

~~RIIO-ED2~~ Load Related RExpenditure Volume Drivers Governance Document

Subject	Details
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~~This document is version 1.0 of the RIIO-ED2 LRE Volume Drivers Governance Document referred to under Special Condition 3.9 of the Electricity Distribution Licence.~~

This document and the RIIO-ED2 LRE Volume Drivers Workbook included at Appendix 1 are licence instruments, in accordance with Special Condition 3.9, and together with Special Condition 3.9, ~~covers~~ set out the arrangements for the Load Related Expenditure (LRE) Volume Drivers ~~in RIIO-ED2~~. The purpose of the Load Related Expenditure Volume Drivers is to allow ~~Distribution Network Operators (DNOs)~~ licensees to deploy flexibility services and invest in their secondary networks as demand increases over the ~~RIIO-ED2~~ Price Control Period.

This document is aimed at ~~DNO~~ licensees and other stakeholders with a general interest in the LRE Volume Drivers. It covers the scope, governance and administration of the LRE Volume Drivers, including the metrics and workbook that will be used to monitor and assess delivery under the volume drivers, ~~how caps will be set~~, and the process that will be undertaken to review these parameters during the price control.

~~Related Documents~~

~~Electricity Act 1989~~

~~RIIO-ED2 Final Determinations, Core Methodology Document, Chapter 3~~

Special Condition 3.9 (LRE Volume Drivers) of the Electricity Distribution Licence
RIIO-ED2 LRE Volume Drivers Workbook (Appendix 1)
ED2Models_MasterTemplate_Disag_Secondary_Reinforcement.xls (Appendix 2)

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Context

Ofgem is the Office of Gas and Electricity Markets which regulates the electricity and gas industries in Great Britain. Our principal duty is to protect the interests of existing and future gas and electricity consumers. Consumers' interests are taken as a whole, including their interests in the reduction of greenhouse gases and in the security of the supply, and in the fulfilment of relevant statutory objectives when we are carrying out our functions as the gas and electricity regulator of Great Britain.

We work in various ways to protect the interests of current and future consumers. One way we do this is by regulating the network companies through the RIIO price controls. We set price controls to specify the services and level of performance that the network operators must provide for users and consumers and to restrict the amount of money that the network companies can recover through network charges over the length of a ~~P~~price ~~e~~Control ~~p~~Period.

In November 2022 we published our RIIO-ED2 Final Determinations for the electricity Distribution Network Operators (~~DN~~~~NO~~~~ss~~). This set out the key elements of the price control from 1 April 2023 to 31 March 2028. This included the Secondary Reinforcement Volume Driver and the Low Voltage Services Volume Driver for Load Related Expenditure (LRE). These newly introduced arrangements are given effect to in the Electricity Distribution Licences.

The purpose of this document is to outline the operation of the LRE volume drivers and the requirements the ~~DN~~~~O~~licensees need to satisfy to comply with the associated licence conditions.

It is the responsibility of each ~~DN~~~~O~~licensee to understand the provisions of this ~~document~~Governance Document -and how those provisions apply to it. ~~This Governance Document comes into effect on 1 April 2023.~~

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1. Introduction

1.1. SpC 3.9 (Load Related Expenditure volume drivers) of the RIIO-ED2 licence establishes this Load Related Expenditure Volume Drivers Governance Document ("the Governance Document") and the RIIO-ED2 LRE Volume Drivers Workbook ("the LRE Volume Drivers Workbook") attached at Appendix 1, as licence instruments.

~~1.1.1.2.~~ This ~~Load Related Expenditure (LRE) Volume Drivers Governance Document~~ ("the ~~Governance Document~~") is issued under ~~Special Condition (SpC) 3.9 (Load Related Expenditure volume drivers)~~ of the ~~RIIO-ED2 licence~~. ~~It~~ This Governance Document provides information on the reporting requirements and methodologies for the Secondary Reinforcement Volume Driver (SRVD) and the Low Voltage Services Volume Driver (LVSVD) (the "LRE Volume Drivers"). The LRE Volume Drivers will enable relevant LRE allowances to be adjusted during ~~RIIO-ED2~~the Price Control Period.

~~1.2.1.3.~~ This Governance Document is intended to help ~~DNOL~~licensees fulfil requirements to receive funding under ~~the LRE Volume Drivers~~SpC 3.9. It provides information on the accompanying monitoring and reporting framework and should be used by ~~DNOL~~licensees alongside the Regulatory Instructions and Guidance (RIGs) and Regulatory Report Packs (RRPs) processes to assist reporting on the use of the LRE ~~V~~volume ~~d~~Drivers.

~~1.3.—DNOL~~Licensees may use the LRE Re-opener, set out under SpC 3.2 of the RIIO-ED2 licence to apply for additional LRE allowances for certain activities that do not fall within the scope of the LRE Volume Drivers. Guidance on the LRE Re-opener is provided in Appendix 9 of the RIIO-2 Reopener Guidance and Application Requirements document.

1.4.

Related Documents

1.5. This Governance Document (including appendices) is one of several documents relevant to the operation and administration of the LRE Volume Drivers. The other relevant documents are:

—~~Electricity Act 1989~~

—~~RIIO-ED2 Final Determinations, Core Methodology Document, Chapter 3~~

- Special Condition 3.9 (LRE Volume Drivers) ~~of the Electricity Distribution Licence~~
- Special Condition 3.2 Part K (Load Related Expenditure Re-opener)

— ~~RIIO-ED2 LRE Volume Drivers Workbook (Appendix 1)~~

— ~~ED2Models_MasterTemplate_Disag_Secondary_Reinforcement.xls (Appendix 2)~~

- RIIO-ED2 Final Determinations, Core Methodology Document, Chapter 3
- RIIO-2 Reopener Guidance and Application Requirements

1.6. In any case of conflict of meaning between these documents, the following order of precedence applies:

- the relevant licence conditions
- the LRE Volume Drivers Governance Document
- the LRE Volume Drivers Workbook
- RIIO-2 Reopener Guidance and Application Requirements
- RIIO-ED2 Final Determinations, Core Methodology Document, Chapter 3

Definitions

1.7. This Governance Document uses the defined terms ~~, which are capitalised, with the meaning~~ listed in the table below which are not defined in the licence. Defined terms not listed in the table below have the meaning given to them in the Licence. ~~found in the following locations: a) the table given below b) Special Condition 1.2 (Definitions and references to the Electricity Distributors); and c) standard condition 1 (Definitions for the standard conditions).~~

Cumulative Reported LVSVD Allowances	means cumulative adjusted LVSVD allowances for RIIO-ED2 Regulatory Years to date, based on actual volumes (minus any that have been previously disallowed) multiplied by the relevant unit costs in Appendix 2 of SpC 3.9, excluding RPEs and excluding any net impact of the TIM.
Cumulative Reported SRVD Allowances	means cumulative adjusted SRVD allowances for RIIO-ED2 Regulatory Years to date, based on actual volumes (minus any that have been previously disallowed) multiplied by the relevant

	unit costs in Appendix 1 of SpC 3.9, excluding RPEs and excluding any net impact of the TIM.
LRE Volume Drivers	means the secondary reinforcement volume driver (SRVD) and the low voltage services volume driver (LVSVD)
LV Service	means the service line from the low voltage distributing main to the licensee's protection device situated upon the Customer's premises.
LVSVD Ex Ante Allowances	means the total initial ex ante allowance for LVSVD _t , over the Price Control Period, excluding RPEs, as shown in Appendix 3 of SpC 3.9.
Proactive Works	Proactive Works means works that are undertaken where no specific Customer request has been received.
Reactive Works	Reactive Works means works that are undertaken in response to a specific Customer request.
SRVD Ex Ante Allowances	means the total initial ex ante allowance for SRVD _t , over the Price Control Period, excluding RPEs, as shown in Appendix 3 of SpC 3.9.
Unlooped Properties	Means properties that were originally fed from a Looped Service, and which, because of an unlooping project, are no longer supplied by a Looped Service.

Compliance

~~1.4.1.8.~~ ~~DNOL~~Licensees are required by SpC 3.9 to comply with this document.

~~1.5.—For the avoidance of doubt, this Governance Document is subordinate to the licence. It does not change any definition or obligations contained within the licence and in the event of any ambiguity or inconsistency with the licence, the licence will take precedence.~~

~~1.6.1.9.~~ This document in no way relieves affected parties, including ~~DNOL~~licensees, from their responsibility to ensure ongoing compliance with legislation including competition, data protection, environment, and consumer protection laws.

~~1.7.1.10.~~ The Authority may amend this Governance Document in accordance with the procedure set out in SpC 3.9.

2. Secondary Reinforcement Volume Driver

Overview

- 2.1. The SRVD is used to fund certain load related activity on the ~~DNO~~licensees' secondary networks relating to capacity constraints. ~~DNOs have been provided with an ex-ante allowance for this investment, set at the start of RIIO-ED2 and shown in the PCFM.~~
- 2.2. We expect that the dominant driver of secondary network reinforcement ~~for RIIO-ED2 over the Price Control Period~~ will be the uptake of Low Carbon Technologies (LCTs), specifically Electric Vehicles (EVs) and Heat Pumps (HPs). The pace, location and local network impact of these technologies is challenging to predict. This creates uncertainty over the volumes of network interventions which will be needed to ensure that connections of LCTs can be supported without compromising network reliability. The SRVD is designed to help manage this uncertainty.
- 2.3. The core parameters of the ~~volume driver~~SRVD ~~are~~ are provided in the table below.

