

Guidance

ED3 Business Plan Guidance Annex 1: Investment Decision Pack (IDP) Guidance

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This document is for electricity distribution network operators. It explains what information companies need to set out on proposed investments contained within their draft business plan submissions.

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1. Introduction

What is an Investment Decision Pack (IDP)?

- 1.1 As part of their ED3 business plan submissions, distribution network operators (DNOs) are required to submit Investment Decision Packs (IDPs) which outline the needs case, scope, costs and benefits for major projects or aggregated investment programmes that meet the specified criteria. These packs are intended to provide both quantitative and qualitative assessments of the proposed investments and provide an insight into the investment decision-making processes and governance undertaken within each company.
- 1.2 An IDP will consist in most cases of an Engineering Justification Paper (EJP) and a Cost Benefit Analysis (CBA). The purpose and scope of each is summarised below:
- 1.3 EJP: Sets out frameworks for major engineering projects, network asset health investments and other specific capital projects as outlined in this guidance. The EJP outlines the technical problem that the investment seeks to solve and sets out the different options that have been considered. The purpose of the EJP templates is to communicate the key factors that have influenced the investment decision and to provide engineering, and where required other relevant disciplines, detail on the options considered. EJPs are primarily intended to be assessed by engineering professionals within Ofgem and any subject matter experts or consultants we engage.
- 1.4 CBA: CBA is another decision-making tool, and we expect DNOs to submit them in support of EJP justifications for a wide range of potential interventions. The purpose of the CBA is to assist Ofgem in the understanding of a particular strategy or proposal in significant areas of investment. The CBA framework ensures that proposed interventions deliver value for money and are compared against alternative options. The CBA will provide information on other alternatives that have been considered and an understanding of the key assumptions that have been made which support a proposal. We have also added a new requirement to join CBA and EJPs with a qualitative bolt-on. This should be included within the CBA section in the EJPs, covering several hard-to-quantify aspects in relation to the strategic alignment of investment proposals.

When should an IDP be used?

- 1.5 IDPs need to be produced for investments that are financially material and/or require significant engineering and/or economic scrutiny by Ofgem because of the risks associated with the investment. In practice, this means that the majority of capex spend should be supported by IDPs. A list of projects and asset categories which require IDPs to be submitted with ED3 business plans is set out in Appendix 2: EJP Submission Requirements.

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- 1.6 The submission requirements and guidance outlined below apply to both proposed baseline expenditure and expenditure subject to an uncertainty mechanism. Where companies are proposing significant investments that will be funded through uncertainty mechanisms, they should follow a comparable engineering and economic evaluation process as was used to justify baseline expenditure. However, we recognise that by definition uncertainty mechanisms may have less data available to support and evidence decisions made through this framework. IDPs for projects that have a well justified needs case, but where cost confidence is low, should still be submitted. In such cases, the DNO should clearly set out the justification for the needs case, an explanation of why the project is not well developed and an explanation of why other data fields in the EJP cannot be completed. For projects for which there is already a project-specific licence condition in place and/or projects funded under ED1 or ED2 where no additional funding is sought, an IDP is not required.

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response, we are moving towards an approach based on the use of different EJPs in ED3 for different types of investment and associated consumer risk.

- 2.3 The use of portfolios is intended to drive a more detailed data driven approach to our review, where context behind investments is driven by the specific data being used to justify the interventions.
- 2.4 Similarly, our revised templated approach to narrative EJPs is designed to focus the EJPs into a coherent engineering focused document to enable reviews to be standardised as far as practicable.

Submission requirements

- 2.5 In Appendix 2 we set out the EJP submission requirements. Where a licensee does not submit IDPs relating to investments in these categories we will assume that there is no associated investment included within the BPDT.
- 2.6 To ensure that the submissions are as far as practically compatible, we expect licensees to provide a clear statement in the EJP Index which shows no investment is taking place.
- 2.7 In cases where there are interactions between different assets as part of a common intervention programme, this should be identified in the EJP Index.

Use of templates

- 2.8 To expedite our review and work towards consistency in submission we have included templates which licensees are expected to use for all EJPs. These are included in the business plan guidance pack and in this document in Appendix 1.
- 2.9 Licensees may use their own corporate styling in full for Narrative EJPs and may include their own corporate branding for Portfolio EJPs but must not change the tables original formatting.
- 2.10 At no times should licensees use Ofgem's branding in their narrative EJPs.

Portfolio EJPs overview

- 2.11 The primary purpose of the High Volume and Low Volume Portfolio EJP spreadsheets is to provide an asset level breakdown of data for Portfolio Non-load Related Expenditure (NLRE) investments. Portfolio EJPs will include those assets which are and are not being intervened on, giving us a clearer view of overall network condition to a more granular asset level.
- 2.12 The High Volume Narrative EJP should provide the methodology used to select assets to be included in the proposed portfolio. The individual assets included within these High Volume categories do not need to be named within the EJP.
- 2.13 For Low Volume Portfolio EJPs we expect the licensee to provide their best view of the individual assets for intervention. We do not expect that licensees will deliver

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every asset included within their plan as we expect changes to happen in period which makes delivery of the original plan unfeasible. However, with this additional asset specific data it will help us in future when considering regulatory reporting and future closeout activities.

2.14 The portfolio EJP is structured in a consistent manner across all the templates provided. This is as follows:

- green - any columns where the heading is coloured green is for referencing and historic interactions
- orange - any columns where the heading is coloured orange are used for asset and condition data. This principally will be data sourced from the licensees Common Network Asset Indices Methodology (CNAIM) data sources
- yellow - any columns where the heading is coloured yellow are used for investment signalling to highlight any known investment proposals. These are not being assessed as part of ED3, but the data is used as supportive context for investments
- blue - any columns where the heading is coloured blue are used to detail the investment information for the ED3 interventions. Not all cells will be applicable and N/A can be added if there is no relevant data provided. These cells should not be completed where there are no investments planned
- grey - any columns where the heading is coloured grey are to be used for licensee comments where required

2.15 The portfolio EJP spreadsheets contain tabs for each asset classification. Each tab may include different asset classifications. Licensees may copy tabs, with appropriate naming and referencing, to enable them to enter their data in a manner befitting their specific requirements. For example, HV Circuits may be broken down further onto separate Excel files between HV overhead lines and or HV cables subject to the data required.

2.16 Where assets are included in Major Projects, licensees can use the appropriate referencing to clarify their inclusion as part of a different EJP.

Portfolio EJPs guidance

2.17 Portfolio EJPs are to be submitted in two separate formats, depending on the volume as defined by Appendix 2 categorisation:

- High Volume Portfolio EJP:
 - (1) High Volume Portfolio Narrative EJP Document which highlights on an Asset Class basis the licensee's approach to their investment management. This includes any narrative which supports their investment proposals including any data analysis of need case, anticipatory investment or bespoke cost drivers which the licensee expects us to review. The Template for which is included in Appendix 3.

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(2) High Volume Portfolio Excel EJP which provides exclusively asset data for high volume assets. This does not include the proposed interventions which licensees are requesting funding for as this would be disproportionate and unlikely to be representative of the investments as delivered given the nature of the assets included in this category.

- Low Volume Portfolio EJP (excel only):

(1) This will provide asset level data for both Network Asset Risk Metric (NARM) and Non-NARM assets (subject to licensee investment proposals). The purpose of this submission is to provide an asset list per category containing the asset data for all assets and to highlight the assets proposed for intervention and those which are not.¹

2.18 Both portfolio EJPs should include NLRE Investments. Where individual assets are contained as part of a Major Project cross referencing is required to avoid duplicated reviews.

2.19 For Excel templates licensees, may at their discretion, submit Excel Tabs as individual Excel sheets to manage their submission. We expect clear referencing where this approach is used.

Major Project EJPs

2.20 Major Project narrative EJPs should be used for individual investments with a total value >£6m.

2.21 Applicable investments are as follows (not exhaustive):

- where every asset on a site is being replaced, either through NLRE or Load Related Expenditure (LRE)
- where the site is being extended through LRE
- where there is a new linear asset route
- for campaign LRE individual asset reinforcements (Unlooping, Secondary Reinforcements)

2.22 Not applicable investments:

- portfolio NLRE works
- atypical investment categories

2.23 Any assets which are being intervened as part of a Major Project should be appropriately cross referenced within the Low Volume Portfolio EJPs applicable to avoid duplicate reviews.

2.24 The Major Projects Template is included in Appendix 1.

¹ We note that for, LV Circuits, HV Circuits, LV Wood Poles, HV Wood Poles we do not expect licensees to provide individual proposals for assets in this category, but expect the asset data to be provided.

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Atypical investments

- 2.25 The atypical investment narrative EJP template should be used for capital projects or programmes which are not directly related to main plant equipment or asset categories which require more bespoke investment justification. The criteria for projects where we would expect companies to submit atypical investment EJPs, are set out in Appendix 2.
- 2.26 Atypical investment EJPs will be on a narrative basis and will broadly follow the structure of the Major Projects EJP, but licensees may use the excel based portfolio EJP templates to support where required.
- 2.27 The template for narrative based atypical Investments is included in Appendix 1.

Core submission requirements - role of narrative

- 2.28 This approach is designed to reflect core submission requirements. Where a licensee considers that additional narrative or evidence is required to support a particular Excel based submission then that licensees may elect to submit additional supportive information. This would not have the same requirements and could take the form of a slimmed down narrative.

Excel - EJP index

- 2.29 The purpose of this spreadsheet is to allow tracking of EJPs to the business plan data templates (BPDT) outputs and ensure any EJP volume or cost variations proposed during review are accurately accounted for in the BPDTs.
- 2.30 The template for this is included in the business plan guidance pack.

