

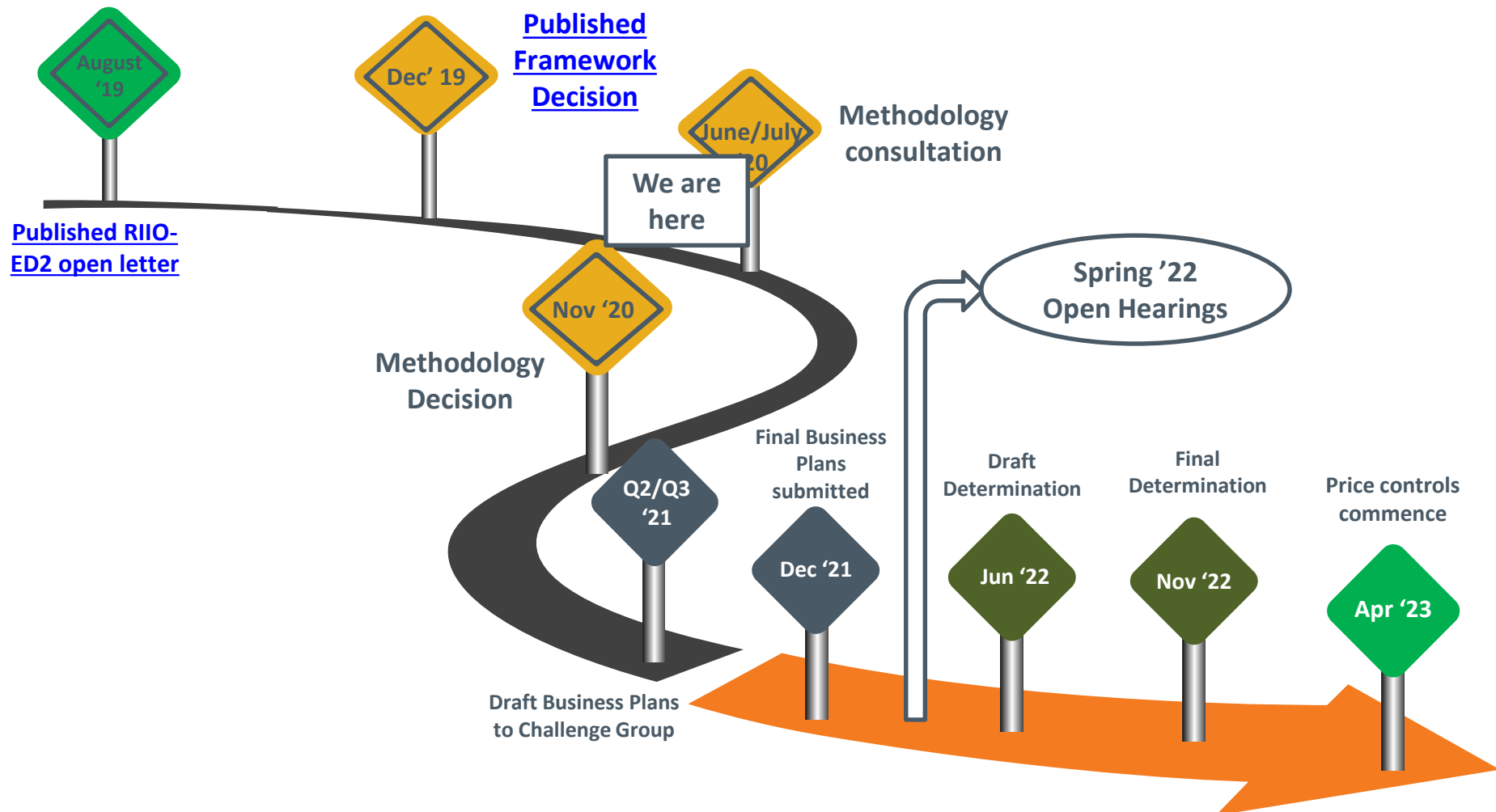
# **RIO-ED2**

## **Cost Assessment Working Group – Meeting 10**



**Electricity Distribution Team**  
23<sup>rd</sup> June 2020

- Welcome and Introductions: 10:00-10:15
- Review of cost assessment working group discussions / position: 10:15-10:30
- SPEN presentation on Uncertainty Mechanisms for RIIO-ED2: 10:30-11:00
- Forecasting and Scenarios: 11:00-11:30
- Incremental Costs and interaction with BPDs: 11:30-12:15
- Engineering Justification Papers (EJPs) in RIIO-ED2: 12:15-12:45
- Actions, Next Steps, and AOB: 12:45-13:00