Table 1: Secondary Reinforcement Volume Driver overview

UM Parameter	Position
Scope	<p>The SRVD funds certain activities that are required to manage load related capacity constraints affecting substations and circuits on the secondary distribution network at voltages up to 22kV. The activities in scope for the SRVD are the replacement-reinforcement of ground mounted and pole mounted transformers, the replacement-reinforcement of overhead lines and buried-underground cables and the use of flexibility services to defer replacement-reinforcement of either transformers, overhead lines or buried-underground cables (or any combination of these).</p> <p>The purpose of the SRVD is to fund reinforcement works (or flexibility services) for assets that are highly utilised. For transformers, the threshold for the SRVD is where utilisation is above, or forecast to be above, 100%. Assessment of transformer utilisation is based on a forecast of the asset's utilisation for the Regulatory Year ahead, ie up to 31 March 2025 for the RRP submission at the end of the Regulatory Year ending 31 March 2024, and each 31 March after the RRP submission thereafter. A tolerance of 10% transformer capacity additions is permitted, where</p>

UM Parameter	Position
	<p>reinforcement activities relate to assets that are forecast to be <100% utilised.</p> <p>The purpose of the SRVD is to fund reinforcement works (or flexibility services) for assets that are highly utilised. For transformers, the threshold for the volume driver is where utilisation is above, or forecast to be above, 100%. Assessment of transformer utilisation is based on a forecast of the asset's utilisation for a year ahead, ie up to 31 March 2024 and each 31 March after the RRP submission thereafter. A tolerance of 10% transformer capacity additions where assets are <100% utilised is permitted.</p>
Volume measure	<p>The SRVD mechanism is used to vary allowances based on set unit costs for the following volume measuressecondary reinforcement activities:</p> <ul style="list-style-type: none"> Substations: MVA gross additions for pole mounted transformers (PMTs) and ground mounted transformers (GMTs). Circuits: km additions for overhead pole lines (OHL) and underground cables, with separate unit costs for each, by voltage level (HV and LV). Flexibility services: gross deferred secondary reinforcement in substations (MVA) and/or circuits (km). <p>Substations: MVA gross additions for pole mounted transformers (PMTs) and ground mounted transformers (GMTs).</p> <p>Circuits: km gross additions for overhead pole lines (OHL) and buried cables with separate unit costs for each, by voltage level (HV and LV).</p> <p>Flexibility services: gross deferred secondary reinforcement in substations (MVA) and/or circuits (km).</p>
Adjustment mechanism	<p>DNOLLicensees received an ex ante secondary reinforcement allowance for the whole of Price Control PeriodRIIO—ED2, set at the start of the Price Control Period and shown in Appendix 3 of SpC 3.9. The volume driverSRVD will adjust the total ex ante allowances for Secondary Reinforcement (up or down). Allowances are calculated as the sum of the volumes delivered multiplied by the relevant unit rates as set out in SpC 3.9.</p>

UM Parameter	Position
	<p>Five metrics are included in the monitoring and reporting package for the SRVD, to help guard against sub-optimal investment, above ex ante funding levels.</p> <ul style="list-style-type: none"> • Metric 1: Transformer utilisation • Metric 2: Transformer capacity released ratio • Metric 3: Circuits length added ratio • Metric 4: Measured Low Voltage Peak Demand Growth and Electricity Consumption Growth Indices • Metric 5: Flexibility procured transformer utilisation <p>Each metric is described in further detail later in this section of the LRE Volume Drivers Governance Document.</p> <p>Metric 4 is included for information purposes only and is not used when considering whether licensee expenditure is sub-optimal or in any subsequent adjustment of volumes.</p>
Totex Incentive Mechanism (TIM)	The TIM will be applied to allowances where there is variance between the unit rates set out in SpC 3.9 (Appendix 1) and the outturn unit rates.
Allowance cap	The total expenditure that can be accessed from the SRVD will be subject to a cap. The cap is set on an aggregate basis, limiting the total costs that are available from the SRVD. The cap is individual to each DN licensee and applies for the whole of RIIO-ED2 the Price Control Period. The value of each DN licensee's cap is set out in SpC 3.9.

Flexibility services

- 2.4. The SRVD has been designed to provide funding for the procurement of flexibility services on the secondary network ~~(“secondary flex”)~~, consistent with the ‘flexibility first’ principle that we established for RIIO-ED2 in our Sector Specific Methodology Decision¹. ~~This is in addition to any ex ante funding that has been allocated for secondary flex.~~

¹ <https://www.ofgem.gov.uk/publications/riio-ed2-sector-specific-methodology-decision>

2.5. The economic case for flexibility, in the context of the SRVD, relates to the value of deferring investment in secondary reinforcement, where these assets would otherwise be eligible for ~~replacement~~ reinforcement under the SRVD.

2.6. Deferral will be achieved where asset utilisation can be reliably managed below 100%, through the use of contracted flexibility services.

2.7. Allowances for flexibility will be calculated in the same way as other allowances under the SRVD ie a volume multiplied by the relevant unit rate. Paragraphs 2.8 and 2.9 describe how the unit rate is set and the volume measure that should be used.

Allowances shall be calculated and reported once, in the Regulatory Year when the flexibility service contract is first procured.

~~2.7.2.8.~~ The unit rate for flexibility services within the SRVD will reflect the value of deferring investments in other secondary reinforcement assets. The value of deferral is determined by the type of asset investment being deferred and the period of deferral, with the unit rate calculated as set out in SpC 3.9 of the RIIO-ED2 licence. ~~For the purposes of calculating the unit rate for flexibility services, the period of reinforcement deferral shall be no greater than five years.~~

2.9. This unit rate will be multiplied by a volume; in this case the transformer capacity (MVA) or circuit length (km) as appropriate, that would have been delivered by the counterfactual network reinforcement under the SRVD if the flexibility service wasn't procured, to provide the overall secondary flexibility allowance. This counterfactual volume shall be ~~determined the value used in using~~ the Common Evaluation Methodology (CEM) tool, ~~or equivalent CBA tool,~~ developed by the Energy Networks Association and Baringa, in accordance with the requirements of Electricity Distribution Standard Licence Condition (SLC) 31E (Procurement and use of Distribution Flexibility Services (SLC 31E)).

~~2.8.2.10.~~ Flexibility solutions delivered through the SRVD must be reported and procured in accordance with the provisions of SLC 31E. ~~DNOLicensees~~ should follow the reporting requirements set out in SLC 31E in meeting this condition, including the detailed requirements in respect of annual reporting on the flexibility they intend to procure (via a Distribution Flexibility Services Procurement Statement) and that which has been procured (via a Distribution Flexibility Services Procurement Report).

~~2.9.2.11.~~ Only flexibility that is shown to be economically advantageous can be funded through the SRVD. In accordance with SLC 31E, ~~DNOLicensees~~ must publish details of

the comprehensive quantitative analysis that is undertaken, including through the CEM tool, to demonstrate that flexibility is the most ~~economic and efficient~~ **economically advantageous** solution in all cases where it is proposed. Such details shall be reported through the annual Distribution Flexibility Services Procurement Statement and the Distribution Flexibility Services Procurement Report, as required by SLC 31E.

~~2.10:~~**2.12.** Where a flexibility contract is procured using the SRVD in order to defer the reinforcement of an asset, and that asset is then subsequently reinforced, prior to the expiry of the flexibility contract, the ~~DNO~~licensee must **provide details within the accompanying commentary to the LRE Volume Drivers Workbook highlight this as part of the review of the LRE volume drivers (see Chapter 4)** and provide justification as to why the reinforcement was required **earlier than expected**. Where we consider that the requirement for secondary reinforcement in advance of the expiry of the flexibility contract is not justified, we may disallow volumes relating to ~~the the flexibility services that were secured through the SRVD~~**secondary reinforcement**. Justification could for example be a change in circumstances impacting load forecasts, that could not reasonably have been foreseen at the point where the flexibility contract was entered into.

~~2.11:~~**2.13.** The use of flexibility services funded through the SRVD, does not reduce or compromise the requirement for compliance with any other part of the RIIO-ED2 licence, including standards and obligations relating to reliability and network security.

~~2.12:~~**DNOs can secure allowances for flexibility services through the SRVD at any point during the Price Control Period, in accordance with this Governance Document. However, the SRVD is intended to enable funding of secondary flex over and above the ex-ante secondary flex allowances that have been set for RIIO-ED2. As such, during the RIIO-ED2 close out process, we will carry out a reconciliation of secondary flex spend across both ex-ante allowances and the volume driver. In the event that all ex-ante secondary flex allowances have not been used, we will adjust secondary flex allowances funded through the volume driver down by the total of the unused ex-ante allowance.**

~~2.13:~~**2.14.** The inclusion of flexibility in the SRVD will be reviewed in **the Regulatory Year ending on 31 March 2026**~~Year 3~~ as part of the wider LRE Volume Drivers review, described in Chapter 4 of this ~~document~~**Governance Document**.