Interface to Digital Justification Papers (DJPs)

- 2.31 There will be investment decisions which involve both digitalisation and non-digitalisation components. Where an EJP has a digitalisation component and consequently the licensee is submitting a DJP, this should be identified in the EJP Index.

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3. EJP assessment framework

This chapter clarifies our approach to the EJP assessment and the assessment outcomes. This is outlined to ensure that future engagement during the price control review and consultation process is clear on the outcomes presented.

Overview

3.1 This section aims to provide a high-level overview of the EJP assessment framework and outcomes of EJP reviews. This is to provide clarity on our approach to the new EJP templates.

Our assessment outputs:

Overview

3.2 Our outputs are one of three states:

- justified/high confidence - this is where we have minimal concerns regarding the EJP element of review
- partially justified/limited confidence - this is where we have some concern regarding the EJP element of review
- not justified/low confidence - this is where we have material concern regarding EJP element of review

Direct EJP review outputs:

3.3 As part of the core engineering review of wider assessment of the Business Plan, we will assess each EJP submitted by the DNOs and consider the following primary elements of the review:

Need case for the investment:

- 3.4 Whether the need for intervention has been demonstrated by the provision of an explanatory narrative and evidence to support the need for investment.
- 3.5 Whether adequate supporting evidence has been provided such as: CNAIM data, asset condition and performance data; degradation projections; power system analysis reports; and references to the outputs of other industry standard processes or assessment methodologies.
- 3.6 Previous funding requests: We will consider if the proposed investment has been delivered previously if funded. This will include asset specific consideration and portfolio level and major projects.

The optioneering used to address the need case:

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- 3.7 The options development and assessment process: whether all credible options to meet the needs case have been identified, including minimum intervention, and whether the reasons for the rejection of options are presented and the rationale for rejection is clear. This ensures that the most relevant options are progressed.
- 3.8 Whether the chosen/preferred option is a proportionate solution to the identified needs case and the scope of the solution has not expanded beyond meeting the identified need, without further justification. Whether the associated CBA supports the solution proposed. Where the CBA does not support the solution, we will consider the additional arguments from licensees.

Supplementary EJP review outputs

- 3.9 Our engineering review provides additional information which sits outside the Primary Review Outputs. These elements of the review may be used by other teams to support the wider business plan review process.

Cost confidence:

- 3.10 For the costs provided we may give outputs related to the Cost Confidence, specifically has the licensee identified the cost drivers and supporting data to the extent required to satisfy us that the costs are relevant for use in different cost assessment modelling.

Alignment to NESO/DSO plans and HMG growth requirements:

- 3.11 We will seek to understand interactions between the proposed interventions and the various key stakeholder plans or policy decisions which we are required to have consideration of.

Engineering review outcomes

Overview

- 3.12 Our review outcomes are one of many which result in a blended approach to our assessment. Where an engineering-based recommendation is made, this may not have a direct relationship to the volumes or costs proposed.

Possible outcomes

- 3.13 Broadly the following outcomes may arise as a result of the engineering review:

- all investments approved in the EJP, no reductions to cost or volumes
- reductions to volumes, where the need case is either partially or not justified
- reductions to volumes, where the optioneering is either partially or not justified
- reductions to costs where the need case or optioneering is either partially or not justified

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- the use or modification of outputs or Uncertainty Mechanisms to minimise consumer risks

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4. Cost Benefit Analysis (CBA) guidance

Chapter 4 sets out when and how Cost Benefit Analysis (CBA) should be used to support Investment Decision Packs, with CBAs expected for all major projects and proportionately for portfolio investments where engineering justification alone is insufficient. It requires companies to identify a clear baseline (“do minimum” or “do nothing”) and assess a full range of credible options, ensuring that costs and benefits are incremental to the baseline and aligned with HM Treasury Green Book principles. The guidance specifies consistent treatment of costs, benefits, risks and sensitivities, including whole-system impacts, asset replacement assumptions, and standardised approaches to valuing societal and non-marketed benefits. CBAs are not to be applied mechanistically; instead, their results should be considered alongside engineering judgement, stakeholder support and qualitative assessments to demonstrate value for money and justify the preferred option.

When should a CBA be used?

- 4.1 The purpose of the CBA is to assist Ofgem in the understanding of a particular strategy or proposal in significant areas of investment. We expect CBAs to support all major investment projects and high-volume interventions for high volume portfolio EJPs.
- 4.2 We expect licensees to provide CBAs with a range of options for Major Projects in line with wider EJP guidance provided in Appendix 3.
- 4.3 For high volume portfolio EJPs, we expect licensees to consider the need to submit a CBA at a proportionate level. This would depend on the range of realistic options available; the ability to quantify costs and benefits; and the admin burden of undertaking a CBA on top of the engineering assessment.
- 4.4 CBAs should focus on projects that offer a blend of potential benefits where the net benefit is difficult to determine using EJP assessments alone. We expect there may be some large investment projects which require a CBA to support investment justification and demonstrate value for money. Companies should submit CBAs to support these decisions.

Identification of options

- 4.5 As part of the CBA, DNOs should clearly identify the range of options that were considered to meet the stated aim, in line with HM Treasury Green Book guidance. This list should, where feasible, include an option that requires a minimal initial investment (the “do minimum option” or “baseline scenario”) which can act as the baseline against which other options can be compared. When applicable, the option of delaying investment (the “deferral option”) must be considered as part of the CBA.

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- 4.6 The “baseline scenario” may represent "do nothing" or "business as usual" including ongoing maintenance. The minimum level of intervention that would be required to remain compliant with all relevant legislation must be clearly identified. This detail should be completed within the “Baseline” tab.
- 4.7 We have included a section in the CBA spreadsheet model for DNOs to clearly identify the list of options they have considered for each investment decision. It should include those that have been considered and rejected before full costing, and the shortlist of those options that have been considered and costed, with a clear rationale for including/excluding them.
- 4.8 This list should include an option that represents the status quo or business as usual option against which other options can be compared (discussed further below).

Baseline scenario

- 4.9 The baseline scenario may represent "do minimum" or "business as usual". This detail is to be completed within the "Baseline" sheet. For instance, we consider the “baseline” scenario to be that which involves the minimum level of intervention that would be required to remain compliant with all relevant safety regulations, and other such legal obligations. Capital costs can be included in the baseline option if they are part of this minimum level of intervention.
- 4.10 For portfolio works, the baseline scenario should be consistent with the ongoing costs of maintaining the asset population at its current state of operation and level of performance risk (ie costs associated with maintenance and repair, as well as responding to emergency callouts on the asset population in question over the investment period). It is important that these costs are entered into the CBA (as "maintenance and repair" in the intervention drop-down menu), so that relative differences in opex expenditure resulting from each proposed investment option can be captured within the Net Present Value (NPV) calculation.
- 4.11 Companies may either submit a single CBA, where the asset population should be entered as the whole population for the asset type being considered, and opex costs should be consistent with the costs of maintaining the whole asset population, or they may submit multiple CBAs in support of a Portfolio EJP, as set out in Appendix 1.
- 4.12 For standalone Major Projects or company-led expansions of the network, the baseline scenario should be "do nothing", if a viable alternative to making the investment is to keep the network in its current state. This scenario may still include opex or compliance-related costs if these would be different under the project option. Where "do nothing" is not an option, the baseline should be "do minimum" or deferral, as appropriate.

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4.13 In both cases described above, it is important that the baseline provides a scenario that is technically feasible and consistent with the DNO's regulatory requirements. It should represent a scenario that is a realistic option for the DNO, ie it should not reflect for instance a "do nothing" or "run to failure" approach if this is not a practical option for the DNO to employ as a business strategy. For each investment, the company should clearly explain, in the supporting commentary boxes in the CBA, what assumptions have been used when defining the baseline scenario.

Options evaluation

4.14 The "Options Summary" section of the CBA template summarises each investment decision considered. This list of options should include those that have been considered and rejected before full costing, and shortlist those options that have been taken forward, fully costed and presented in the CBA. Clear rationales for inclusion/exclusion of different options should be provided and quantified appropriately in the comment boxes provided – unless provided within the associated EJP.

4.15 For each option which has been taken forward for full costing, an Option sheet should be completed. The Option sheet should present the costs associated with the investment option (eg costs of replacement or refurbishment) and where appropriate the ongoing opex costs associated with maintaining the whole asset population (ie maintenance, repair and emergency costs), taking into account any reductions in these costs as a result of other interventions (eg asset replacement meaning less maintenance or other opex is required on the new assets). Companies should also include any additional costs or benefits associated with the investment option that they consider having a material impact on the investment decision and are not already captured within the template.

4.16 Costs and benefits to be considered in the CBA are those that would occur over and above the baseline scenario. These additional costs and benefits represent the marginal or incremental costs or benefits of the option being considered. DNOs should classify all negative impacts of an option as costs and all positive impacts as benefits.

4.17 DNOs should consider and include where appropriate whole system costs associated with any proposed options (ie those costs incurred by other electricity network companies). DNOs should include these costs under the relevant investment categories, "Whole Systems Cost – Other Electricity Distribution Licensees" or "Whole Systems Cost – Electricity Transmission Licensees". DNOs should explain in the "Workings" worksheets how they have estimated these costs.

4.18 DNOs should assume zero benefits are realised in first year of investment, 100 percent benefits are realised from year two of investment and beyond. The

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financial costs and benefits should correspond to the financial/market values set out in the DNO's business plan (where applicable). For example, the expected reduction in any cost of repairs and maintenance (a financial benefit) arising from an investment should be consistent with the assumptions on unit repair and maintenance costs set out in the plan. Any deviation from the values set out in the business plan should be explained within the CBA.

