Worst Served Customers

ED2 Engineering Justification Paper Addendum

ED2-NLR(O)-SPEN-001-WSC-EJP-ADD

Issue	Date	Comments
Issue 0.1	Aug 2022	Internal Draft for Review
Issue 0.2	Aug 2022	Internal Draft with Comments
Issue 1.0	Aug 2022	First Issue - Draft Determination Response

Scheme Name	SPEN Worst Served Customers			
PCFM Cost Type	Non-Load Related Non-Asset			
Activity	Worst Served Customers			
Primary Driver	Network Reliability			
Reference	ED2-NLR(O)-SPEN-001-WSC-EJP-ADD			
Output Type	Worst Served Customers			
Cost	**SPD**	£5.973m	**SPM**	£8.658m
Delivery Year	2023-2028			
Reporting Table	CV19			
Outputs included in ED1	~~Yes~~/No			
Business Plan Section	Ensure a Safe and Reliable Electricity Supply			
Primary Annex	Annex 4A.5: Network Performance Strategy			

Spend Apportionment	**ED1**	**ED2**	**ED3**
	£m	**£14.631m**	**£m**

	Proposed by	**Endorsed by**	**Approved by**
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Date	23.08 2022	23 08.2022	23.08.2022

1 Purpose

This addendum has been prepared to provide additional information and justification to ED2-NLR(O)-SPEN-001-WSC-EJP – Worst Served Customers following receipt of RIIO-ED2 Draft Determination. The content of this addendum is in response to comments and feedback provided by Ofgem as to the "Partial Justification" status of the EJP. The purpose of this document is to support Ofgem's assessment for Final Determination including supporting any associated impact on engineering adjustments within Ofgem's financial modelling.

2 Ofgem Comments & Feedback

2.1 RIIO-ED2 Draft Determinations SPEN Annex

The following comments are taken from Table 26 of *"RIIO-ED2 Draft Determination SPEN Annex"*.

Ofgem Comment - Partially Justified. We agree with the needs case presented by SPEN, however SPEN have not outlined the works they will consider in making improvements for WSCs. Further, their proposed request is based on an allowance per WSC that is not reflective of scheme costs.

Ofgem Identified Risks - The EJP provides limited confidence in the deliverability of the works during RIIO-ED2. Therefore, there is a risk that the outputs at the end of RIIO-ED2 will differ from those that have been proposed.

3 Additional Justification

3.1 Summary of any SQs from Draft Submission

Ofgem have queried the WSC volumes as part of SPEN073 SQ and the targeted improvement for the schemes. SP Energy Networks have responded by quoting strong stakeholder support for this programme and have highlighted the benefits the customer base will experience from these interventions. SP Energy Networks have also detailed how it will be ensured that the WSC and QoS programmes will not overlap.

Ofgem have further queried the WSC programme as part of SPEN107 SQ. SP Energy Networks have provided additional justification for the approach to calculating costs (based on cost per WSC rather than cost per scheme) as part of the response to this SQ. Further detail into the data modelling used for the creation of this programme was also included. **An updated EJP was issued at Ofgem's request as part of the response to this SQ.**

The SQs and responses have been appended in Section 4 for reference.

3.2 Our Response

As stated in Section 5.1 of the EJP, 11 schemes will be targeted in SP Distribution and 11 schemes in SP Manweb. The schemes identified for Final Submission are as follows in Table 1 and Table 2, for SP Distribution and SP Manweb respectively:

Table 1: SP Distribution WSC Schemes		
Circuit Code	**Connected WSCs**	**Scheme Cost (£m)**
[redacted]	1303	£2.00
	743	£1.14
	221	£0.34
	285	£0.44
	191	£0.29
	214	£0.33
	203	£0.31
	154	£0.24
	103	£0.16
	98	£0.15
	165	£0.25
Total WSCs	3,680	£5.64

Table 2: SP Manweb WSC Schemes		
Circuit Code	**Connected WSCs**	**Scheme Cost (£m)**
[redacted]	586	£1.17
	579	£1.16
	463	£0.92
	216	£0.43
	397	£0.79
	524	£1.05
	530	£1.06
	272	£0.54
	199	£0.40
	241	£0.48
	170	£0.34
Total WSCs	4,177	£8.33

The funding is based on a cost per WSC rather than a cost per scheme. This is because it is currently uncertain what works will be required to improve performance for these customers. A range of interventions is possible, depending on the leading causes of the interruptions. The intervention will be decided during engineering design. However, this will not limit investment for any particular scheme, as the allocated cost per WSC result in sufficient funding to cover any necessary works.

The low investment in WSCs in RIIO-ED1 creates the current uncertainty surrounding what works will be required to improve performance. Any historical cost per scheme based on RIIO-ED1 schemes would not provide any additional certainty regarding the scope of required works to improve performance for WSCs. As a result, there is no historical scheme cost that could be used with a high degree of confidence to calculate RIIO-ED2 costs per scheme.

A case study was carried out for circuit [redacted] which has an allocated cost of [redacted] This is the scheme with the least funding in SP Manweb, and therefore the most at risk in terms of deliverability. To test for sensitivity, it was assumed that the available funding for the scheme was reduced by 80%, bringing it to [redacted].

By investigating the leading causes of the interruptions, it was discovered that the WSCs on this circuit experience a large number of transient faults. Therefore, upgrading the existing protection equipment and installing new protection devices will likely improve the performance. Associated pole changes were factored into the costs of these replacements, which would account for poles found to be in poor condition.

A total cost for these works of [redacted] was calculated. This is within the reduced funding of [redacted] and provides confidence that the cost per WSC used in calculating the allowance is sufficient to ensure these schemes will be delivered. Furthermore, any remaining funding will be invested in-period in other identified WSC schemes.

A second case study was carried out for circuit [redacted]. This is a complex scheme, where a multitude of interventions must be carried out in order to derive benefits for WSCs. This scheme will require deployment of automation at various locations, tree cutting, bird flight diverters, and overhead line conductor replacement, along with pole replacement as necessary. The total cost of these works has been calculated at [redacted], compared to the original forecast of [redacted]. This represent a counterexample to the case study described previously, with the purpose of illustrating that the forecast scheme costs are accurate, yet present low deliverability risk.

The approach of deriving scheme costs from a cost per WSC results in sufficient funding for SP Energy Networks to improve the performance experienced by WSCs. In practice, it is likely that scheme costs will be significantly under the proposed costs, as indicated by the worked example, mitigating deliverability risks. It is likely, therefore, that further WSCs than the ones targeted by the programme will benefit from this funding, as any left-over funding will be invested in other WSCs identified in-period.

4 Appendix

The content of this appendix has been redacted.