SRVD reporting and monitoring framework

~~2.14-2.15.~~ ~~DNOLicensees~~ are required to report their performance in relation to the SRVD. ~~in accordance with the RIIO-ED2 RIGs. This includes submission by the deadline stated in the RIGs and in the format prescribed by the RIIO-ED2 RRP.~~ The sections below describe the SRVD reporting and monitoring framework in more detail, including the specific metrics that will be used. Where the same information is required for multiple metrics, ~~DNOLicensees~~ are only required to report this information once.

~~2.15-2.16.~~ Central to the reporting and monitoring framework is the LRE Volume Drivers Workbook (Appendix 1). ~~This~~ workbook forms part of this ~~LRE Volume Drivers Governance Document~~, ~~will form part of the RRP~~s, and will be used throughout the Price Control Period, to track volumes, costs and compliance with the metrics described in this document.

~~2.16-2.17.~~ In this SRVD reporting and monitoring framework, the following definitions of HV and LV apply, in respect of transformers and circuits;

- High Voltage (HV): 1,000V – 22kV
- Low Voltage (LV): <1,000V

~~2.17-2.18.~~ In accordance with the RRP~~s~~ 'CV2 – Secondary Reinforcement' datasheet, each ~~DNOLicensee~~ must submit both ~~their~~-its costs and volumes annually for the following reinforcement activities:

(a) Substation Reinforcement (reinforcement to increase capacity at substations)

- PMT ~~Transformer~~ gross (capacity) additions (HV / LV, MVA)
- GMT ~~Transformer~~ gross (capacity) additions (HV / LV, MVA)

(b) Circuit Reinforcement (reinforcement to increase the capacity of circuits)

- OHL Circuit (length) additions (LV, km)
- OHL Circuit (length) additions (HV, km)
- Cable Circuit (length) additions (LV, km)
- Cable Circuit (length) additions (HV, km)

~~2.18-2.19.~~ In accordance with the RRP~~s~~ 'CV2 – Secondary Reinforcement' datasheet, each ~~DNOLicensee~~ must submit both ~~their~~-its costs and deferred activity volumes annually

split out by the length of the contract, for the following activity types when flexibility has been procured to defer reinforcement:

(a) Deferred Substation Reinforcement

- PMT ~~Transformer~~ capacity deferred (gross, counterfactual) (HV / LV, MVA)
- GMT ~~Transformer~~ capacity deferred (gross, counterfactual) (HV / LV, MVA)

(b) ~~(b)~~ Deferred Circuit Reinforcement

- OHL Circuit length deferred (~~gross~~, counterfactual) (LV, km)
- Cable Circuit length deferred (~~gross~~, counterfactual) (LV, km)
- OHL Circuit length deferred (~~gross~~, counterfactual) (HV, km)
- ~~Cable Circuit length deferred (gross, counterfactual) (LV, km)~~
- Cable Circuit length deferred (~~gross~~, counterfactual) (HV, km)

~~2.19.2.20.~~ In accordance with the relevant RRP datasheet, each ~~DN~~licensee must also submit ~~their~~its volumes for the following, in order to facilitate the calculation of the reporting and monitoring metrics:

- PMT gross capacity additions (HV / LV, MVA) within the respective 20% **forecast** utilisation bands of the transformer before it was reinforced.²
- GMT gross capacity additions (HV / LV, MVA) within the respective 20% **forecast** utilisation bands of the transformer before it was reinforced.
- HPs installed on the ~~DN~~licensee's' network during the ~~year~~Regulatory Year, ~~using the MCS database as a data source~~ (#).³
- EVs registered in the ~~DN~~licensees's' ~~region(s)~~Distribution Services Area during the ~~Regulatory y~~Year ~~using the DVLA registration database as a data source~~ (#).⁴
- PMT disposals (HV / LV, MVA).
- GMT disposals (HV / LV, MVA).

² The 20% bands for PMT and GMT gross capacity additions are those outlined in the RRP: $0 \leq x < 20\%$, $20\% \leq x < 40\%$, $40\% \leq x < 60\%$, $60\% \leq x < 80\%$, $80\% \leq x < 100\%$, $100\% \leq x < 120\%$, and $\leq 120\%$

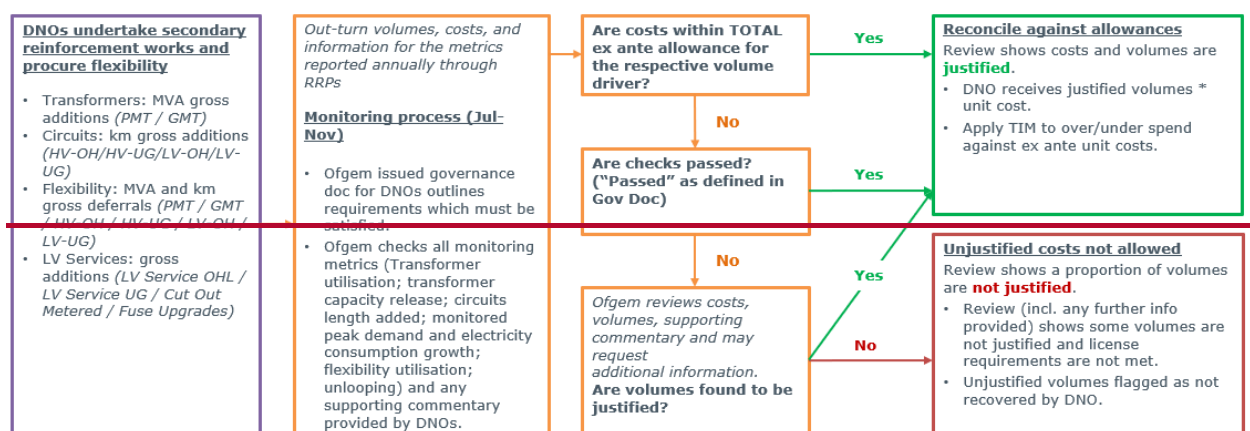
³ Further details regarding the data that should be used by licensees in respect of heat pumps is provided in the RIGs

⁴ Further details regarding the data that should be used by licensees in respect of EVs is provided in the RIGs

- LV monitored GMT peak demand growth (HV / LV, #) within the respective growth bands.⁵
- LV monitored PMT peak demand growth (HV / LV, #) within the respective growth bands.
- LV monitored GMT electricity consumption growth (HV / LV, #) within the respective growth bands.
- LV monitored PMT electricity consumption growth (HV / LV, #) within the respective growth bands
- PMT existing capacity of assets with flexibility procured (HV / LV, MVA) within the respective 20% **forecast** transformer utilisation bands and split out by the length of the contract in years.^{6 7}
- GMT existing capacity of assets with flexibility procured (HV / LV, MVA) within the respective 20% **forecast** transformer utilisation bands and split out by the length of the contract.^{6 7}

2.20. ~~Figure 1 below sets out the high-level process that DNOs and the Authority will follow in using the SRVD.~~

~~Figure 1: SRVD monitoring process~~



SRVD monitoring metrics

⁵ The bands are those outlined in the RRP: $x < -5\%$, $-5\% \leq x < 0\%$, No growth, $0\% < x < 5\%$, $5\% \leq x < 10\%$, $10\% \leq x < 20\%$, $20\% \leq x < 30\%$, $30\% \leq x < 50\%$, $50\% \leq x$, monitored sites with sufficient data but bad data / nil return, and monitored sites with insufficient data. These bandings apply for PMTs and GMTs, for both peak demand and electricity consumption growth.

⁶ The 20% bands are those outlined in the RRP: $0 \leq x < 20\%$, $20\% \leq x < 40\%$, $40\% \leq x < 60\%$, $60\% \leq x < 80\%$, $80\% \leq x < 100\%$, $100\% \leq x < 120\%$, and $\leq 120\%$.

⁷ The length of the contract should be recorded as either 1, 2, 3, 4, or 5 years.