- 4.19 DNOs should also include replacement costs for the particular assets specified which may need to be replaced during the 45-year horizon. DNOs should include assumed failure rates of assets and must set out their view and explain their assumptions.
- 4.20 The financial cost and benefits should be in 2025/26 prices, exclude real price effects (RPEs) and should be net of expected productivity improvements, ie consistent with the data set out in the DNO's BPDT. Where CBA outcomes are marginal, the DNO should run sensitivities on productivity improvements beyond RIIO-ED3.
- 4.21 Where one or more of the options that have been considered by the DNO are flexible solutions/services then these may be evaluated using the common evaluation methodology (CEM) tool, where this has been amended to reflect the parameters used in the ED3 CBA model. Additionally, where of value, DNOs can also use their own proprietary models (such as the Real Options CBA, ROCBA) to evaluate flexible solutions/services. Where this is undertaken, the DNO should consider providing copies of assessments as supporting evidence to the business plan and include the output in the ED3 CBA where the full options considered have been set out. The Workings tabs in the ED3 CBA and/or supporting narrative set out in EJPs should clearly set out the assumptions used, and the approach taken to evaluation that has been undertaken in models outside of the core ED2 CBA such as the CEM tool.

Qualitative bolt-on

- 4.22 We have decided to include a qualitative CBA bolt-on in the EJPs covering several hard-to-quantify aspects in relation to the strategic alignment of investment proposals with wider ED3 objectives, impact of distribution losses and the impact on economic growth. This qualitative narrative should be included in the main body of any EJP that is supported by a CBA.
- 4.23 A brief outline of the strategic objectives that should be covered by the qualitative bolt-on narrative is provided below:

Proactive investment

- 4.24 For this objective the DNO should describe the relative difference between each option in how it takes a proactive approach to low-regret investments ahead of need. DNOs may wish to refer to:

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- number of forecast connections that will be facilitated
- emissions impact associated with and not associated with losses (with reference to values stated in CBA template)
- level of investment brought forward from ED4 onwards (with reference to values stated in CBA template)

Touch the network once

4.25 This strategic objective requires the DNO to set out if and how each option supports the policy objective of touching the network once. DNOs may wish to refer to:

- high level assessment of magnitude or likelihood of mitigating future curtailment costs
- cost efficiency of avoided future investment, such as proactive installation of higher capacity transformer or preparatory civil works (with reference to values stated in CBA template)
- high level assessment of the risk that anticipated future needs or demand do not materialise, resulting in stranded assets

Whole system planning / multi-driver investments

4.26 For this strategic objective the DNO will describe the relative difference between each option in how it achieves synergies across different investment drivers. DNOs may wish to refer to:

- high level assessment of savings due to synergies across different investment drivers - climate resilience, smarter networks, flexibility use cases, asset health and the environment. This may include explicit cost savings stated in the CBA template
- non-DNO benefits such as reduced losses, reduced probability of fatality or major injury or reduced oil leakage (with reference to values stated in CBA template)
- high level assessment of the magnitude or likelihood of reducing interruptions above and beyond Volume of Lost Load (VoLL) and customer minutes stated in the CBA template
- climate resilience and the expected benefits from long-term avoided impacts from interruptions (with reference to values stated in CBA template)

4.27 For all these options, the narrative in the qualitative bolt-on should focus on the impact on NPV of these proposals. In other words, the narrative should describe how impacts could increase/decrease NPV (if monetised).

4.28 The ED2 approach to valuing losses was based on wholesale energy prices and carbon value. Given the broader context of electrification, we anticipate that losses will increase in the coming years due to a range of factors, including the

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uptake of distributed and consumer energy resources, voltage optimisation and other emerging system behaviours.

- 4.29 Ideally, the value of losses would capture the costs associated with voltage management, reactive compensation, incremental balancing, and avoided future reinforcements, expressed for example in £/kW-hour/coincident peak hours. We have included a line in the option assessment sheets of the CBA template to assess the monetary impact of each project.
- 4.30 To support ED3's whole system, proactive, long term planning framework where we expect a longer term, more consistent and holistic approach to network planning, a Loss Cost of Energy (LCE) metric must be marginal, dynamic, time varying, and location specific. To deliver whole system value, we believe losses in ED3 must account for:
- energy cost: Core economic value of losses
 - capacity value: Losses consume network headroom and drive reinforcement
 - system services: Losses affect reactive power flows, voltage management, and balancing
 - carbon cost: Losses consume generation that may have non-zero carbon intensity
- 4.31 However, we understand that monetising the whole system impact of changes in distribution losses can be challenging. For this reason, we have decided to offer the option to provide a qualitative narrative for projects where the full monetised impact could be disproportionate.
- 4.32 In addition to strategic objectives, we have a "Growth Duty" which requires that we have regard to the desirability of promoting economic growth, which helps to ensure that we consider the potential impact of our activities and our decisions on medium-to-long-term economic growth. The Ofgem Review² signalled the government's intention to introduce a new principal duty that requires us to promote economic growth (alongside retaining our existing commitment to existing and future consumers, and another new principal duty to facilitate net zero). The precise scope and effect of this duty will depend on the subsequent implementing legislation, which we will consider once introduced. For their business plans, we ask the DNOs to consider a range of impacts and we will be cognisant of the information available to the DNOs at this time when assessing their submissions.
- 4.33 The economic growth qualitative narrative to the EJP bolt-on should consider how different proposals support growth, including in labour and industrial markets that will benefit from targeted expansion of the network. DNOs may wish to refer to:
- investment in a more skilled workforce

² [The Ofgem Review final report | Department for Energy Security and Net Zero | April 2026](#). Action 1

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- industrial zones unlocked
- place-based alignment (regional plans)
- community impact associated with street works or road closures

4.34 As in the strategic assessment, the narrative in the qualitative bolt-on should focus on the impact on the overall value of these proposals.

4.35 The introduction of a qualitative assessment of growth impacts and strategic alignment in EJPs would allow networks to complement the NPV from CBAs with non-quantifiable information which would allow a degree of flexibility when comparing different options. It would also allow DNOs to recommend proposals that would have a better strategic fit or higher long-term benefits that would be difficult to calculate in NPV terms.

Society benefits and the treatment of non-marketed goods

4.36 DNOs should consider societal benefits (ie avoided costs) associated with each option. The societal costs section of the CBA template is to value the key environmental, safety and other drivers that support many investment decisions. For consistency, we have standardised some of the assumptions and calculations for the valuation of society benefits and non-marketed goods within the core CBA model.

4.37 Where we have entered default parameters/assumptions in the CBA model for most non-marketed items, if DNOs amend or add to these default parameters and assumptions full justification should be supplied to support the move from the default parameters. For the benefits associated with preventing fatalities and injuries, we require DNOs to draw on guidance set out in HM Treasury Green Book³ and the Health and Safety Executive (HSE).⁴

4.38 A brief outline of some of the key assumptions is provided below:

- losses: Where expenditures are justified using the reduction of electrical energy lost, we have provided guidance on the Qualitative Bolt-on section on how to assess losses

³ [The Green Book - GOV.UK](#)

⁴ Health and safety statistics - HSE

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- CO₂e associated with losses: Carbon emissions associated with losses have been estimated using the DESNZ CO₂e conversion factor for electricity.⁵ To account for the RIIO-ED2 process timeline and expected changes to the DESNZ published values: the published figures from 23 December 2020 have been used for the CBA. To take account of the government's carbon targets and energy policy and modelling by the Committee on Climate Change and others, it is necessary to reflect the fact that power sector carbon intensity is likely to decline over time to almost zero. We have accounted for this in the CBA model through a linear reduction of power sector carbon intensity towards a final power sector carbon intensity of 10g/kWh in 2050.⁶ Should the DNO chose to use an updated version of the publish carbon figures, this must be clearly recorded on the CBA and values consistently used across the interlinking suite of documents
- other GHG emissions (CO₂e) ie not associated with losses: All Carbon emissions have been valued based on the DESNZ traded (central) carbon values⁷
- fatality and major injuries: For the benefits associated with preventing fatalities and injuries, we require DNOs to draw on guidance set out in HM Treasury Green Book and the HSE. A "default" disproportion factor of 6.25 has been set to reflect the Common Network Asset Indices Methodology (CNAIM). The HSE states that “for a measure to be deemed not reasonably practicable, the cost has to be grossly disproportionate to the benefits. This is taken into account by the disproportion factor (DF). A DF more than 10 is unlikely”.⁸ DNOs should consider what safety disproportion factor is appropriate in the CBA submission with the factor ranging between 1 to 10
- others included and standardised: Customer interruptions (CI), Customer minutes lost (CML), and Oil leakage

4.39 DNOs should consider including further non-marketed items (ie benefits that accrue beyond a customer’s meter), where a fixed parameter or calculation methodology has not been provided in the CBA model. Where a societal benefit or non-marketed item is not provided in the CBA as a fixed parameter, DNOs can include by using the "other X (specify)" field to include these values and impacts in its CBA.

4.40 Where this is used, DNOs should justify why the additional societal benefit or nonmarketed item has been included as well as the method by which it has calculated the impact on this value of the investment being assessed. This should clearly set out the assumptions and valuation methodology used, in the workings

⁵ [Final UK greenhouse gas emissions national statistics: 1990 to 2020 - GOV.UK](#)

⁶ CCC predict 1g/kWh in the seventh carbon budget. [The Seventh Carbon Budget - Climate Change Committee](#)

⁷ [Carbon valuation - GOV.UK](#)

⁸ Guidance on ALARP Decisions in COMAH - SPC/Permissioning/37

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section of the model, and how double counting or interactions with other fixed parameters has been considered and avoided. The calculation of impact can be both based on DNO data and/or a common data basis where the best approach is used.