## **Review of Cost Assessment Working Group / Discussion**

### Key components:

Approach to  
econometric analysis

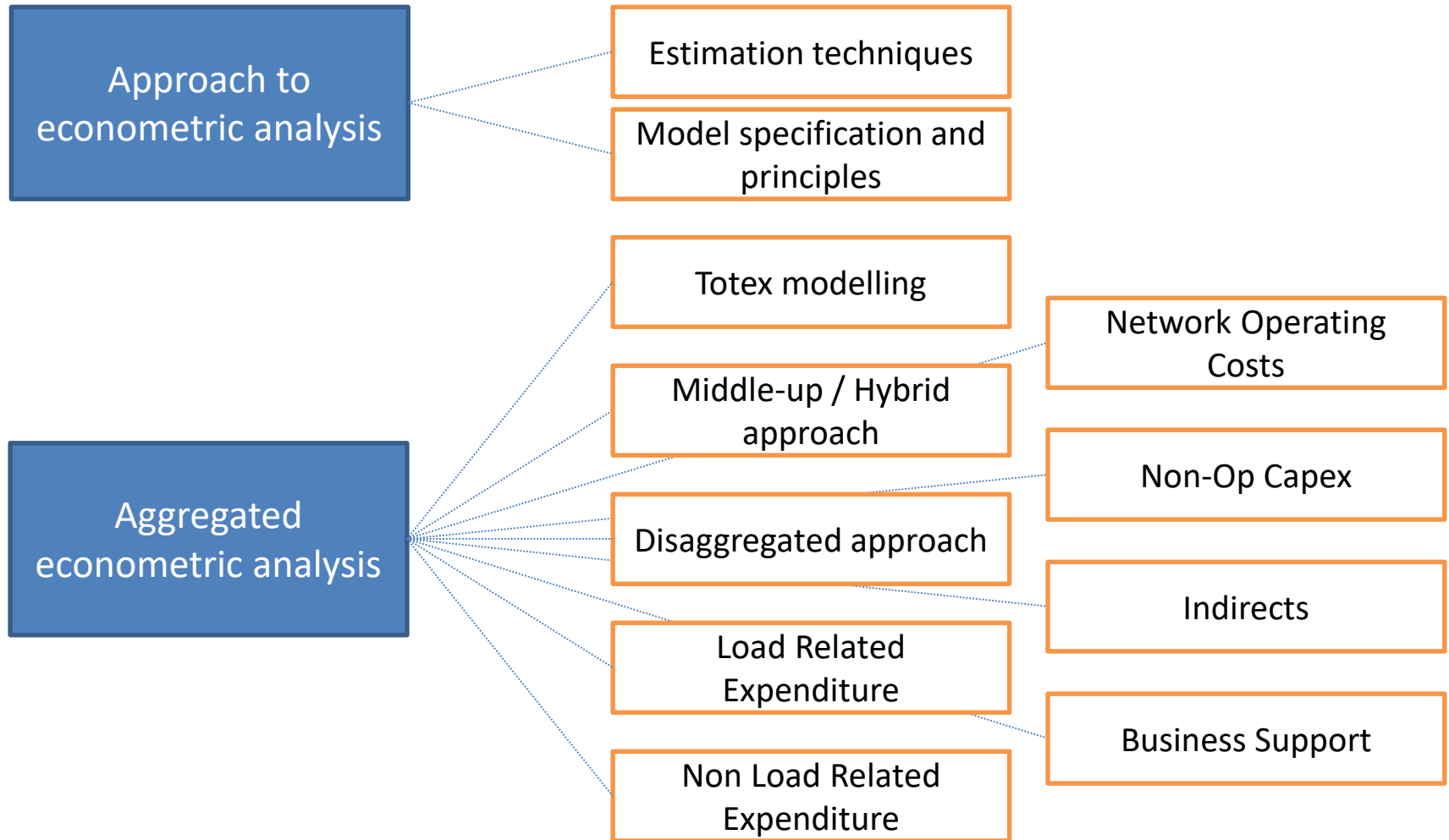
Aggregated  
econometric analysis

Regional and  
Company Specific  
Factors

RPEs and Ongoing  
Efficiency

Data Assurance and  
Compliance

Proposals for  
Business Plans



We will also discuss:

- Forecasting, including how we are treating regional variances, DFES;
- Interaction with EJPs and CBAs, including the role of flexibility; and