- 2.21. Licensees must provide information which will be used to track their performance against the five SRVD metrics using the LRE Volume Drivers Workbook~~DNOs must provide information which will be used to track DNO performance against five SRVD metrics in the RRP in each year of the price control.~~ The metrics are designed to protect ~~C~~customers against unjustified costs arising from sub-optimal investment in the network~~that was not supported by robust information on network requirement.~~ This is achieved by each metric identifying whether ~~DNO~~licensees are exhibiting unexpected behaviour, for example increasing investment when LCT demand is lower than expected, or reinforcing a high proportion of low utilised assets.
- 2.22. Metric 4 is included to provide additional information to the Licensees and the Authority in respect of LV demand growth during the Price Control Period. ~~As such, it will provide an indication of the change in demand on the low voltage network rather than to check whether licensee expenditure is sub-optimal.~~
- ~~2.22.2.23.~~ SRVD ~~M~~metrics will be calculated from the ~~start of the Price Control Period~~~~first year of the price control.~~ If Cumulative Reported SRVD Allowances ~~DNO expenditure are is below SRVD Ex Ante Allowances~~~~within its ex ante RIIO-ED2 allowance for the relevant cost areas,~~ results from the metrics will not lead to ~~withholding of allowance~~~~the disallowance -of volumes~~ by the Authority.
- ~~2.23.2.24.~~ If, having exceeded its SRVD Ex Ante Allowances~~ex ante allowances for the SRVD activities described in Appendix 1 of SpC 3.9,~~ the ~~DNO~~licensee does not pass ~~certain any of the metrics, other than metric 4,~~ the Authority may review costs, volumes, and additional information submitted by the ~~DNO~~licensees as outlined in Chapter 4, associated with the failed metric(s). Where the review identifies sub-optimal expenditure, the Authority may decide to disallow a portion of the allowances associated with the failed metric(s). More detail on the annual review process can be found in Chapter 4.
- 2.25. Metrics 2a, 2b, 3a and 3b monitor the efficiency of SRVD activity, with reference to LCT demand growth, by calculating ratios that are compared with industry benchmarks. ~~The calculation of~~ The industry median benchmark ratios can be found in **Column N** of the *Cal_LCT_Modelling_Inputs* tab of the RIIO-ED2 Secondary Reinforcement Disaggregated Model (the "Disaggregated Model"), attached at Appendix 2.

2.26. Metrics 2 and 3 use the peak load contribution arising from new LCTs. For the purposes of these metrics, the following assumptions are used in the calculation of peak load contributions;

- EVs: 1.3 kW/EV
- Heat Pumps: 2.9 kW/HP

Metric 1: Transformer utilisation

~~2.24.~~2.27. The transformer utilisation metric is designed to control against sub-optimal reinforcement of transformers. The metric checks that reinforcement activities, funded through the SRVD, are occurring within areas where transformer utilisation is above, or forecast to be above, 100%.

~~2.25.~~2.28. Assessment of transformer utilisation shall be based on a forecast of the asset's utilisation for a ~~year~~Regulatory Year ahead, ie to the 31 March immediately after the annual RRP submission or 31 March 2024 in the case of the first ~~year~~Regulatory Year of ~~RIIO-ED2~~the Price Control Period. A tolerance of 10% of capacity additions in utilisation bands below 100% will be permitted, to account for situations where it is justified, or necessary for safety reasons, to invest in transformers with a utilisation below 100%.

~~2.26.~~2.29. The metric uses the following information reported by each ~~DNOL~~licensee on an annual basis:

- PMT gross capacity additions (HV / LV, MVA) within the respective 20% **forecast** utilisation bands of the transformer before it was reinforced.⁸
- GMT gross capacity additions (HV / LV, MVA) within the respective 20% **forecast** utilisation bands of the transformer before it was reinforced.⁸

~~2.27.~~2.30. ~~DNOL~~Licensees must develop a joint method statement that ensures that utilisation is measured consistently across ~~DNOL~~licensees. The method statement must

⁸ The 20% bands are those outlined in the RRP: $0 \leq x < 20\%$, $20\% \leq x < 40\%$, $40\% \leq x < 60\%$, $60\% \leq x < 80\%$, $80\% \leq x < 100\%$, $100\% \leq x < 120\%$, and $\leq 120\%$

be independently audited to confirm that the methodology is appropriate and can be applied consistently by all ~~DNØ~~licensees. This will include validation of:

- the source data used
- modelling and calculations being based on the source data correctly
- final outputs being correctly recorded
- final outputs providing a consistent measure of utilisation as defined in the method statement.

~~2.28-2.31.~~ In order to recover allowances under the SRVD, the independent audit of the method statement must be completed before July 2024 (ie when reporting starts for the first ~~year-Regulatory Year~~ of ~~RIIO-ED2~~the Price Control Period).

Metric 2a: Transformer capacity released ratio (PMT)

~~2.29-2.32.~~ The transformer capacity released ratio (PMT) checks that transformer capacity additions for PMTs are proportional to changes in LCT demand, by measuring the ratio of PMT net capacity additions⁹ to the increase in peak load capacity for PMTs caused by new LCT demand.¹⁰ The percentage of new LCTs contributing to peak load capacity for PMTs is assumed to be proportional to the percentage of total capacity served by PMTs on the network and is calculated in the Disaggregated Model.

~~2.30-2.33.~~ Each ~~DNØ~~licensee is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that resulting in the check not being passed. The formula for the ratio is presented below:

$$\frac{[PMT \text{ gross capacity released}_t - PMT \text{ disposals}_t]}{\sum_i \text{Proportion of LCTs served by PMTs}_i \cdot \text{Additional LCT connected}_{t,i} \cdot \text{Peak load contribution}_i}$$

Where:

$t = \text{time}$

$i = \text{LCT technology type}$

⁹ Net capacity additions are calculated as the difference between gross capacity additions and disposals.

~~¹⁰ LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions; 1.3kW/EV; and 2.9kW/HP.~~

~~2.31-2.34.~~ The metric uses the following information reported by each ~~DN~~licensee on an annual basis:

- HPs installed on the ~~DN~~licensees's network during the ~~year~~Regulatory Year, ~~using the MCS database as a data source~~ (#)
- EVs registered in the ~~DN~~licensees's Distribution Services Area ~~region(s)~~ during the ~~Regulatory y~~Year ~~using the DVLA registration database as a data source~~ (#)
- PMT ~~Transformer~~ gross (capacity) additions (HV / LV, MVA)
- PMT disposals (HV / LV, MVA)

Metric 2b: Transformer capacity released ratio (GMT)

~~2.32-2.35.~~ The transformer capacity released ratio (GMT) checks that transformer capacity additions for GMTs are proportional to changes in LCT demand, by measuring the ratio of GMT net capacity additions¹¹ to the increase in peak load capacity for GMTs caused by new LCT demand.¹² The percentage of new LCTs contributing to peak load capacity for GMTs is assumed to be proportional to the percentage of total capacity served by GMTs on the network and is calculated in the Disaggregated Model.

~~2.33-2.36.~~ Each ~~DN~~licensee is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that resulting in the check not being passed. The formula for the ratio is presented below:

$$\frac{[GMT \text{ gross capacity released}_t - GMT \text{ disposals}_t]}{\sum_i \text{Proportion of LCTs served by GMTs}_i \cdot \text{Additional LCT connected}_{t,i} \cdot \text{Peak load contribution}_i}$$

Where:

t = time

i = LCT technology type

~~2.34-2.37.~~ The metric uses the following information reported by each ~~DN~~licensee on an annual basis:

¹¹ Net capacity additions are calculated as the difference between gross capacity additions and disposals.

¹² ~~LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions; 1.3kW/EV; and 2.9kW/HP.~~

- HPs installed on the ~~DNOLicensees's~~ network during the ~~Regulatory Year, using the MCS database as a data source~~ (#)
- EVs registered in the ~~DNOLicensees's~~ Distribution Services Area ~~region(s)~~ during the ~~Regulatory Year using the DVLA registration database as a data source~~ (#)
- GMT ~~Transformer~~ gross (capacity) additions (HV / LV, MVA)
- GMT disposals (HV / LV, MVA)

Metric 3a: LV Circuits length added ratio (LV OHL)

~~2.35-2.38.~~ The LV circuits length added ratio (LV OHL) checks that the addition of LV overhead pole line circuits (length) is proportional to changes in LCT demand, by measuring the ratio of LV overhead pole line (LV OHL) length additions to the increase in peak load capacity for LV OHLs caused by new LCT demand.¹³ The percentage of new LCTs contributing to peak load capacity for LV overhead pole lines is assumed to be proportional to the ~~split of LV services between LV overhead pole lines and underground cables percentage of LV overhead pole lines on the network (relative to the total number of LV circuits)~~ and is ~~as~~ calculated in the Disaggregated Model.

~~2.36-2.39.~~ Each ~~DNOLicensee~~ is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that meaning that the check will not be passed. The formula for the ratio is shown below:

$$\frac{LV\ OHL\ length\ added_t}{\sum_i Proportion\ of\ LCTs\ served\ by\ LV\ OHLs_i \cdot Additional\ LCT\ connected_{t,i} \cdot Peak\ load\ contribution_i}$$

Where:

t = time

i = LCT technology type

~~2.37-2.40.~~ The metric uses the following information reported by each ~~DNOLicensee~~ on an annual basis:

¹³ ~~LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions: 1.3kW/EV; and 2.9kW/HP.~~

- HPs installed on the ~~DNO~~licensees's network during the ~~Regulatory yYear~~, using the ~~MCS database as a data source~~ (#)
- EVs registered in the ~~DNO~~licensees's Distribution Services Area ~~region(s)~~ during the ~~Regulatory yYear~~ using the ~~DVLA registration database as a data source~~ (#)
- OHL Circuit (length) additions (LV, km)

~~Metric 3b: HV Circuits length added ratio (HV OHL)~~

The ~~HV circuits length added ratio (HV OHL)~~ checks that the addition of HV overhead pole line circuits (length) is proportional to changes in LCT demand, by measuring the ratio of HV overhead pole line (HV OHL) length additions to the increase in peak load capacity for HV OHLs caused by new LCT demand.¹⁴ The percentage of new LCTs contributing to peak load capacity for HV overhead pole lines is assumed to be proportional to the percentage of HV overhead pole lines on the network (relative to the total number of HV circuits) and is calculated in the Disaggregated Model.

