

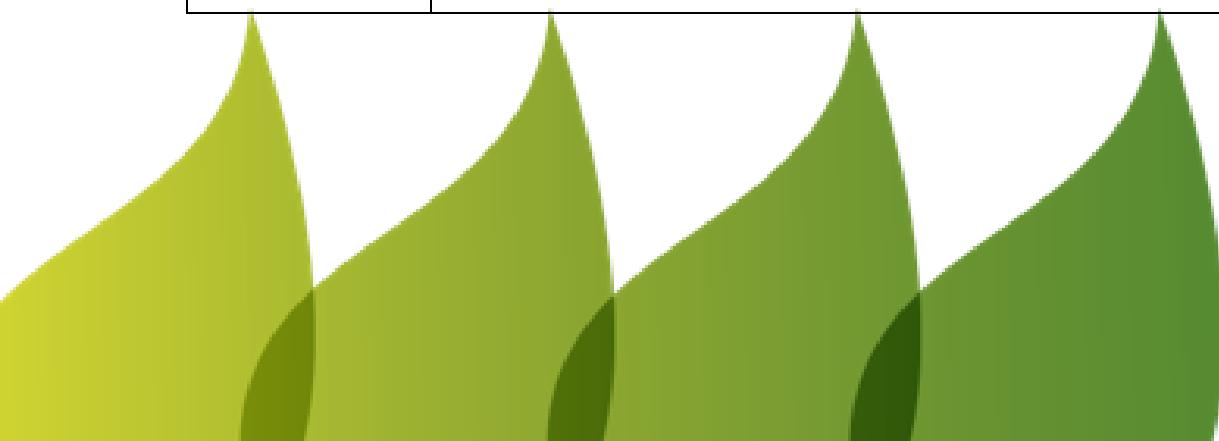
## Environmental – Noise Pollution

### ED2 Engineering Justification Paper Addendum

**ED2-NLR(A)-SPEN-001-ENV-EJP-ADD**

Issue	Date	Comments					
Issue 0.1	July 2022	Internal Draft for Review					
Issue 0.2	August 2022	Internal Draft with Comments Addressed					
Issue 1.0	August 2022	First Issue - Draft Determination Response					
<b>Scheme Name</b>	RIIO ED2 – CV22 – Noise Pollution						
<b>PCFM Cost Type</b>	Non-Load Related Other						
<b>Activity</b>	Environmental – Noise Pollution						
<b>Primary Investment Driver</b>	Legal requirement to action noise complaints and mitigate noise pollution from new installations.						
<b>Reference</b>	ED2-NLR(A)-SPEN-001-ENV-EJP-ADD						
<b>Output Type</b>	Environmental – Noise Pollution						
<b>Cost</b>	<b>SPD</b>	£0.847m	<b>SPM</b>	£0.847m			
<b>Delivery Year</b>	2023-2028						
<b>Reporting Table</b>	CV22						
<b>Outputs included in EDI</b>	Yes/No						
<b>Business Plan Section</b>	Ensure a Safe and Reliable Electricity Supply						
<b>Primary Annex</b>	Annex 4C.3: Environmental Action Plan						
<b>Spend Apportionment</b>	<b>EDI</b> £m	<b>ED2</b> £1.694m	<b>ED3</b> £m				

	Proposed by	Endorsed by	Approved by
<b>Name</b>	David Cupples	Ralph Eyre-Walker	Russell Bryans
<b>Signature</b>	<i>David Cupples</i>		
<b>Date</b>	23.08.2022	23.08.2022	23.08.2022



## I Purpose

This addendum has been prepared to provide additional information and justification to ED2-NLR(A)-SPEN 001-ENV-EJP Noise Pollution EJP following receipt of RIIO-ED2 Draft Determination. The content of 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 SPEN’s proposal is broadly in line with RIIO-EDI rates for SPM, however far greater than RIIO-EDI rates for SPD. We consider this increased expenditure in SPD is unjustified.

**Ofgem Identified Risks** - There is a volume and deliverability risk based on the increased expenditure from RIIO-EDI.

## 3 Additional Justification

### 3.1 Additional Supporting Information

Noise Pollution interventions on our assets are primarily driven by noise complaints by members of the public which are raised with the local authority. Therefore, Noise Pollution as workstream is reactive with variable levels of intervention throughout the period dependant on the number of noise complaints received

In forecasting of allowances, SPEN looked at historic data for noise complaints and more recent trends in both the SPD and SPM licences. Table I below contains the same information as Table I in this EJP, with the below updated to include the latest available RRP data (7<sup>th</sup> year 2021/22).