- 4.41 In the first instance, DNOs should use societal benefit or non-marketed item values from the DNO common approach to Social Return on Investment (SROI) data proxy bank as the source for additional values. DNOs can also utilise other values not included in this data bank where sufficient justification can be provided as to why it has been used.
- 4.42 It may be appropriate to use a different assumption (eg location specific assumption) to measure benefits where this can apply to both fixed parameters and additional parameters included in the analysis. DNOs can include these benefits in the rows provided but should clearly set out the assumptions and valuation methodology used in the workings section of the model.
- 4.43 DNOs should also set out any non-marketed impacts or factors that cannot be monetised within the EJP or in the investment decision developed.
- 4.44 In all instances DNOs should present the results of any CBA both including and excluding additional societal benefit or non-marketed items so that comparisons can be easily drawn between the results from a core CBA and those enhanced by the inclusion of additional societal benefit or non-marketed items.
- 4.45 The common approach to SROI should not be used instead of the ED3 CBA model but may need to be used for other aspects of companies' ED3 business plans.

Decision rule

- 4.46 The purpose of the CBA template is to enable companies to demonstrate the proposals included in their business plans provide the optimum solution which demonstrates value for customers.
- 4.47 While companies are not required to use CBAs mechanistically (ie including all schemes with positive NPV and excluding all those with negative NPV); variations are to be qualified. The output from the CBA is an important element of companies justifying their preferred option and should be considered alongside factors such as the technical and economic asset life, payback periods and risks to investment.
- 4.48 Where a scheme has a marginally positive or negative NPV relative to the baseline, companies should consider the inclusion/exclusion of such a scheme drawing on sensitivity analysis and the identification of any non-monetised benefits or costs. As an example, such non-monetised costs/benefits might include:

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- (non-monetised) engineering judgement on what constitutes an efficient project, as detailed in the required EJP
 - evidence of stakeholder support for one option over another (ie providing connectivity to vulnerable customers)
- 4.49 Companies should clearly set out such judgements as part of their IDP and have provided a section for a brief synopsis for both engineering justification and stakeholder support within the CBA template.
- 4.50 It is the overall position determined across the following three distinct elements which will determine and substantiate the most appropriate solution:
- EJP
 - stakeholder Engagement and Support
 - the quantitative analysis (ie CBA)
- 4.51 The IDP will be assessed in its entirety by Ofgem to inform the viability and justification of any proposed investments within the company’s well-justified business plan.
- 4.52 Included within the CBA template and EJP are sections for capturing risks associated with the preferred option. These risks should capture any material risk which may impact the cost and/or timing of the preferred investment. The risk impact should be broadly quantified, and the likelihood of occurrence estimated, according to the drop-down menu options within the CBA template. The relevant controls and risk mitigation should also be captured within this section. These sections are important as they demonstrate that companies have undertaken a comprehensive evaluation of the proposed spend.
- 4.53 Ofgem also intends to utilise the evidence presented in the IDPs as part of the ongoing monitoring and assessment of delivery throughout the price control period. Where there has been material divergence in the cost, timing and/or nature of the solution from that which was assessed and funded through the business plan process, these changes are to be subject to the same rigour and assessment that the original proposal was subjected to. An updated IDP, with the baseline being the original solution, is to be available to Ofgem upon request.

Uncertainty and sensitivity analysis

- 4.54 We expect DNOs to undertake sensitivity analysis affecting Net Present Social Value (NPSV) and Benefit Cost Ratio (BCR) consistent with the HM Treasury Green Book guidance. This states:

“Sensitivity analysis explores the sensitivity of the expected outcomes of an intervention to potential variations in key input variables. It can demonstrate, for example, the changes in key assumptions required to change the preferred option on an NPSV or BCR basis or to turn the NPSV of an option positive. A switching

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value refers to the value a key input variable would need to take for a proposed intervention to switch from a recommended option to another option or for a proposal not to receive funding approval.

At a minimum, sensitivity analysis and the identification of switching values should be carried out on the preferred option from the shortlist appraisal. These results must form part of the presentation of results. If the costs and benefits of the preferred option are highly sensitive to certain values or input variables, sensitivity analysis will probably be required for other options in the shortlist.”

4.55 We expect DNOs to consider sensitivity analysis for key assumptions used in their CBA for example:

- asset performance / health deterioration rates
- ongoing efficiency assumptions
- future demand growth / reduction
- future energy scenarios
- future utilisation of assets

4.56 Sensitivity analysis should primarily focus on the preferred option, demonstrating that it is viable under a range of different potential scenarios. However, companies may also need to undertake sensitivities on other options, to provide comparators under different assumptions. For example, when testing the sensitivity of a key input assumption (eg capacity utilisation) it is appropriate to only consider the impact on the preferred option. However, when evaluating the impact of higher carbon prices, it is important to consider this impact on each of the options identified in the CBA.

4.57 Where a DNO provides a CBA for smart grids using our template, we expect the DNO to incorporate a run of the model without RPEs applied as part of the sensitivity analysis on RPEs that should be considered. Any CBAs provided should align with the DNO “best view” scenario.

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Send us your feedback

We are keen to receive your feedback about this guidance. We would also like to get your answers to these questions:

- Do you have any comments about the quality of this guidance?
- Do you have any comments about its tone and content?
- Was it easy to read and understand? Or could it have been better written?
- Do you have any further comments?

Please send your feedback to stakeholders@ofgem.gov.uk.

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| Appendix 3 | General engineering guidance |

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Appendix 1 ED3 EJP templates (narrative)

Major Project

Summary table

A1.1 The following summary table must be completed for each EJP

| Title Section | Applicable information to be completed |
|---|--|
| EJP type | Major Project or Portfolio Works |
| Name of Scheme | Working title of the Project or Portfolio. |
| Investment Driver | eg Asset Health/Load Related/tRESP Where there are multiple drivers, licensees should provide a list. In particular, costs will be disaggregated and aligned to the drivers of works. |
| BPDT/Scheme Reference Number | This will include the licensees own referencing system. |
| Outputs | Please list volumes (assets) of all outputs to be delivered |
| Cost | This is the total cost (£m) of the preferred option(s) |
| Delivery Year | The year the scheme will be completed. If a program delivery is over a number of years in a staged manner, list multiple years. For programs of work spanning ED3 or beyond, provide the range of years applicable. |
| Applicable Reporting Tables (CV) | Please list all applicable tables which are included in this investment. |
| Historic Funding interactions | Please detail all interactive (either as direct named assets, or as portfolios) funding provided or requested for works in RIIO-ED1 and/or RIIO-ED2. Please highlight if there have been any deferrals of works |
| Interactive Projects | Please detail any projects which are directly interactive with this investment. Where applicable include any project references from the BDPT. |
| Total Spend Apportionment (£m as appropriate, where a portion of investment is proposed as an uncertainty mechanism, please clearly separate) | ED1: x ED2: x ED3: x ED4: x |

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| License Area | Reporting Table | Description | Total (£m) | 27/28 (£m) | 28/29 (£m) | 29/30 (£m) | 30/31 (£m) | 31/32 (£m) |
|-------------------------|----------------------------------|--|------------|------------|------------|------------|------------|------------|
| Applicable License Area | The Applicable CV table (eg CV1) | The asset/ portfolios being intervened | | | | | | |

Introduction

A1.2 This section will provide a concise and succinct summary of the details contained within the main text of the EJP. As a minimum, it will detail the following:

- background to investment
- identification of primary driver(s)
- timing of investment
- uncertainties expected to be experienced
- outputs and delivery year

Background information and needs case

A1.3 This section should provide an overview of the asset(s) that the proposal pertains to, explain the investment driver(s) including reference to relevant engineering standards, and present arguments and evidence to support intervention in the ED3 period.

LRE

A1.4 For load related investments, an overview of the planning background driving the investment with commentary on load and generation changes, and an overview of the network modelling and methodologies to identify constraints. We note that the EJP should focus on the outputs of these assessments, referencing the detailed methodology underpinning the planning scenario (including disaggregation to asset level) which should be provided in the relevant Annex. Investments that are not classified as higher uptake investments (ie investments required to meet the demand associated with unadjusted outputs of the tRESP) once the sensitivity analysis prescribed by Ofgem in Section 8 of the Business Plan Guidance has been applied should be clearly identified and where there are preparatory works required to maintain optionality to proceed with those investments, these should be clearly outlined and justification provided for their inclusion in ex ante funding

A1.5 The asset(s) or asset grouping(s) that the proposal pertains to, including reference to network configuration(s), asset manufacturer(s)/model(s) and asset rating(s), with named assets where practicable. For Portfolio Works, this should be representative of the licensee's overall network.

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A1.6 Licensees shall provide both actual and forecast demands. Where there is a difference between the historic forecast demand and actual demand the licensee shall provide clarity on these points in their narrative.

NLRE

A1.7 For non-load related investments, an overview of the asset condition(s) with supporting evidence, including reference to CNAIM where appropriate.

A1.8 The needs case for the proposed investment, including reference to engineering standards, and an overview of the methodology used to assess the network and identify assets for proposed investment.

Optioneering

Overview

A1.9 This section should provide an overview, and list the outputs, of all options considered in addressing the needs case. This should also include a high-level assessment of each option outlining whether or not it was taken forward for further consideration, and the reasons for this.

A1.10 Optioneering must include:

- an option comprising the minimum level of intervention that would be required to remain compliant with all applicable regulation/address asset health concerns
- all credible options considered, including replacement, reinforcement, innovative solutions, contracted flexibility, and other commercial options
- a table summarising the outputs of each option considered
- the costs for each option

A1.11 For options taken forward as credible, each option should be accompanied by Single Line Diagrams and where applicable circuit route maps, and substation layout diagrams.