Each DNO is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that meaning that the check will not be passed. The formula for the ratio is shown below:

$$\frac{\text{HV OHL length added}_t}{\sum_i \text{Proportion of LCTs served by HV OHLs}_t \times \text{Additional LCT connected}_{i,t} \times \text{Peak load contribution}_t}$$

Where:

t = time

i = LCT technology type

The metric uses the following information reported by each DNO on an annual basis:

HPs installed on the DNOs' network during the year, using the MCS database as a data source (#)

EVs registered in the DNOs' region(s) during the year using the DVLA registration database as a data source (#)

OHL Circuit (length) additions (HV, km)

Metric 3be: LV Circuits length added ratio (LV cable)

¹⁴ LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions; 1.3kW/EV; and 2.9kW/HP.

~~2.38:~~2.41. The LV circuits length added ratio (LV cable) checks that the addition of LV cable circuits (length) is proportional to changes in LCT demand, by measuring the ratio of LV cable length additions to the increase in peak load capacity for LV cables caused by new LCT demand.¹⁵ The percentage of new LCTs contributing to peak load capacity for LV cables is assumed to be proportional to the percentage of LV cables on the network (relative to the total number of LV circuits) and is calculated in the Disaggregated Model.

~~2.39:~~2.42. Each ~~DN~~licensee is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that meaning that the check will not be passed. The formula for the ratio is presented below:

$$\frac{LV\ Cable\ length\ added_t}{\sum_i Proportion\ of\ LCTs\ served\ by\ LV\ cables_i \cdot Additional\ LCT\ connected_{t,i} \cdot Peak\ load\ contribution_i}$$

Where:

t = time

i = LCT technology type

~~2.40:~~2.43. The metric uses the following information reported by each ~~DN~~licensee on an annual basis:

- HPs installed on the ~~DN~~licensees's network during the Regulatory Year, ~~using the MCS database as a data source~~ (#)
- EVs registered in the ~~DN~~licensees's Distribution Services Area ~~region(s)~~ during the Regulatory Year ~~using the DVLA registration database as a data source~~ (#)
- Cable Circuit (length) additions (LV, km)

Metric 3c: HV Circuits length added ratio (HV OHL)

2.44. The HV circuits length added ratio (HV OHL) checks that the addition of HV overhead pole line circuits (length) is proportional to changes in LCT demand, by measuring the ratio of HV overhead pole line (HV OHL) length additions to the increase in peak load

¹⁵ ~~LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions; 1.3kW/EV; and 2.9kW/HP.~~

capacity for HV OHLs caused by new LCT demand. The percentage of new LCTs contributing to peak load capacity for HV overhead pole lines is assumed to be proportional to the percentage of Customers connected to HV overhead lines (as indicated by the IIS HV circuit disaggregated data) and is as calculated in the Disaggregated Model.

- 2.45. Each licensee is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that meaning that the check will not be passed. The formula for the ratio is shown below:

$$\frac{HV\ OHL\ length\ added_t}{\sum_i Proportion\ of\ LCTs\ served\ by\ HV\ OHLs_i \cdot Additional\ LCT\ connected_{t,i} \cdot Peak\ load\ contribution_i}$$

Where:

t = time

i = LCT technology type

- 2.46. The metric uses the following information reported by each licensee on an annual basis:

- HPs installed on the licensee's network during the Regulatory Year (#)
- EVs registered in the licensee's Distribution Services Area during the Regulatory Year (#)
- OHL Circuit (length) additions (HV, km)

Metric 3d: HV Circuits length added ratio (HV cable)

- ~~2.41-2.47.~~ 2.47. The HV circuits length added ratio (HV cable) checks that the addition of HV cable circuits (length) is proportional to changes in LCT demand, by measuring the ratio of HV cable length additions to the increase in peak load capacity for HV cables caused by new LCT demand.¹⁶ The percentage of new LCTs contributing to peak load capacity for HV cables is assumed to be proportional to the percentage of HV cables on

¹⁶ ~~LCT peak load contribution is calculated for EVs and heat pumps using the following assumptions; 1.3kW/EV; and 2.9kW/HP.~~

the network (relative to the total number of HV circuits) and is calculated in the Disaggregated Model.

~~2.42-2.48.~~ Each ~~DN~~licensee is compared to an industry benchmark, calculated in the Disaggregated Model. A tolerance of 10% above the industry benchmark is permitted, with any deviation above that meaning that the check will not be passed. The formula for the ratio is presented below:

$$\frac{HV\ Cable\ length\ added_t}{\sum_i Proportion\ of\ LCTs\ served\ by\ HV\ cables_i \cdot Additional\ LCT\ connected_{t,i} \cdot Peak\ load\ contribution_i}$$

Where:

t = time

i = LCT technology type

~~2.43-2.49.~~ The metric uses the following information reported by each ~~DN~~licensee on an annual basis:

- HPs installed on the ~~DN~~licensees's network during the Regulatory ~~y~~Year, ~~using the MCS database as a data source~~ (#)
- EVs registered in the ~~DN~~licensees's Distribution Services Area ~~region(s)~~ during the Regulatory ~~y~~Year ~~using the DVLA registration database as a data source~~ (#)
- Cable Circuit (length) additions (HV, km)

Metric 4: Measured Low Voltage ~~p~~Peak ~~D~~demand ~~G~~growth and ~~E~~electricity ~~C~~consumption ~~G~~growth ~~I~~indices

~~2.44-2.50.~~ The Measured Low Voltage ~~p~~Peak ~~D~~demand ~~G~~growth and ~~E~~electricity ~~C~~consumption ~~G~~growth ~~I~~indices measure the change over time in the peak load and electricity consumption volume measured by LV Monitoring¹⁷. The metric tracks whether year on year growth is positive or negative. It is intended to provide visibility of the change in demand on the low voltage network as opposed to checking whether ~~DN~~licensee expenditure is sub-optimal.

¹⁷ LV Monitoring means the use of direct measurement, or advanced analytics, to allow for real time measurement and assessment of network conditions on the licensee's LV network, as defined in the RIIO-ED2 licence

~~2.45.2.51.~~ ~~DNOL~~Licensees are required to calculate their (i) year-on-year ~~A~~Annual ~~P~~peak ~~D~~demand ~~G~~growth and (ii) year-on-year ~~A~~Annual ~~e~~Electricity ~~C~~consumption ~~G~~growth measured by LV Monitoring and where there is sufficient data to do so.¹⁸ ~~DNOL~~Licensees should report additional data points as '~~Monitored sites with insufficient data~~' ~~new sites~~' once they have LV Monitoring installed, even where insufficient data has been recorded to calculate year-on-year annual growth.

~~2.46.2.52.~~ The year-on-year ~~A~~Annual ~~P~~peak ~~D~~demand ~~G~~growth shall be calculated as the percentage difference in measured peak demand (MVA) across ~~R~~regulatory ~~reporting~~ ~~Y~~Years. For this measure the in-year annual peak demand shall be based on the average (mean) of the peak demand across multiple events for each LV Monitoring point, using the highest 10 Half Hour periods for that LV substation. The formula is presented below:

$$\frac{\text{Peak demand (asset type } i)_t - \text{Peak demand (asset type } i)_{t-1}}{\text{Peak demand (asset type } i)_{t-1}} \cdot 100\%$$

Where:

~~t~~~~T~~ = time

Asset type *i* = GMT or PMT

~~2.47.2.53.~~ The year-on-year ~~a~~Annual ~~E~~electricity ~~C~~consumption ~~G~~growth shall be calculated as the percentage difference in measured annual electricity consumption (MWh) across ~~R~~regulatory ~~reporting~~ ~~Y~~Years, at ~~the each~~ locations where LV Monitoring is being used. The formula is presented below:

$$\frac{\text{Electricity consumption (asset type } i)_t - \text{Electricity consumption (asset type } i)_{t-1}}{\text{Electricity consumption (asset type } i)_{t-1}} \cdot 100\%$$

Where:

~~t~~~~T~~ = time

Asset type *i* = GMT or PMT

~~2.48.—As per Data Best Practice requirements, we expect DNOs to publish all LV monitoring data, subject to open data triage processes, and make this accessible to stakeholders.~~

¹⁸ This will require data for two consecutive Regulatory Years.

~~2.49~~**2.54.** The metric uses the following information reported by each ~~DN~~**O**licensee on an annual basis:

- LV monitored GMT peak demand growth (HV / LV, #) within the respective growth bands.¹⁹
- LV monitored PMT peak demand growth (HV / LV, #) within the respective growth bands.¹⁹
- LV monitored GMT electricity consumption growth (HV / LV, #) within the respective growth bands.¹⁹
- LV monitored PMT electricity consumption growth (HV / LV, #) within the respective growth bands.¹⁹

Metric 5: Flexibility procured transformer utilisation

~~2.50~~**2.55.** The flexibility procured transformer utilisation metric is designed to check that flexibility is only being procured in situations where transformer utilisation is above, or projected to be above, 100%.

