a 20MW Sole-Use project with a total forecast project cost of £6m has a forecast UCA of £300k/MW and is therefore classed as an Atypical Project. 50% of the actual costs, as incurred, would be passed through to consumers. For the remaining funding, SHETL we derive an allowance based on the capacity to be delivered (i.e. 20MW) multiplied by the Atypical UCA (£294k/MW) multiplied by 50%. So, for this example, the allowance would be equivalent to £2.94 million. As with the Revenue Driver projects, the totex allowance will be made in four payments, starting the year work commenced. So in the example given, a totex allowance of £0.735 million per annum would be made for four years. As with projects under the ex-ante allowance and the Revenue Drivers, this mechanism will be subject to the sharing factor and the capitalisation rate.

Real Price Effects

Setting the UCAs and Atypical UCAs for Connections Infrastructure on an ex-ante basis introduces an increased element of risk to fluctuations in value of these UCAs as a consequence of the movement of component costs. We therefore propose that the UCAs and Atypical UCAs are increased by 1.5% per annum to mitigate this risk.

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Summary

OBJECTIVE	Fund uncertain costs associated with Sole-Use and Shared-Use Connections Infrastructure
PRIMARY OUTPUTS	Capacity Outputs: 1,168 MW Sole-Use Connections Infrastructure 1,008 MVA Shared-Use Connections Infrastructure
FUNDING & INCENTIVES	Ex-ante totex allowance at 90% capitalisation: £99m for Sole-Use Connections Infrastructure £83m for Shared-Use Connections Infrastructure Clawback for under-delivery of Primary Outputs using pre-threshold UCA Totex incentive with 50% sharing factor Atypical projects (above atypical threshold) will be subject to separate treatment.
ADDITIONAL INVESTMENT BEYOND PRIMARY OUTPUTS	Delivery of capacity over the Primary Output Funded in 2 parts: Allowance automatically calculated prior to project commencement on basis of capacity to be delivered multiplied by revenue driver UCA, allowed in 4 equal amounts commencing year works start Funding of incremental opex at 1% of Gross Asset Value for the remainder of the T1 period Atypical projects (above atypical threshold) will be subject to separate treatment.
TREATMENT OF ATYPICAL PROJECTS	Irrespective of timing, Atypical Projects (above atypical threshold) will be funded in 3 parts: 50% of actual costs incurred by SHETL passthrough to consumers Allowance for remaining 50% automatically calculated prior to project commencement on basis of capacity to be delivered multiplied by Atypical UCA, multiplied by 50% allowed in 4 equal amounts commencing year works start Funding of incremental opex at 1% of Gross Asset Value for the remainder of the T1 period