A1.12 Analysis on the preferred option should be included in this section. This should include for the credible options:

- a summary of CBA outputs and the qualitative narrative detailed in Section 4 of this document
- sensitivity analysis of the preferred solution against a range of plausible planning scenarios (informed by tRESP) - this will include as measured demand or system data as opposed to modelled DFES/tRESP system data
- detail of any regional variations, site specific factors or exceptional costs

LRE

A1.13 For LRE projects, an overview of future interventions needed to release the full capacity of the proposed investment, and an overview of the next planned load

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or asset health related investment on the assets, circuits or substations in question.

NLRE

A1.14 For NLRE projects licensees will provide detailed analysis on assets which are not being intervened on as part of the major project proposed. Licensees will clarify what options do not address all asset health concerns.

CBA

A1.15 CBA should be completed in line with the guidance provided in Section 4. In the body of the EJP a summary of the EJP outputs along with the qualitative bolt-on should be provided.

Cost

A1.16 For the preferred option, further information regarding the proposed asset interventions and associated workload is required. In all categories, proposed work should be broken down by asset register category and proposed cost allowance category. This should additionally be broken down as follows:

- core investment - investment that is critical to addressing the needs case justification set out
- opportunistic investment - investment included due to low marginal cost, or to gain programme efficiencies and note that this excludes oversizing of assets
- consequential investment - investment needed as a result of / to facilitate investment on the asset comprising the needs case (eg replacement of disconnectors / circuit breakers to accommodate a replacement transformer with a higher fault level)

A1.17 For the preferred option, further information must be provided detailing the methodology for any unit costs have been estimated.

- where unit costs are built up from first principles, estimated costs or rates for component costs should be detailed with evidence of how they were determined
- where unit costs are primarily informed by historical costs incurred for similar works, this should be made clear, a summary of the historical data should be provided, including the number of observations and a summary of the variability across observations - how this historical data has been used to inform the unit cost estimate provided should be both clear and justified

A1.18 Where licensees have detailed site/route specific cost information to justify their costs this will be included in this section.

A1.19 Where licensees are submitting a portfolio investment any cost driver elements will be included in this section.

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Deliverability and Risk

A1.20 This section will provide commentary on the ability of the licensee to deliver their preferred solution.

A1.21 As a minimum, this will include:

- the volume delivery profile on a year-by-year basis (if applicable)
- an overview of the delivery track record in RIIO-ED1 and RIIO-ED2 of comparable investments
- any deliverability constraints, and key delivery risks and mitigations
- any historic funding requested on the site/route/portfolio, its previous approval status by Ofgem and, if funded/approved and not delivered, clarifications as to why the investment proposals are not deliverable

Conclusion

A1.22 This section will provide a concise, succinct summary of main conclusions and recommendations contained within the main text of the EJP.

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High volume portfolio

Summary table

A1.23 The following summary table must be completed for each EJP.

| Title Section | Applicable information to be completed |
|---|---|
| EJP type | High Volume |
| Name of Scheme | Working title of the Project. |
| Investment Driver | eg Asset Health / Load Related Where there are multiple drivers, licensee should provide a list. In particular costs will be disaggregated and aligned to the drivers of works. |
| BPDT/Scheme Reference Number | This will include the licensees own referencing system. |
| Outputs | Please list volumes of all outputs to be delivered |
| Cost | This is the total cost (£m) of the preferred option(s) |
| Delivery Year | The year the scheme will be completed. If a program delivery is over a number of years in a staged manner, list multiple years. For programs of work spanning ED3 or beyond, provide the range of years applicable. |
| Applicable Reporting Tables | Please list all applicable tables which have this portfolio, including volumes and costs. |
| Historic Funding interactions | Pease detail all interactive (either as direct named assets, or as portfolios) funding provided or requested for works in RIIO-ED1 and/or RIIO-ED2. Please highlight if there have been any deferrals of works |
| Interactive Projects | Please detail any projects which are directly interactive with this investment. Where applicable include any project references from the BDPT. |
| Spend Apportionment (£m as appropriate) | ED1: x ED2: x ED3: x ED4+: x |

Introduction

A1.24 This section will provide a concise, succinct summary of the details contained with the main text of the EJP. As a minimum, it will detail the following:

- background to Investment

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- identification of primary driver(s)
- timing of investment
- uncertainties expected to be experienced
- outputs and delivery year

Background information and needs case

A1.25 This section should provide an overview of the asset(s) that the proposal pertains to, explain the investment driver(s) including reference to relevant engineering standards, and present argument and evidence to support intervention in the ED3 period.

A1.26 This section will contain the licensees NARM/non-NARM asset data analysis used to create the volumes considered in the optioneering section of the EJP.

A1.27 As a minimum, this section will detail:

- the needs case for the proposed investment, including reference to engineering standards, and an overview of the methodology used to assess the network and identify assets for proposed investment. This should include an overview of the asset condition(s) with supporting evidence, including reference to CNAIM where appropriate. This will include as a minimum:
 - (1) inspection frequency for each asset class, and where required distinction made between safety-based inspections and condition-based inspections. This will be accompanied by the completion rate for these inspections
 - (2) maintenance frequency for each asset class and compliance with internal maintenance policy for each asset class. This will be accompanied by the completion rate for the maintenance
 - (3) failure and fault analysis on the asset class including counts and types of failures/faults with information on the relationship between the assets which have failed and their CNAIM Health Indices status before the failure
 - (4) asset health and critical trends for the asset class proposed for interventions in RIIO-ED1, RIIO-ED2, ED3 and into future price controls.
- RIIO-ED1 and RIIO- ED2 cost and volumes performance will be referenced alongside the original requested RIIO-ED1 and RIIO-ED2 costs and volumes

Optioneering

A1.28 This section should provide an overview, and list the outputs, of all options considered in addressing the needs case. This should also include a high level assessment of each option outlining whether or not it was taken forward for further consideration, and the reasons for this.

A1.29 As a minimum, the optioneering should include:

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- an option comprising the minimum level of intervention that would be required to remain compliant with all applicable regulation
- all credible options considered, including replacement, reinforcement, innovative solutions, contracted flexibility, and other commercial options
- a table summarising the outputs of each option considered

A1.30 This section should provide the licensee's assessment of the subset of options taken forward for detailed analysis, ultimately presenting the licensee's preferred option that they propose to take forward.

A1.31 Each option taken forward should be costed and evaluated by a Cost Benefit Analysis. Licensees should use the CBA alongside other quantitative and qualitative arguments to justify their preferred solution. This should include:

- sensitivity analysis of the preferred solution against a range of plausible planning scenarios (informed by tRESP) for NLRE opportunity investments
- detail of any regional variations, site specific factors or exceptional costs
- an assessment of cost maturity and confidence of submitted costs
- the forecast costs and declared outputs should be clearly summarised for each option

A1.32 By timing of the needs case for intervention (ie distinction of the cost and volumes of interventions proposed for a needs case arising in future price controls). For assets that are intervened on ahead of need, this should be categorised as:

- opportunistic investment; investment included due to low marginal cost, or to gain programme efficiencies. We note this excludes oversizing of assets
- consequential investment; investment needed as a result of / to facilitate investment on the asset comprising the needs case (eg replacement of disconnectors / circuit breakers to accommodate a replacement transformer with a higher fault level)

A1.33 Licensees must also confirm whether or not any of the outputs of their preferred solution were included in the companies' RIIO-ED2 business plan. If so, commentary on why this was not delivered as part of RIIO-ED2 must be provided.

Cost

A1.34 Licensees will provide an overview of their cost assumptions. This will detail any specific drivers applicable to the asset class in question.

A1.35 Costs will be broken down into the following categories and can be in a tabular format:

- the applicable CV table to which the investments relate
- the TOTEX based network characteristics which the investment influences

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Deliverability and risk

A1.36 This section will provide commentary on the ability of the licensee to deliver their preferred solution.

A1.37 As a minimum, this will include:

- the volume delivery profile on a year-by-year basis
- an overview of the delivery track record in RIIO-ED1 and RIIO-ED2. This will include the volumes requested and volumes delivered as a minimum
- any deliverability constraints, and key delivery risks and mitigations
- any historic funding requested, its previous approval status by Ofgem and, if funded/approved and not delivered, clarifications as to why the investment proposals are now deliverable

Conclusion

A1.38 This section will provide a concise, succinct summary of main conclusions and recommendations contained within the main text of the EJP.

Low volume portfolio - optional narrative

Summary table

A1.39 The following summary table must be completed for each EJP.

| Title section | Applicable information to be completed |
|---------------------------------|---|
| EJP type | Low Volume |
| Applicable Low Volume Portfolio | Asset, or asset classes applicable. |
| BPDT/Scheme Reference Number | This will include the licensees own referencing system. |
| Outputs | Please list volumes of all outputs to be delivered |
| Cost | This is the total cost (£m) of the preferred option(s) |
| Delivery Year | The year the scheme will be completed. If a program delivery is over a number of years in a staged manner, list multiple years. For programs of work spanning ED3 or beyond, provide the range of years applicable. |
| Applicable Reporting Tables | Please list all applicable tables which have this portfolio, including volumes and costs. |

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Introduction

A1.40 This section will provide a concise, succinct summary of the details contained with the main text of the EJP. As a minimum, it will detail the following:

- background to Investment
- identification of primary driver(s)
- timing of investment
- uncertainties expected to be experienced
- outputs and delivery year

Background information and needs case

A1.41 This section should provide an overview of the asset(s) that the proposal pertains to, explain the investment driver(s) including reference to relevant engineering standards, and present argument and evidence to support intervention in the ED3 period.

A1.42 This section will contain the licensees NARM/non-NARM asset data analysis used to create the volumes considered in the optioneering section of the EJP.