~~2.51~~**2.56.** Assessment of transformer utilisation shall be based on a forecast of the asset's utilisation for a ~~year~~**Regulatory Year** ahead, ie to the 31 March immediately after the annual RRP submission or 31 March 2024 in the case of the first ~~year~~**Regulatory Year** of ~~RIIO-ED2~~**the Price Control Period**.

~~2.52~~**2.57.** The metric uses the following information reported by each ~~DN~~**O**licensee on an annual basis:

- PMT existing capacity of assets with flexibility procured (HV / LV, MVA) within the respective 20% **forecast** transformer utilisation bands and split out by the length of the contract in years.^{20 21}

¹⁹ The bands are those outlined in the RRP~~s~~: $x < -5\%$, $-5\% \leq x < 0\%$, No growth, $0\% < x < 5\%$, $5\% \leq x < 10\%$, $10\% \leq x < 20\%$, $20\% \leq x < 30\%$, $30\% \leq x < 50\%$, $50\% \leq x$, monitored sites with sufficient data but bad data / nil return, and monitored sites with insufficient data. These bandings apply for PMTs and GMTs, for both peak demand and electricity consumption growth.

²⁰ The 20% bands are those outlined in the RRP~~s~~: $0 \leq x < 20\%$, $20\% \leq x < 40\%$, $40\% \leq x < 60\%$, $60\% \leq x < 80\%$, $80\% \leq x < 100\%$, $100\% \leq x < 120\%$, and $\leq 120\%$.

²¹ The length of the contract should be recorded as either 1, 2, 3, 4, or 5 years.

- GMT existing capacity of assets with flexibility procured (HV / LV, MVA) within the respective 20% **forecast** transformer utilisation bands and split out by the length of the contract.^{20 21}

SRVD Cap

~~2.53:~~2.58. The total ~~expenditure that can be recovered~~ allowances that can flow through the SRVD ~~will be~~ subject to a ~~DNØ~~licensee specific cap, set out in SpC 3.9, Appendix 3. The cap is set on an aggregate basis, limiting the total ~~costs~~ allowances that are available from the ~~volume driver~~SRVD, ie individual caps will not be set per asset type. The cap applies for the whole of ~~RIIO-ED2~~the Price Control Period, allowing an uneven profile of spend across ~~Regulatory~~ Years if necessary.

~~2.54:~~2.59. The SRVD cap for each licensee has been determined by adding additional reinforcement costs to the SRVD ex ante allowances. Such additional reinforcement costs are calculated using the Disaggregated Model and are the difference between the efficient reinforcement costs using the LCT uptake forecasts in the FES 2022 System Transformation scenario (used in the derivation of ex ante funding) and the efficient reinforcement costs using the LCT uptake forecasts in the FES 2022 Leading the Way scenario. All other assumptions used in the calculation of the cap are the same as those used in the Disaggregated Model.

~~2.55:~~2.60. Taking a scenario from an independent source ensures an even treatment across ~~DNØ~~licensees. Using a scenario with ambitious forecasts for LCT take-up reduces the risk of blocking net zero whilst mitigating the risk that ~~DNØ~~licensees are provided with uncontrolled funding that will unfairly increase costs for ~~GB~~ consumersCustomers.

~~2.56:~~2.61. If a ~~DNØ~~licensee reaches the cap, it will no longer be able to increase allowances against the SRVD. As set out in Chapter 54, the level of the cap will be reviewed in the Regulatory Year ending on 31 March 2026~~3 of RIIO-ED2~~, with provision to review the cap earlier should it be necessary.

3. Low Voltage Services Volume Driver

Overview

- 3.1. The LVSVD is designed to fund ~~p~~Proactive Works and ~~reactive~~Reactive Works load ~~related~~relating to LV ~~S~~service reinforcement, including works associated with 'unlooping' of LV ~~S~~service cables.
- 3.2. The core parameters of the ~~volume driver~~LVSVD are provided in the table below.

Table 2: Low Voltage Services Volume Driver overview

UM Parameter	Position
Scope	<p>The LVSVD funds certain activities that are required to increase the capacity of service connections to individual loads at low voltage (<1kV). The LVSVD can fund certainpProactive Works and rReactive Works load relating to LV sService reinforcement activitiesas follows;</p> <ul style="list-style-type: none"> • Installation of new overhead pole lines – LV Service (OHL) • Installation of buriedunderground cables – LV Service (UG) • Works to upgrade switchgear cut outs – Cut Out (metered) • Works to upgrade switchgear fuses - Fuse upgrades <p>In the context of the LVSVD the following definitions apply:</p> <p>LV Service means the service line from the low voltage distributing main to the licensee's protection device situated upon the Customer's premises, but does not include the joint and associated components connecting the service line to the distributing main.</p> <p>Reactive Works means works that are undertaken in response to a specific customer request</p> <p>Proactive Works means works that are undertaken where no specific customer request has been received</p>
Volume measure	<p>The mechanism is used to vary allowances based on set unit costs for the volume of assets reinforced for each activity. The same unit cost will apply whether the works are delivered proactively or reactively. In each case the volume measure is the number of each type of activity delivered, where the specific activities are as follows.The mechanism is used to vary allowances based on set unit costs for the volume of assets reinforced for each</p>

UM Parameter	Position
	<p>activity. The same unit cost will apply irrespective of whether the works are Proactive Works or Reactive Works. In each case the volume measure is the number of each type of activity delivered, where the specific activities are as follows.</p> <ul style="list-style-type: none"> • Overhead pole lines – LV Service (OHL) • Buried-Underground cables – LV Service (UG) • Number Switchgear – Cut Out (metered) • Number Switchgear – Fuse upgrades
Adjustment mechanism	<p>DNOLLicensees received an ex ante allowance for the whole Price-Control Period of RIIO-ED2, set at the start of RIIO-ED2the Price Control Period and shown in Appendix 3 of SpC 3.9. The LVSVD will adjust the ex ante allowances for LV Services (up or down). Allowances are calculated as the sum of the volumes delivered multiplied by the relevant unit rates as set out in SpC 3.9.</p> <p>One 'LV Services unlooping' metric is included in the monitoring and reporting package for the LVSVD, to ensure that any Proactive Works for LV Services, works carried out and funded through the LVSVD, are primarily related to unlooping.</p>
Totex Incentive Mechanism (TIM)	The TIM will be applied to allowances where there is variance between the unit rates set out in SpC 3.9 (Appendix 2) and the outturn unit rates.
Allowance cap	<p>The total expenditure that can be accessed from the LVSVD will be subject to a cap. The cap is set on an aggregate basis, limiting the total costs that are available from the volume driverLVSVD. The cap is individual to each DNOLlicensee and applies for the whole of RIIO-ED2the Price Control Period. The value of each DNOLlicensee's cap is set out in SpC 3.9.</p>

LVSVD reporting and monitoring framework

- 3.3. ~~DNOL~~Licensees must report their individual performance in relation to the LVSVD in accordance with the ~~RIIO-ED2~~-RIGs. This includes submission by the stated deadline and in the format prescribed by the RIIO-ED2 RRP.

3.4. Each ~~DNO~~licensee is required to submit both ~~their~~-its costs and volumes annually in the RRP 'CV2 – Secondary Reinforcement' datasheet for the following reinforcement asset additions:

- Reactive OHL LV Service reinforcement asset additions (LV Service (OHL), LV, #)
- Reactive Cable LV Service reinforcement asset additions (LV Service (UG), LV, #)
- Reactive Switchgear reinforcement asset additions (Cut out (metered), LV, #)
- Reactive Switchgear reinforcement asset additions (Fuse upgrades, LV, #)
- Proactive OHL LV Service reinforcement asset additions (LV Service (OHL), LV, #)
- Proactive Cable LV Service reinforcement asset additions (LV Service (UG), LV, #)
- Proactive Switchgear reinforcement asset additions (Cut out (metered), LV, #)
- Proactive Switchgear reinforcement asset additions (Fuse upgrades, LV, #)

3.5. Where multiple activities are undertaken as part of a single project (e.g. unlooping with cut-out change), the volumes and costs for each volume driver activity must be reported separately against the appropriate category.

~~3.5.3.6.~~ In accordance with the RRP's 'CV2 – Secondary Reinforcement' datasheet, each ~~DNO~~licensee must also submit ~~their~~-its volumes for the number of Unlooped ~~pProperties that have been unlooped~~²², resulting from Proactive Works, in order to facilitate the calculation of the reporting and monitoring metric. ▸

~~The reporting and monitoring process that DNOs and the Authority will follow in using the LVSVD is the same as the SRVD process and is set out above at Figure 1 Chapter 2.~~

LVSVD monitoring metric

~~3.6.3.7.~~ The LVSVD metric is designed to ensure that any ~~pProactive Works~~ relating to LV Service reinforcement, ~~works~~ carried out and funded through the LVSVD, are primarily related to unlooping.