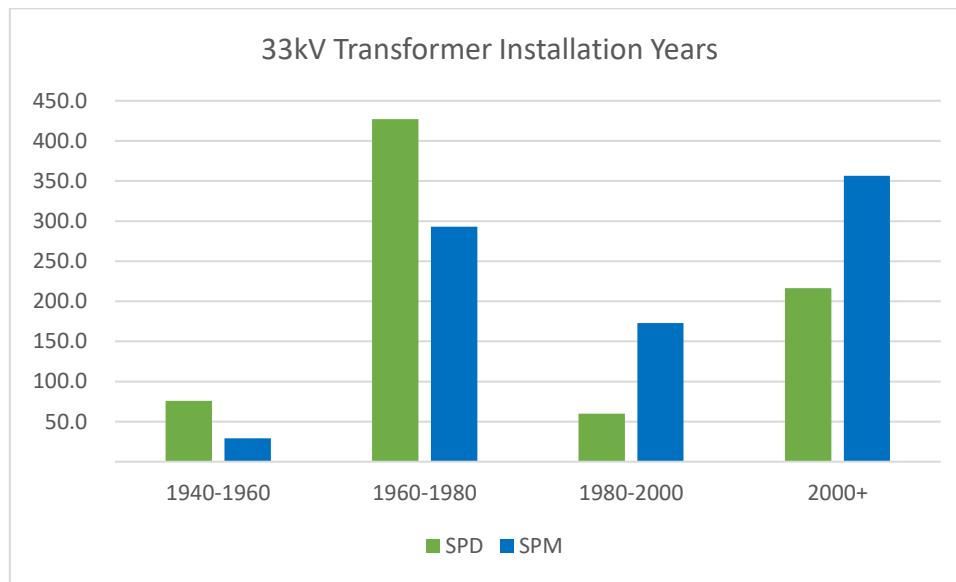
Table I - Summary of Historic Noise Complaint Interventions

Licence	Noise Complaints DPCR5	Noise Interventions DPCR5	Noise Complaints RIIO-EDI To date	Noise Interventions RIIO-EDI To date	Average D5 & EDI Per Annum
SPM	No data	69 (13.8pa)	25 (4pa)	23 (3.3pa)	8pa
SPD	No data	84 (16.8pa)	10 (1.4pa)	8 (1.1pa)	8pa

The updated data in Table I continues to show over DPCR5 and RIIO-ED1 average interventions of 8 per year SPD's average volumes in ED1 are noticeably lower than SPM which is driven predominantly by no activity being undertaken in 4 individual years. Once these zero years are removed, the ED1 average in SPD is 2 6pa which is in line with SPM.

However, as our overall transformer fleet continues to age with the increased loading driven by LCT uptake and distributed generation, we believe it's likely that noise complaints within SPD shall increase in frequency, heading towards the long-term average to be more in line with SPM. This is backed up by the latest RRP data, which saw 2 noise complaints submitted in SPD in the 2021/22 RRP year.

Our 33kV transformer fleet in SPD is in general older than the SPM fleet, as shown by the graph below. As transformer noise is related to asset age and average loading, it seems likely that SPD assets will generate more noise than previously as ED2 progresses, increasing the likelihood of customer noise complaints. Noise complaints in SPM are already fairly high, and so it seems unlikely that this volume will increase much higher in the next 5 years.



**Figure 1** 33kV Transformer Installation Years

It's worth noting that a proportion of these older assets will be replaced in ED2 through condition driven interventions, however due to the large total asset population the average age of 33kV transformers in SPD and SPM will still rise in ED2. These ages are given in the table below, and further justify SPEN's assumption that noise complaints will continue or increase in frequency in RIIO-ED2.

Licence	2023 Average Tx Age	2028 Average Tx Age
SPD	43.42	45.50
SPM	34.63	37.64

**Table 2** Average 33kV Transformer Age

SPEN has therefore forecast 3 volumes per annum in both licences. This is line with SPM's EDI average and SPD's average across EDI years where activity has been undertaken. It is worth noting that 3pa remains a conservative forecast and is well below the long-term average in both licences of 8pa.