A1.43 As a minimum, this section will detail:

- the needs case for the proposed investment, including reference to engineering standards, and an overview of the methodology used to assess the network and identify assets for proposed investment. This should include an overview of the asset condition(s) with supporting evidence, including reference to CNAIM where appropriate. This will include as a minimum:
 - (1) inspection frequency for each asset class, and where required distinction made between safety-based inspections and condition-based inspections. This will be accompanied by the completion rate for these inspections
 - (2) maintenance frequency for each asset class and compliance with internal maintenance policy for each asset class. This will be accompanied by the completion rate for the maintenance
 - (3) failure and fault analysis on the asset class including counts and types of failures/faults with information on the relationship between the assets which have failed and their CNAIM Health Indices status before the failure
- asset Health and Critical trends for the asset class proposed for interventions in RIIO-ED1, RIIO-ED2, ED3 and into future price controls.
- RIIO-ED1 and RIIO- ED2 cost and volumes performance will be referenced alongside the original requested RIIO-ED1 and RIIO-ED2 costs and volumes.

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Optioneering

A1.44 This section should provide an overview, and list the outputs, of all options considered in addressing the needs case. This should also include a high level assessment of each option outlining whether or not it was taken forward for further consideration, and the reasons for this.

A1.45 As a minimum, the optioneering should include:

- an option comprising the minimum level of intervention that would be required to remain compliant with all applicable regulation
- all credible options considered, including replacement, reinforcement, innovative solutions, contracted flexibility, and other commercial options
- a table summarising the outputs of each option considered

A1.46 This section should provide the licensee's assessment of the subset of options taken forward for detailed analysis, ultimately presenting the licensee's preferred option that they propose to take forward

A1.47 Each option taken forward should be costed and evaluated by a Cost Benefit Analysis. Licensees should use the CBA alongside other quantitative and qualitative arguments to justify their preferred solution. This should include:

- sensitivity analysis of the preferred solution against a range of plausible planning scenarios (informed by tRESP) for NLRE opportunity investments
- detail of any regional variations, site specific factors or exceptional costs
- An assessment of cost maturity and confidence of submitted costs

A1.48 The forecast costs and declared outputs should be clearly summarised for each option.

A1.49 By timing of the needs case for intervention (ie distinction of the cost and volumes of interventions proposed for a needs case arising in future price controls). For assets that are intervened on ahead of need, this should be categorised as:

- opportunistic investment; investment included due to low marginal cost, or to gain programme efficiencies. We note this excludes oversizing of assets
- consequential investment; investment needed as a result of / to facilitate investment on the asset comprising the needs case (eg replacement of disconnectors / circuit breakers to accommodate a replacement transformer with a higher fault level)
- licensees must also confirm whether or not any of the outputs of their preferred solution were included in the companies' RIIO-ED2 business plan. If so, commentary on why this was not delivered as part of RIIO-ED2 must be provided

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Cost

A1.50 Licensees will provide an overview of their cost assumptions. This will detail any specific drivers applicable to the asset class in question.

A1.51 Costs will be broken down into the following categories and can be in a tabular format:

- the applicable CV table to which the investments relate
- the TOTEX based network characteristics which the investment influences

Deliverability and risk

A1.52 This section will provide commentary on the ability of the licensee to deliver their preferred solution.

A1.53 As a minimum, this will include:

- the volume delivery profile on a year-by-year basis
- an overview of the delivery track record in RIIO-ED1 and RIIO-ED2. This will include the volumes requested and volumes delivered as a minimum
- any deliverability constraints, and key delivery risks and mitigations
- any historic funding requested, its previous approval status by Ofgem and, if funded/approved and not delivered, clarifications as to why the investment proposals are now deliverable

Conclusion

A1.54 This section will provide a concise, succinct summary of main conclusions and recommendations contained within the main text of the EJP.

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Atypical

Summary table

A1.55 The following summary table must be completed for each EJP

| Title section | Applicable information to be completed |
|-------------------------------|---|
| EJP type | Atypical as appropriate |
| Name of Scheme | Working title of the Atypical Investment. |
| Investment Driver | eg Asset Health / Load Related / Climate Resilience Where there are multiple drivers, licensee should provide a list. In particular costs will be disaggregated and aligned to the drivers of works. |
| BPDT/Scheme Reference Number | This will include the licensee's own referencing system. |
| Outputs | Please list volumes of all outputs to be delivered |
| Cost | This is the total cost (£m) of the preferred option(s) |
| Delivery Year(s) | The year the scheme will be completed. If a program delivery is over a number of years in a staged manner, list multiple years. For programmes of work spanning ED3 or beyond, provide the range of years applicable. |
| Applicable Reporting Tables | Please list all applicable tables which have this portfolio, including volumes and costs. |
| Historic Funding interactions | Pease detail all interactive (either as direct named assets, or as portfolios) funding provided or requested for works in RIIO-ED1 and/or RIIO-ED2. Please highlight if there have been any deferrals of works |
| Interactive Projects | Please detail any projects which are directly interactive with this investment. Where applicable include any project references from the BDPT. |
| Spend Apportionment (£m) | ED1: x ED2: x ED3: x ED4: x |

Introduction

A1.56 This section will provide a concise, succinct summary of the details contained with the main text of the EJP. As a minimum, it will detail the following:

- background to Investment
- identification of primary driver(s)

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- timing of investment
- uncertainties expected to be experienced
- outputs and delivery year

Background information and needs case

A1.57 This section should provide an overview of the investments purpose. This includes if applicable:

- the activity, the asset(s) or the wider business support investment category that the investment pertains to
- explanation of the investment driver(s) including reference to relevant engineering standards or other relevant standards where appropriate
- present arguments and evidence to support investment in the ED3 period

Optioneering

A1.58 This section should provide an overview, and list the outputs, of all options considered in addressing the needs case. This should also include a high-level assessment of each option outlining whether or not it was taken forward for further consideration, and the reasons for this.

A1.59 As a minimum, the optioneering should include:

- an option comprising the minimum level of intervention that would be required to remain compliant with all applicable regulation
- all credible options considered and other commercial options (if applicable).
- a table summarising the outputs of each option considered

Network related investments

A1.60 This section should provide the licensee's assessment of the subset of options taken forward for detailed analysis, ultimately presenting the licensee's preferred option that they propose to take forward.

A1.61 Each option taken forward should be costed and evaluated by a Cost Benefit Analysis. Licensees should use the CBA alongside other quantitative and qualitative arguments to justify their preferred solution. This should include (where applicable):

- detail of any regional variations, site specific factors or exceptional costs
- an assessment of cost maturity and confidence of submitted costs
- the forecast costs and declared outputs should be clearly summarised for each option. This should be further broken down as follows:
- timing of the needs case for intervention. This should include:
 - (1) opportunistic investment: investment included due to low marginal cost, or to gain programme efficiencies. We note this excludes oversizing of assets

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- (2) consequential investment: investment needed as a result of / to facilitate investment on the asset comprising the needs case (eg replacement of disconnectors / circuit breakers to accommodate a replacement transformer with a higher fault level)
- (3) for light current or auxiliary assets, a breakdown between interventions where the long-term needs case (ie 2050 demand or generation forecasts) is met and delivered vs instances where further intervention will be required to meet this needs case

A1.62 Licensees must also confirm whether or not any of the outputs of their preferred solution were included in the companies' RIIO-ED2 business plan. If so, commentary on why this was not delivered as part of RIIO-ED2 must be provided.

Non-network investments

A1.63 This section should provide the licensee's assessment of the subset of options taken forward for detailed analysis, ultimately presenting the licensee's preferred option that they propose to take forward.

A1.64 Each option taken forward should be costed and evaluated by a Cost Benefit Analysis. Licensees should use the CBA alongside other quantitative and qualitative arguments to justify their preferred solution. This should include (where applicable):

- detail of any regional variations, site specific factors or exceptional costs
- an assessment of cost maturity and confidence of submitted costs
- the forecast costs and declared outputs should be clearly summarised for each option. This should be further broken down as follows:

A1.65 timing of the needs case for intervention. This should include:

- opportunistic investment: investment included due to low marginal cost, or to gain programme efficiencies
- synergies or links to other investments in non-network categories

A1.66 Licensees must also confirm whether or not any of the outputs of their preferred solution were included in the companies' RIIO-ED2 business plan. If so, commentary on why this was not delivered as part of RIIO-ED2 must be provided.

Cost

A1.67 Licensees shall provide a cost breakdown of their investment which enables our review of the proposal.

Deliverability and risk

A1.68 This section will provide commentary on the ability of the licensee to deliver their preferred solution.

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A1.69 As a minimum, this will include:

- the volume delivery profile on a year-by-year basis
- an overview of the delivery track record in RIIO-ED1 and RIIO-ED2
- any deliverability constraints, and key delivery risks and mitigations
- any historic funding requested, its previous approval status by Ofgem and, if funded/approved and not delivered, clarifications as to why the investment proposals is now deliverable

Conclusion

A1.70 This section will provide a concise, succinct summary of main conclusions and recommendations contained within the main text of the EJP.

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Appendix 2 EJP submission requirements

EJP submission requirements

- A2.1 The following Table sets out the minimum Portfolio EJP submission Requirements.
- A2.2 Where a licensee does not propose an investment in these categories, licensees shall submit a "boiler plate" EJP which clearly highlights no planned investment in the categories listed.
- A2.3 Where High Volume Portfolio Asset EJPs are included, these may be combined into single EJPs subject to the licensee clarifying which investments are contained in the paper clearly.
- A2.4 For any portfolio-based investments these will be at a Group level (the total for all licensed networks). We do not expect licensees to provide individual licence areas, but if selected this will not be a factor in our assessment.