- Treatment of proposals for strategic investment.

## **SPEN presentation on Uncertainty Mechanisms**

# Forecasting and Scenarios

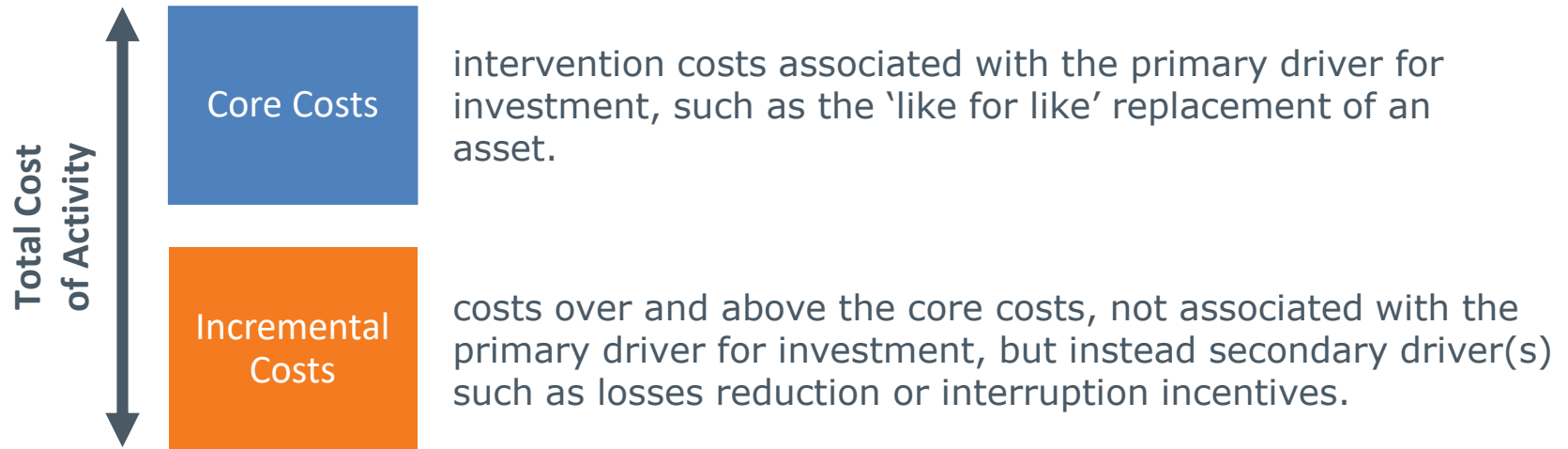


- We recognise the challenges raised against our request for early forecasts, pre-Business Plan submission.
- We will continue to work with stakeholders on the development of this proposal.
- See '2020 ED2 Forecast.xlsx' and '2020 ED2 Forecasting Reporting Commentary Final' attached in meeting invite.