~~3.7.3.8.~~ The LVSVD metric will be calculated from the ~~start first year~~ of the Price Control Period. If Cumulative Reported LVSVD Allowances ~~DNO expenditure is~~ are within the below LVSVD Ex Ante Allowances~~sex ante allowance for the activities identified at~~

²²~~Properties that have been unlooped (#) means, the number of properties that were originally fed from a looped service, and which, because of an unlooping, are now fed by separate cables connected directly to the distribution main.~~

paragraph 3.4, results from the metric will not lead to the withholding of disallowances of volumes by the Authority.

3.8.3.9. If, having exceeded its LVSVD Ex Ante Allowances~~sex-ante allowances for the activities identified at paragraph 3.4~~, the ~~DN~~licensee does not pass the LVSVD metric, the Authority may review costs, volumes, and additional information submitted by the ~~DN~~licensees as outlined in Chapter 4. Where the review identifies sub-optimal expenditure, the Authority may decide to disallow a portion of the allowances. Further details on the review process can be found in Chapter 4.

Metric 6: LV Services Unlooping

~~3.9. The LVSVD metric is designed to ensure that any proactive LV Service works carried out and funded through the LVSVD, are primarily related to unlooping.~~

3.10. The metric checks that LV Service cables (overhead pole lines and cables), fuse upgrades and cut outs (metered) are in the majority of cases only being reinforced as part of an unlooping. In relation only to ~~proactive~~ LV Service ~~Proactive w~~Works; if the number of i) LV Service overhead pole lines and LV Service cables, ii) cut outs (metered), or iii) fuse upgrades exceeds the number of properties unlooped by more than 20% then the check will not be passed.

3.11. The metric uses the following information reported by each ~~DN~~licensee on an annual basis:

- Number of ~~Unlooped p~~Properties resulting from ~~proactively unlooped~~ Proactive Works (#)
- Proactive OHL LV service reinforcement asset additions (LV Service (OHL), LV, #)
- Proactive Cable LV Service reinforcement asset additions (LV Service (UG), LV, #)
- Proactive Switchgear reinforcement asset additions (Cut out (metered), LV, #)
- Proactive Switchgear reinforcement asset additions (Fuse upgrades, LV, #)

3.12. ~~The number (#) of Unlooped Properties resulting from Reactive Works will also be recorded in the LRE Volume Driver Workbook.~~

LVSVD Cap

3.13. The total ~~expenditure that can be recovered from~~ allowances that can flow through -the LVSVD ~~will are be~~ subject to a ~~DN~~licensee specific cap, set out in SpC 3.9, Appendix

3. The cap is set on an aggregate basis limiting the total ~~costs-allowances~~ that are available from the ~~volume-driver~~LVSVD, ie individual caps will not be set per asset type. The cap applies for the whole of ~~RIIO-ED2~~the Price Control Period, which allows an uneven profile of spend across ~~Regulatory~~Years if necessary.
- 3.14. The LVSVD cap for each licensee is the total submitted LV service upgrade costs (including costs submitted for ex-ante funding and those submitted within M13 uncertainty mechanism) submitted ~~has been determined by adding an additional sum for proactive & reactive LV Services to the LVSVD ex ante allowances. Such additional costs have been calculated by applying the industry median % uplift between submitted CV2 LV Services costs and submitted M13 LV Services costs~~by each licensee with their Business Plan, ~~to the modelled LVSVD ex ante allowances. All other assumptions used in the calculation of the cap are the same as those used in the Disaggregated Model.~~
- 3.15. If a ~~DNØ~~licensee reaches the cap, it will no longer be able to increase allowances against the LVSVD. As set out in Chapter 5, the level of the cap will be reviewed in ~~the Regulatory Year ending on 31 March 2026~~Year 3 of ~~RIIO-ED2~~, with provision to review the cap earlier should it be necessary.

4. Annual metric review process

- 4.1. ~~DNOL~~icensees will report on the five SRVD metrics and the LVSVD metric using the LRE Volume Drivers Workbook, the template for which is provided at Appendix 1, as part of the annual RRP process. Ofgem will then review the information between July and November of that Regulatory Year. Further Guidance on the completion and submission of the LRE Volume Drivers Workbook is provided at Appendix 3.
- 4.2. If a ~~DNOL~~icensee's Cumulative Reported SRVD Allowances have not exceeded its SRVD Ex Ante Allowances~~cumulative, recalculated LRE Volume Driver costs (using adjusted volumes and efficient unit rates and excluding any net impact of the TIM) have not exceeded its ex ante allowance~~, or it has exceeded its SRVD Ex Ante Allowances~~ex ante allowance~~, ~~passed all the metrics and not reached the SRVD cap~~, then the SRVD volumes recorded in that Regulatory ~~Year~~, will be used for the ~~volume driver~~ calculation of ~~allowances~~ without adjustment, with the TIM applied to allowances where there is variance between the unit rates set out in SpC 3.9 and the outturn unit rates.
- 4.2.4.3. If a licensee's Cumulative Reported LVSVD Allowances have not exceeded its LVSVD Ex Ante Allowances, or it has exceeded its LVSVD Ex Ante Allowances, passed all the metrics and not reached the LVSVD cap, then the volumes recorded in that Regulatory Year for the LVSVD, will be used for the calculation of allowances without adjustment, with the TIM applied to allowances where there is variance between the unit rates set out in SpC 3.9 and the outturn unit rates.
- 4.3.4.4. For both LRE ~~Volume~~Volume Drivers where any of the relevant metrics for the Volume Driver are not passed (~~If any of the six metrics are not passed~~, with the exception of SRVD Metric 4), ~~and a DNOL~~icensee's Cumulative Reported SRVD Allowances~~cumulative, has exceeded its SRVD-Ex Ante Allowances for the relevant Volume Driver or its Cumulative Reported LVSVD Allowances has exceeded its LVSVD Ex Ante Allowances~~recalculated LRE Volume Driver costs (using adjusted volumes and efficient unit rates and excluding any net impact of the TIM) have exceeded its LRE Volume Driver ex ante allowances for the whole of the Price Control Period, for one or ~~both LRE Volume Drivers~~, the Authority may require the ~~DNOL~~icensee to submit additional information.
- 4.4.4.5. Listed below are examples of the type of additional information that ~~DNOL~~icensees would be expected to submit if one or more of the metrics are not

passed, though the Authority may request such additional information as it considers necessary in the circumstances. The specific additional information requested will depend on which of the ~~fivesix~~ metrics have not passed. ~~DNOL~~Licensees may also provide additional information for the Authority's consideration.

- Forecast LCT volume uptake;
- Engineering Justification Papers for interventions on low (ie below 100%) utilisation assets;
- Circuits (km~~and MVA~~) reinforced broken down by new circuits and replacement of old circuits;
- Local engagement that has informed the ~~DNOL~~licensee's investments subject to the review;
- Data on HV and LV network existing and forecast constraints in the areas where reinforcement has been undertaken, both before and after the interventions; and
- Age and condition of assets replaced.

4.6. If, following its review of this additional information, the Authority is not satisfied that the expenditure above the ~~SRVD Ex Ante Allowances and/or LVSVD eEx aAnte aAllowances~~ was justified, the Authority may decide to ~~withhold-disallow~~ some, or all of the ~~expenditure-volumes incurred-reported~~ by the ~~DNOL~~licensee which are, ~~relateding to in relation to the metric(s) that the DNOLicensee has failedthe LRE Volume Driver(s) that had metrics which were not passed.~~ The diagrams at **Figure 1**~~Figure 1~~ show which metrics relate to which activity volumes.

4.7. Volumes disallowed by the Authority under paragraph 4.6 shall be no greater than the lesser of:

- a) The volumes required to return the licensee's allowances to its original ex ante allowances for the relevant LRE Volume Driver (SRVD or LVSVD); and
- b) The volumes required to return the relevant 'failed' metric to a 'pass' status.

Figure 1: Activity volumes and metrics (SRVD and LVSVD)

SRVD			LVSVD	
Volume	Transformer Utilisation	Volume / Demand Ratio	Volume	LV Services Unlooping
GMT	Metric 1	Metric 2 (a-b)	Proactive UG LV Service	Metric 6
PMT			Proactive OHL LV Service	
OHL LV		Metric 3 (a-d)	Proactive Switchgear cut out	
OHL HV			Proactive Switchgear fuse	
UG LV				
UG HV				
Flexiblity	Metric 5			

5. Review of LRE Volume Drivers

- 5.1. There will be a review of the LRE Volume Drivers during ~~the Price Control Period~~~~RIIO-ED2~~. The review is designed to ensure that they are functioning as intended, ie that ~~DNOLicensees~~ are able to invest in the network, or procure flexibility services, to meet net zero, without ~~consumers~~~~Customers~~ paying for work that isn't necessary.