Portfolio EJP

| Asset class | Name | Voltage type | |
|--------------------|------------------------------------|--------------|-------------|
| Overhead Pole Line | LV Main (OHL) Conductor | LV | High Volume |
| Overhead Pole Line | LV Service (OHL) | LV | High Volume |
| Overhead Pole Line | LV Poles | LV | High Volume |
| Cable | LV Main (UG Consac) | LV | High Volume |
| Cable | LV Main (UG Plastic) | LV | High Volume |
| Cable | LV Main (UG Paper) | LV | High Volume |
| Cable | Rising & Lateral Mains | LV | Atypical |
| Cable | LV Service (UG) | LV | High Volume |
| Cable | LV Service associated with RLM | LV | Atypical |
| Switchgear | LV Circuit Breaker | LV | Low Volume |
| Switchgear | LV Pillar (ID) | LV | Low Volume |
| Switchgear | LV Pillar (OD at Substation) | LV | Low Volume |
| Switchgear | LV Pillar (OD not at a Substation) | LV | Atypical |
| Switchgear | LV Board (WM) | LV | Low Volume |
| Switchgear | LV UGB | LV | High Volume |

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| Asset class | Name | Voltage type | |
|--------------------|---|--------------|-------------|
| Switchgear | LV Cutout | LV | High Volume |
| Switchgear | LV Board (X-type Network) (WM) | LV | Low Volume |
| Switchgear | LV Transformers/Regulators | LV | High Volume |
| Overhead Pole Line | 6.6/11kV OHL (Conventional Conductor) | HV | High Volume |
| Overhead Pole Line | 6.6/11kV OHL (BLX or similar Conductor) | HV | High Volume |
| Overhead Pole Line | 20kV OHL (Conventional Conductor) | HV | High Volume |
| Overhead Pole Line | 20kV OHL (BLX or similar Conductor) | HV | High Volume |
| Overhead Pole Line | 6.6/11kV Poles | HV | High Volume |
| Overhead Pole Line | 20kV Poles | HV | High Volume |
| Cable | 6.6/11kV UG Cable | HV | High Volume |
| Cable | 20kV UG Cable | HV | High Volume |
| Cable | HV Sub Cable | HV | Atypical |
| Switchgear | 6.6/11kV CB (PM) | HV | High Volume |
| Switchgear | 6.6/11kV CB (GM) Primary | HV | Low Volume |
| Switchgear | 6.6/11kV CB (GM) Secondary | HV | Low Volume |
| Switchgear | 6.6/11kV Switch (PM) | HV | High Volume |
| Switchgear | 6.6/11kV Switchgear - Other (PM) | HV | High Volume |
| Switchgear | 6.6/11kV Switch (GM) | HV | Low Volume |
| Switchgear | 6.6/11kV RMU | HV | Low Volume |
| Switchgear | 6.6/11kV X-type RMU | HV | Low Volume |
| Switchgear | 20kV CB (PM) | HV | High Volume |
| Switchgear | 20kV CB (GM) Primary | HV | Low Volume |
| Switchgear | 20kV CB (GM) Secondary | HV | Low Volume |
| Switchgear | 20kV Switch (PM) | HV | High Volume |
| Switchgear | 20kV Switchgear - Other (PM) | HV | High Volume |
| Switchgear | 20kV Switch (GM) | HV | Low Volume |
| Switchgear | 20kV RMU | HV | Low Volume |

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| Asset class | Name | Voltage | type |
|---------------------|---|---------|-------------|
| Transformer | 6.6/11kV Transformer (PM) | HV | High Volume |
| Transformer | 6.6/11kV Transformer (GM) | HV | Low Volume |
| Transformer | 20kV Transformer (PM) | HV | High Volume |
| Transformer | 20kV Transformer (GM) | HV | Low Volume |
| Protection | Batteries at GM HV Substations | HV | Atypical |
| Overhead Pole Line | 33kV OHL (Pole Line) Conductor | EHV | High Volume |
| Overhead Pole Line | 33kV Pole | EHV | High Volume |
| Overhead Pole Line | 66kV OHL (Pole Line) Conductor | EHV | High Volume |
| Overhead Pole Line | 66kV Pole | EHV | High Volume |
| Overhead Tower Line | 33kV OHL (Tower line) Conductor | EHV | Low Volume |
| Overhead Tower Line | 33kV Tower | EHV | Low Volume |
| Overhead Tower Line | 33kV Fittings | EHV | Low Volume |
| Overhead Tower Line | 66kV OHL (Tower Line) Conductor | EHV | Low Volume |
| Overhead Tower Line | 66kV Tower | EHV | Low Volume |
| Overhead Tower Line | 66kV Fittings | EHV | Low Volume |
| Cable | 33kV UG Cable (Non-Pressurised) | EHV | Low Volume |
| Cable | 33kV UG Cable (Oil) | EHV | Low Volume |
| Cable | 33kV UG Cable (Gas) | EHV | Low Volume |
| Cable | 66kV UG Cable (Non-Pressurised) | EHV | Low Volume |
| Cable | 66kV UG Cable (Oil) | EHV | Low Volume |
| Cable | 66kV UG Cable (Gas) | EHV | Low Volume |
| Cable | EHV Sub Cable | EHV | Atypical |
| Switchgear | 33kV CB (Air Insulated Busbars) (ID) (GM) | EHV | Low Volume |
| Switchgear | 33kV CB (Air Insulated Busbars) (OD) (GM) | EHV | Low Volume |
| Switchgear | 33kV CB (Gas Insulated Busbars) (ID) (GM) | EHV | Low Volume |
| Switchgear | 33kV CB (Gas Insulated Busbars) (OD) (GM) | EHV | Low Volume |
| Switchgear | 33kV Switch (GM) | EHV | Low Volume |

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| Asset class | Name | Voltage type | |
|---------------------|--|--------------|-------------|
| Switchgear | 33kV Switchgear - Other | EHV | High Volume |
| Switchgear | 33kV Switch (PM) | EHV | High Volume |
| Switchgear | 33kV RMU | EHV | Low Volume |
| Switchgear | 66kV CB (Air Insulated Busbars) (ID) (GM) | EHV | Low Volume |
| Switchgear | 66kV CB (Air Insulated Busbars) (OD) (GM) | EHV | Low Volume |
| Switchgear | 66kV CB (Gas Insulated Busbars) (ID) (GM) | EHV | Low Volume |
| Switchgear | 66kV CB (Gas Insulated Busbars) (OD) (GM) | EHV | Low Volume |
| Switchgear | 66kV Switchgear - Other | EHV | High Volume |
| Transformer | 33kV Transformer (PM) | EHV | High Volume |
| Transformer | 33kV Transformer (GM) | EHV | Low Volume |
| Transformer | 66kV Transformer (GM) | EHV | Low Volume |
| Protection | Batteries at 33kV Substations | EHV | Atypical |
| Protection | Batteries at 66kV Substations | EHV | Atypical |
| Overhead Pole Line | 132kV OHL (Pole Line) Conductor | 132kV | Low Volume |
| Overhead Pole Line | 132kV Pole | 132kV | Low Volume |
| Overhead Tower Line | 132kV OHL (Tower Line) Conductor | 132kV | Low Volume |
| Overhead Tower Line | 132kV Tower | 132kV | Low Volume |
| Overhead Tower Line | 132kV Fittings | 132kV | Low Volume |
| Cable | 132kV UG Cable (Non-Pressurised) | 132kV | Low Volume |
| Cable | 132kV UG Cable (Oil) | 132kV | Low Volume |
| Cable | 132kV UG Cable (Gas) | 132kV | Low Volume |
| Cable | 132kV Sub Cable | 132kV | Atypical |
| Switchgear | 132kV CB (Air Insulated Busbars) (ID) (GM) | 132kV | Low Volume |
| Switchgear | 132kV CB (Air Insulated Busbars) (OD) (GM) | 132kV | Low Volume |
| Switchgear | 132kV CB (Gas Insulated Busbars) (ID) (GM) | 132kV | Low Volume |
| Switchgear | 132kV CB (Gas Insulated Busbars) (OD) (GM) | 132kV | Low Volume |
| Switchgear | 132kV Switchgear - Other | 132kV | High Volume |

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| Asset class | Name | Voltage type | |
|---------------------------|--------------------------------|--------------|------------|
| Transformer | 132kV Transformer (GM) | 132kV | Low Volume |
| Protection | Batteries at 132kV Substations | 132kV | Atypical |
| Protection | Pilot Wire Overhead | Other | Atypical |
| Protection | Pilot Wire Underground | Other | Atypical |
| Cable Tunnel | Cable Tunnel (DNO owned) | All | Atypical |
| Cable Bridge | Cable Bridge (DNO owned) | All | Atypical |
| Electrical Energy Storage | | Other | Atypical |
| Protection | | All | Atypical |

Narrative EJPs

| Atypicals | High Volume Portfolio Asset | Major project |
|---|--------------------------------|---|
| Narrative | Narrative | Narrative |
| Control Room Investments | LV Service (OHL) | HV Reinforcement (Greater than £4m) |
| Depot Investments | LV Poles | EHV Reinforcement (Greater than £4m) |
| Environmental Driven Investments | LV Main (UG Consac) | 132kV Reinforcement (Greater than £4m) |
| Bespoke Civils Investments | LV Main (UG Plastic) | Portfolio LV Reinforcement |
| Legal and Safety Investments (Excluding ESQCR Compliance) | LV Main (UG Paper) | Portfolio HV Reinforcement |
| Flood Mitigation Investments | Rising & Lateral Mains | Portfolio EHV Reinforcement |
| Batteries and LVAC Equipment | LV Service (UG) | Portfolio 132kV Reinforcement |
| LV UGB | LV Service associated with RLM | NLRE Major Projects (Individual NLRE works greater than £6m per site/circuit) |
| Pilot Wire Overhead | Cut Out (Metered) | LV Service Unlooping |

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| Atypicals | High Volume Portfolio Asset | Major project |
|---|--|----------------------|
| Pilot Wire Underground | 6.6/11kV OHL (Conventional Conductor) | |
| Cable Tunnel (DNO owned) | 6.6/11kV OHL (BLX or similar Conductor) | |
| Cable Bridge (DNO owned) | 20kV OHL (Conventional Conductor) | |
| Protection and Control Investments | 20kV OHL (BLX or similar Conductor) | |
| System Monitoring Investments (Not Including P&C) | 6.6/11kV Poles | |
| Worst Served Customers (WSC) | 20kV Poles | |
| Voltage Control Investments | 6.6/11kV UG Cable | |
| | 20kV UG Cable | |

Appendix 3 General EJP guidance

Need case guidance

NLRE

- A3.1 Our intention is to base our reviews for NLRE primarily on NARM data where available. For asset classes which are not in NARM presently, we welcome additional information to highlight the specific need case data the licensee has used.
- A3.2 Licensees should consider their approach to Portfolios with regards to the asset data and condition information provided. Where asset condition and HI status do not align, licensees may provide additional information to clarify any discrepancies.
- A3.3 While we accept that there can be a range of reasons for intervening on assets with low HI scores, we anticipate that most NLRE interventions will be on assets with higher HI scores. Where there are large divergences between the asset volumes proposed for interventions, we expect licensees to provide additional information to clarify their approaches and explain why assets with lower HI scores are being intervened on.