		Load related												
		Connections within the price control	Reinforcement (Primary Network)	Reinforcement (Secondary Network)	Fault Level Reinforcement	New Transmission Capacity Charges	Total load related costs	Diversions (Excluding Rail Electrification)	Diversions (Rail Electrification)	Asset Replacement	Refurbishment no SDI	Refurbishment SDI	Civil Works Condition Driven	Operational IT and telecoms
		£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m	£'m
<b>Total Net Costs after Non Price Control allocation</b>														
RIIO-ED1	2016						-							
	2017						-							
	2018						-							
	2019						-							
	2020						-							
	2021						-							
	2022						-							
Median ED1		-	-	-	-	-	-	-	-	-	-	-	-	-
RIIO-ED2	Est. difference from ED1 median annual spend													
RIIO-ED2	Est. difference driven by workload													

## **Incremental costs and interaction with BPDs**

- At CAWG-8 we discussed the treatment of incremental costs in RIIO-ED2.



- We presented three options for dealing with these costs:
  1. Split core and incremental costs out within the RIGs tables.
  2. Adjust for these costs in our cost modelling, like a regional or company specific factor.
  3. If all DNOs are carrying out similar activities around climate change adaptation, upsizing of assets etc. do we need to consider core and incremental costs separately.
- ... and asked stakeholders to respond to the following question:

***What is the scale or the materiality of this issue in ED2, and in what specific areas (demand and capacity, losses, then elements of resilience coming in?)***

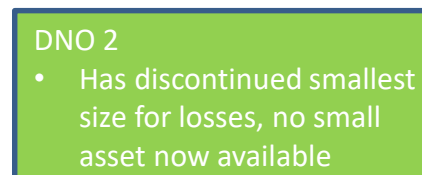
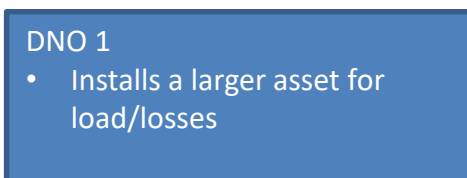
- ENWLs proposal to deal with this challenge is to retain the prime cost and asset additions/disposals against the original driver but send the additional costs to the secondary table together with any benefit volumes as reportable.
- Alternative approaches are possible such as a memo table on the prime table and/or identified in an overall memo table.
- The important point is to enable appropriate cost assessment of these opportunities for secondary benefits and of the work classed against the prime driver.
- The table below lists areas for potential incremental investment to be undertaken as efficient investment, when supported by a CBA, together with proposed treatment of the incremental investment. The costs and asset volumes of the standard solution will remain on the relevant table depending on the prime driver for the work.

Incremental opportunity	Cost area and type of increment
Upsizing for capacity reasons (cable & transformer sizes)	Incremental cost for installing larger capacity asset to be reported on reinforcement table (CV1 or 2 as appropriate) together with the resulting MVA capacity
Upsizing/increase specification for losses reasons (cable & transformer sizes)	Incremental cost for a higher specification 'Eco' transformer or larger cross section cables to be reported on losses table (CV21) together with volumes of losses saved (when moved from table E4)
Scope changes for climate change considerations – e.g. taller poles, increased ratings	Incremental costs to be reported on environmental table (CV22)