Process

- 5.2. The review of the LRE Volume Drivers will begin in October 2025, as the ~~RIIO-ED2~~ Year 2 RIGs and RRP processes ~~for the Regulatory Year ending on 31 March 2025~~ are reaching a conclusion. The Authority will ~~aim to conclude~~~~publish the outcome of its review~~~~by 31 March 2026, ahead of the RIIO-ED2 Year 3 RIGs and RRP processes~~. If, as a result of the review the Authority identifies changes required to the LRE Volume Drivers, ~~or this Governance Document~~ ~~or the LRE Volume Drivers Workbook~~, it will consult on the proposed changes. ~~The Authority~~ ~~and~~ will aim to publish its decision on ~~the any changes proposed to the Governance~~~~Governance Document or LRE Volume Drivers Workbook~~ ~~changes during before the end of by 31 March 2026~~.
- 5.3. The Authority will notify the ~~DNOLicensees~~ by 1 July 2025 of any information it considers relevant to inform the scope of the review. ~~DNOLicensees~~ should provide the Authority with that information by 30 September 2025.
- 5.4. Following the submission of that information the Authority will engage in a supplementary question (SQ) process with the ~~DNOLicensees~~. The detailed arrangements of the SQ process which will be agreed between the Authority and the ~~DNOLicensees~~ in September 2025.
- 5.5. If, as a result of the review, the Authority identifies changes required to be made to either SpC 3.9 or this Governance Document, it will make those changes following the statutory modification process set out in S11A of the Electricity Act 1989. Where changes to the RIGs or RRP~~s~~ are identified as a result of the review, those changes will be made in accordance with Standard Licence Condition 46.
- 5.6. Any changes that are made as a result of the review of LRE Volume Drivers, in accordance with Paragraph 5.5, will be enacted on a forward-looking basis. No changes will be made to allowances for volumes that have already been delivered.

~~5.6.5.7.~~ The Authority may, if it considers it necessary to do so, initiate the review earlier during the Price Control Period, at a time agreed with the ~~DNOL~~licensees.

Scope

~~5.7.5.8.~~ The scope of the review will include, but is not limited to:

- The efficacy of the unit costs set out in the volume drivers.
- A review of whether the volume driver caps are set at the right level, including through consideration of revised forecasts for LCT uptake, outturn LCT uptake figures and additional commentary provided by ~~DNOL~~licensees. For the caps to be increased, ~~DNOL~~licensees must provide strong evidence that additional investment is ~~justified~~justified, and that the volume of work required to meet demand arising from LCTs is increasing above the levels that can be delivered within the existing caps. ~~predicted by the FES 2022 Leading the Way scenario.~~
- A review of the method statement required under SRVD Metric 1.
- A review of the flexibility services element of the SRVD, its effectiveness in supporting flexibility solutions where investments in secondary reinforcements can be deferred, and consideration of the efficiency of ~~DNOL~~licensee activity under this part of the volume driver.
- Consideration of whether the SRVD metrics are functioning effectively, ie whether they are identifying unjustified investment and not incorrectly identifying justified investment.
- An assessment of progress against the expectations of granular utilisation data to be available for RIIO-ED3.
- Availability and consistency of data.

~~5.8.5.9.~~ In respect of flexibility services, ~~DNOL~~licensees will be required to provide the Authority with information for each asset where flexibility has been used to defer investment through the SRVD mechanism. Such information may include the following, as a minimum:

- Details of the secondary reinforcement activity that has been deferred (including the type of asset, the relevant volume and cost and the revised forecast date for replacement).
- Details of the flexibility services procured (contract term, service provider, terms and type of flex**ibility**, cost).
- Forecast asset utilisation at the start and end of the flexibility contract.

- Details of assets where reinforcement was originally deferred through the use of contracted flexibility services but that have subsequently been reinforced within the ~~Price Control Period~~ RIIO-ED2 period.

Appendix 1 – RIIO-ED2 LRE Volume Drivers Workbook

The RIIO-ED2 LRE Volume Drivers Workbook has the following filename:

RIIO-ED2 LRE Volume Drivers Workbook 1.0.xls

Appendix 2 - RIIO-ED2 Secondary Reinforcement Disaggregated Model

The Secondary Reinforcement Disaggregated Model has the following filename:

ED2Models_MasterTemplate_Disag_Secondary_Reinforcement.xls

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Appendix 3 – RIIO-ED2 LRE Volume Drivers Workbook Instructions & Guidance

Purpose

- A3.1 The purpose of this Appendix is to provide instructions and guidance to enable licensees to complete the LRE Volume Drivers Workbook.
- A3.2 The LRE Volume Drivers Workbook aims to provide a comprehensive, transparent, accessible and accurate report of costs, volumes and performance relating to the LRE Volume Drivers, SRVD and LVSVD, for the purpose of collecting data that can be used to compare these items to allowances and to provide historic and forecast data for trend, benchmarking and performance management purposes.

Sources of Data

- A3.3 The LRE Volume Drivers Workbook is to be populated with data from other reporting sheets that will be submitted as part of the annual ~~Regulatory Reporting Packs (RRP)~~ in accordance with the ~~Instructions and Guidance (RIGs)~~.
- A3.4 With the exception of the data described at paragraph A3.5, all data required for the LRE Volume Drivers Workbook will be taken directly from the 'CV2 – Secondary Reinforcement' reporting sheet, from rows of corresponding titles. Guidance and instructions relating to the completion of the CV2 sheet, including for those elements that will be used to populate the LRE Volume Drivers Workbook, is described in the RIGs.
- A3.5 The following data required for the LRE Volume Drivers Workbook will be populated from other reporting sheets, with such sheets to be confirmed in the RIGs. Guidance and instructions relating to the completion of these sheets, including for those elements that will be used to populate the LRE Volume Drivers Workbook, is described in the RIIO-ED2 RIGs.
- LCT Data
 - LV Monitoring Data

Errors

- A3.6 In the event that a licensee identifies an error in the LRE Volume Drivers Workbook or the RIIO-ED2 LRE Volume Drivers Workbook Instructions & Guidance ("the LRE

Volume Drivers Workbook Guidance”), the licensee should notify the Authority by email, detailing the nature of the error, as soon as reasonably practicable.

- A3.7 If errors are identified in the LRE Volume Drivers Workbook or the LRE Volume Drivers Workbook Guidance, that affect the calculation of variable allowances, the Authority will make the changes necessary to correct these errors as soon as reasonably practicable.
- A3.8 The Authority will maintain a log of minor errors that do not affect the calculation of variable allowances and will issue a modified LRE Volume Drivers Workbook and LRE Volume Drivers Workbook Guidance for the following Regulatory Year.
- A3.9 If the modifications that are required to correct errors meet the criteria for self-modification, set out in SpC 3.9, the Authority will, if necessary, issue a direction following the process set out in Part C of SpC 3.9 modifying the Load Related Expenditure Volume Drivers Governance Document or LRE VD Workbook.
- A3.10 Before making a direction under paragraph A3.9, the Authority will consider any views expressed and representations made by the LRE Volume Drivers Working Group.
- A3.11 If any proposed modification fails to meet the criteria for self-modification set out in SpC 3.9, the Authority will follow the statutory modification process set out in S11A of the Electricity Act 1989 to make the necessary changes.

Timescales for reporting

- A3.12 The LRE Volume Drivers Workbook shall be populated and submitted in respect of each Regulatory Year.
- A3.13 Where reporting sheets include forecast information for the data categories required in the LRE Volume Drivers Workbook, such forecasts should be included in the LRE Volume Drivers Workbook, for each of the remaining Regulatory Years of the Price Control Period.
- A3.14 The licensees must, unless the Authority consents otherwise in writing, submit a copy of the LRE Volume Drivers Workbook, by no later than 31 July following the end of each Regulatory Year. The first LRE Volume Drivers Workbook will therefore be populated in respect of the Regulatory Year ending on 31 March 2024 and is due to be submitted to the Authority by 31 July 2024.

Form of submission

A3.15 The Authority will provide the licensee with instructions for the electronic submission of the LRE Volume Drivers Workbook in advance of each submission deadline. However, if the licensee has any doubt about the method of submission, the licensee must contact the Authority.

A3.16 The submission must be accompanied by a letter (or part of an overall RIGs sign-off letter) signed by a director on behalf of the licensee confirming that the data is accurate in all material respects and has been provided in accordance with this LRE Volume Driver Workbook Guidance and any other relevant requirements.

A3.17 Naming convention for the LRE Volume Drivers Workbook shall be "ED2-[LICENSEE GROUP NAME] [LICENSEE NAME] LRE VD Workbook submission YYYY" (e.g. ED2-NGED SWEST LRE VD Workbook submission 2024.xlsx).

Resubmissions

A3.18 The licensee is required to seek the agreement of the Authority before resubmitting the LRE Volume Drivers Workbook. This may be as a result of the licensee identifying an error or as part of the Authority's review of the licensee's LRE Volume Drivers Workbook. In any such instance, the LRE Volume Drivers Workbook must be resubmitted in full unless agreed otherwise by the Authority.

A3.19 For each resubmission a detailed explanation must be provided, on the changes log in the RIGs, listing every cell that has been amended. The explanation must include sufficient commentary to explain the reasons for the ~~required~~ resubmission.

Review

A3.20 Once the licensee has submitted the information to the Authority, the Authority, or a person nominated by the Authority, will undertake a detailed review of the information and the process detailed in Chapter 4 of this Governance Document will be followed.