LRE

- A3.4 To aid our review we expect licensees to provide clear system data to highlight the need for intervention. With regards to scenario modelling, we welcome recognised industry wide scenarios being used to inform future requirements. These forecasts should not be used in isolation and historic divergences between as measured demand and historic scenarios should be highlighted and explained in the EJP.
- A3.5 Where licensees are proposing anticipatory investment, this should be clearly stated. Anticipatory investment should not be undertaken in a manner which the investment is to the sole benefit of pre-described customers.

Optioneering

Portfolio EJPs

- A3.6 For portfolio EJPs we expect licensees to consider their optioneering at a proportionate level. We anticipate that as intervention cost and complexity increases that optioneering will respond to be more detailed. For high volume assets we do not anticipate that the optioneering will be the same as for those assets designated as low volume assets. Narrative papers for High Volume EJPs will contain all optioneering for assets defined as High Volume.

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A3.7 We have provided the in the portfolios the opportunity for further columns to be added where appropriate this includes for optioneering where there are more bespoke requirements.

Major Projects

Site/Route Specific Bespoke Optioneering

A3.8 We expect licensees to consider a range of options for their site specific and route specific projects which are bespoke to that investment proposal. We do not expect generic repeated justification used.

A3.9 EJPs should provide site specific schematics and proposed designs for each credible option. Where licensees are using a standardised design, this should be clarified as a standardised design.

Portfolio Major Projects optioneering

A3.10 For portfolio major projects, such as Service Unlooping or HV secondary Reinforcement works, we expect licensees to provide clear optioneering at a portfolio level.

A3.11 Licensees should provide statistical analysis for these projects regarding optioneering and associated costs in a disaggregated manner. For example, in HV Secondary Reinforcement, licensees should provide different optioneering for OHL and Cable circuits with analysis as to the proportions of works in each category and costs associated. Similarly, for above ground Secondary substations and underground Secondary substations we would expect to see analysis into the proportions of these assets and then the optioneering options.

A3.12 A key component of each licensee's evidence based should be a detailed whole life cost assessment.

Lowest whole life cost solutions

A3.13 Our view is that licensees should prioritise optioneering based on solutions with the lowest whole life cost. This means that there may be occasions where the capital cost or delivery time is higher or longer than a lesser whole life cost solution. We see two broad categories where this is most often applicable.

Routes

A3.14 Our view is that OHLs and Cables are project specific decisions and that either option can be justified in a range of environments. Our view is that cables generally have higher capital and whole life costs than OHLs.

A3.15 Our general expectations are that in rural or semi-rural areas we would expect a higher proportion of credible options to be OHL based. Conversely in urban or suburban areas we would expect a higher proportion of credible options to be

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Cable based. However, we also recognise that in both cases different solutions may be justifiable.

A3.16 We expect that where OHLs are being replaced by Cables, licensees will provide clear justification for this which is route specific.

Substations

A3.17 Our view is that AIS and GIS designs are project specific decisions and both can be justified in a range of environments. Our view is that for higher voltages AIS generally has lower capital and whole life cost than GIS but that there may be other reasons why GIS solutions may be appropriate.

A3.18 Our general expectations are that in rural or semi-rural areas we would expect a higher proportion of credible options to be AIS based. Conversely in urban or suburban areas we would expect a higher proportion of credible options to be GIS based. However, we also recognise that in both cases different solutions may be justifiable.

A3.19 In either case we would expect a detailed whole life cost assessment to be made. This whole life cost assessment should consider the choice of IIG material.

Use of SF6

A3.20 Given the potential future policy direction and in line with our requirements to consider the environment as part of our investment appraisals we believe that SF6 alternatives should be considered as the initial option during optioneering.

A3.21 We note that there will be cost impacts in both Capex and Opex when moving towards SF6 alternative assets, namely those which are innovative designs. Where these alternatives are being utilised, we expect licensees to provide cost analysis which shows the incremental costs associated with the use the alternative technologies.

A3.22 We recognise that for specific applications and/or for legacy issues, SF6 may still be utilised in the proposed investments by licensees.

Additional portfolio EJP guidance**Overview**

A3.23 We recognise that licensees operate their organisations and investment systems differently and so while each Excel sheet includes the tabs required for submission, each licensee may, if they deem necessary, put tabs into separate excel sheets. This can be for standalone investments or can be combined where selected tabs are included in a submission.

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Examples of portfolio Excel sheet construction

Example 1: LV OHLs

A3.24 Licensees may choose to combine the tabs required for their LV OHL portfolio into one excel sheet. This could include the following tabs:

- LV supports
- LV conductor
- LV service

A3.25 The submitted Excel Sheet would then appear as below in the EJP submission:

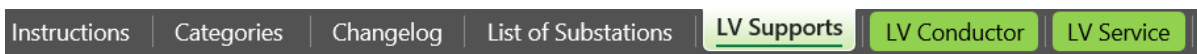


Figure 2: Example of LV OHLs portfolio EJP sheet navigation bar

Example 2: HV Substations

Licensees may choose to combine the tabs required for their HV Substation portfolio into one excel sheet. This could include the following tabs:

- HV switchgear
- HV transformers

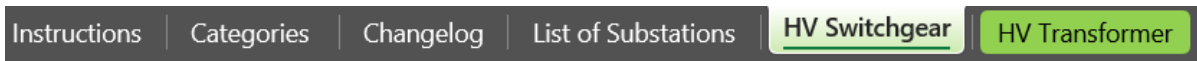


Figure 3: Example of HV substations portfolio EJP sheet navigation bar

Additional information in portfolio EJPs

A3.26 We welcome additional information in the Portfolio EJPs. To aid consistency in our review we have provided an additional section in the Template to enable licensees to provide additional information in a standardised manner.

A3.27 Figure 4: Colour coding table for portfolio EJPs set out below clarifies the colours to be used in the Low Volume Table (which is shared with the High Volume Table). This has had the Purple section added to enable additional information.

| | |
|-------------------------------|--|
| Colour Coding | |
| Plan References (Light Green) | To be populated for all assets planned for intervention in ED3. For referencing to; the Business Plan Data Template (BPDT) for specific Projects, Cost/Volume Codes, investment covered by a Major Project EJPs, or a Portfolio Narrative EJP for further narrative. |

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| | |
|--------------------------------------|---|
| Historic Funding (Dark Green) | To be populated for all assets held in asset register. Used to indicate any historic interventions (ED1 or ED2) on the asset or circuit. Where there has been historic intervention on an asset or circuit proposed for intervention in ED3, we expect the historic intervention to be outlined in the comment column of the ED3 Intervention section. |
| Asset and Condition Data (Orange) | To be populated for all assets held in asset register. Asset Sub-Categories for each table can be found in the "Categories" tab. Should licensees need to add more data, additional columns can be added, this colour coding will be used for Asset and Condition Data. Additional columns to be added to denote the health of non-CNAIM Asset Sub-Categories where licensee's method of scoring asset health does not align to HI1-5 as per CNAIM. |
| Investment Signals (Yellow) | To be used to indicate proposed ED3 and future price control interventions. Data provided should be current best view of likely intervention yearly to 2035 (aligning to single tRESP forecast), and price control period thereafter to the end of ED5 in 2043 (assuming 5-year price controls). For avoidance of doubt, no assets listed beyond ED3 are being assessed in this price control period. |
| ED3 Intervention (Blue) | To be populated for proposed interventions in ED3 only. Additional column(s) to be added to denote the health post intervention of non-CNAIM Asset Sub-Categories where licensee's method of scoring asset health does not align to HI1-5 as per CNAIM. |
| Additional information (Purple) | To be used where licensees seek to provide additional information. |

Figure 4: Colour coding table for portfolio EJPs

A3.28 Where a licensee seeks to use the additional information table, the cells which provide the description of the column will include the associated colour above. An example can be seen in Figure 5: Additional information formatting example.

| | | |
|------------------------|-------------------------|-----------|
| Additional information | | |
| Limited Site Access | Building/Housing Needed | Off Plumb |

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Figure 5: Additional information formatting example

A3.29 In Figure 5: Additional information formatting example the licensee has chosen to include two optioneering elements of additional information which are coloured Blue and then Asset Condition Data coloured Orange. The cells below this are formatted as per the other data entry cells.

A3.30 There are no expectations nor limitations to licensees providing additional information. Where additional information is provided, we expect this to have direct relevance to the proposals made by the licensee.