Incremental opportunity	Cost area and type of increment
Incremental upsizing of services in readiness for LCTs and growth in demand	Incremental costs to be reported on the secondary network reinforcement table (CV2) together with the resulting MVA capacity
Incremental costs of installing larger link boxes (i.e. more ways) for capacity reasons and support of Smart Street	Incremental costs to be reported on the secondary network reinforcement table (CV2) together with the resulting MVA capacity
Incremental costs of installing ABC and HV covered conductor (stronger poles too?) for QoS or safety as part of other work	Incremental costs to be reported on the QoS table (CV15)
When replacing PM plant, consider increasing spec to reclosers for QoS benefits	Incremental costs to be reported on the QoS table (CV15)
Additional functionality to enable smarter networks (e.g. OLTC equipment, the prep work that is required for CLASS sites etc.)	Incremental costs to be reported on the secondary network reinforcement table (CV2) together with the resulting MVA capacity
Additional arrangements for network operability (e.g. adding local protection)	Incremental costs to be reported on the QoS table (CV15)
Battery capacity – for all battery changes, incremental upgrade to higher spec Black Start resilience batteries	Incremental costs to be reported on the black start table (CV12) with volumes of the number of sites for which this additional resilience has been achieved
Specifying equipment with integral monitoring capabilities	Incremental costs to be reported on reinforcement &/or QoS tables.
Any other incidental effects that change the scope (e.g. low noise units, additional civils etc.)	Incremental costs to be reported on environmental table (CV22) with volumes of noise pollution mitigation.

- In terms of scope, WPD considers incremental costs to be relevant in the following areas:
  - Losses
  - Activities where larger assets are installed under 'Touch it once' principles
- There are some other areas where the concept of incremental costs could be considered, although maybe somewhat different to the principles focussed on in the last CAWG:
  - DSO – there may be some costs that will be incurred that could be considered incremental to the DNO activity, as not all costs may be entirely new costs.
  - Street works (permits and lane rental) – could these costs be considered an incremental cost? These are incremental to the core activity that are undertaken, but unlike other examples of incremental cost discussed, these are not necessarily controllable by the DNO. Policy varies across Highway Authorities and across country (i.e. England vs Wales & Scotland). This leads to differing impacts which will have to be considered across any potential cost assessment approach.
- Incremental costs may have an impact wherever an asset is installed and this will include more than just asset replacement; it will impact numerous different activities. WPD considers that incremental costs will predominantly relate to installing a larger sized asset, but could also relate to doing additional activity.
- It is easier to provide values for incremental costs where additional activity (such as the installation of additional assets) is carried out. It is far more difficult to separate out incremental costs of installing larger assets. There is no additional activity to capture. The costs are predominantly based around different material costs (i.e. a larger unit costs more than a smaller unit).

- Running option 2 (adjusting for incremental costs) is only possible if Ofgem collate information split by core and incremental i.e. Ofgem would need to run option 1 before it can do option 2.
- The relevancy of option 3 (ignoring incremental costs because all DNOs are doing the same) will only be known upon receipt of business plans by Ofgem. Individual DNOs at this time are not in a position to comment on whether a common approach to climate change or upsizing assets, as examples, will be undertaken at an industry level, given these undertakings are optional.
- WPD proposes that a variation on option 1 be considered (**call it option 1.b**):
  - that Ofgem collate information on total costs in the main part of the BPDT with a supporting memo table(s) that sets out what percentage of that total cost is incremental, e.g. X% due to 'touch it once' principles.
  - It is important that the main part of the pack reports the total costs as this reflects the work the DNO is forecasting to undertake in the period and also to be consistent with the other tables.
  - Memo table(s) bring the advantage of not having total costs split across the two elements, core and incremental, in the main part of the pack; whilst maintaining the ability for Ofgem to calculate both elements and run benchmarking as they see appropriate.
  - Furthermore the memo table of increments would remove/reduce the need for engineering justification papers to explain cost movements or the make-up of costs where this is attributable to 'increments'.
  - For example, WPD could see it appropriate for a DNO to prepare a single 'touch it once' EJP that sets out its approach to reporting costs where these principles have been applied. Ofgem can consult the EJP alongside the memo table(s), as opposed to the alternative of digesting multiple similar EJPs for each asset replacement activity, reinforcement activity, etc. each with an explanation of where the 'touch it once' principle has been used in the absence of an increments memo table where otherwise the main part of the BPDT may provide insufficient information.



What (if  
anything) gets  
reported as  
incremental?

What is the  
counter-factual?



## **Engineering Justification Papers (EJPs) in RIIIO-ED2**

The objective of this work is to clarify the role of Engineering Justification Papers (EJPs) in RIIO ED2

- Establish Principles for EJP Governance
  - Clarify Relationship with enhanced CBA
  - Clarify Relationship with NARMS
  - Establish EJP Need Flowchart
  - Clarify the role of data and evidence (Next Session)
- 
- We have previously produced guidance documents for both RIIO ET and GT/D EJPs. [Link here](#)
  - The high level principles for EJP governance have been adapted based on the feedback to the CAWG. Principles for adoption are highlighted in yellow
  - We are seeking agreement with the principles in order to clarify the engineering guidance and the associated submission requirements in support of the RIIO ED2 Business Plan
  - The ET/GD EJP guidance documents will be updated to include the principles agreed and the interaction with NARM and CBAs. It will formalise any agreed materiality thresholds and triggers for EJPs.
  - Our view is that enhanced guidance will focus the engineering submission and add significant value to overall business plan submission.

*EJPs are required for high materiality investment programs. They are required for scrutiny and challenge of business plan proposals in conjunction with other appropriate means of justification for investment decisions. They aid transparency on which risks, costs and benefits have been considered and provide detail on assumptions, inputs and rationale for decisions, calculations and results. They are essential where investment proposals and volumes are significantly different from RIIO ED1.*

- From the RIIO T2 challenge group, consultants and internal Ofgem experience the general feedback is that CBAs and NARMS alone do not convey enough information allow stakeholders to understand the proposals.
- The EJPs are complimentary to the CBA, the EJP provides
  - Explanatory narratives, and supporting background analyses
  - the rationale for discounting options,
  - optional considered but not taken forward to full CBA,
  - detail how the costs were calculated including any specific factors driving costs,
  - Where there is no CBA the EJP will be the prime evidence in support of investment proposals.
  - High level explanations to portfolios of CBAs where the supporting factors are common.
- For GD2 companies set their own materiality threshold for EJPs, in cash terms (ie £500k). Options based on % of total category expenditure or absolute value (£) are available (covered in future slides)
- We are seeking feedback the suitability of a of material threshold for spend categories and or asset categories (see future slides) but our updated view is that materiality thresholds for EJPs will focus the submission, and this is more appropriate than a fixed structure.

EJPs should not duplicate existing information and the EJP submissions should be concise with EJPs providing additional information, to support the needs cases, costs & project timings where this may not be immediately apparent from consulting the business plan, BPDTs or CBA NARMS documentation alone.

- In the interests of minimising duplication, group level papers covering the consistent application of company policies, processes, systems, and governance should be referenced in the BP or EJPs.
- The EJPs should align to the spend areas identified in the BDPT, where BDPT entries contain multiple schemes at a portfolio level the EJPS should explain the disaggregated portfolio.
- The EJPs can be used to provide additional justification for Price Control Deliverables where the primary driver is engineering led.
- We expect DNOs to explain the structure of their proposal in an overarching document, the EJPs submission should not be an excessive burden on licences.
- **The final structure of the EJP's will be at the discretion of the DNOs, we will not be prescriptive, but we consider referencing and aggregation is key to a concise submission.**

1) We expect that EJPs will be required in the following areas, subject to a materiality threshold;

- High Value Projects
- Major reinforcement projects not covered by Capacity mechanisms (eg 'Strategic' reinforcement, n-2 schemes etc.)
- Reinforcement programmes not covered by Capacity mechanisms (eg service unlooping?)
- Fault Level
- Specific Legal & Safety programmes
- Rising & Lateral Mains
- Protection and RTUs
- Civils

2) We expect that EJPs will be required in the following areas, subject to a materiality threshold or specified triggers

- NARMs replacement volumes (limited to High Value Projects, Volume Differentials from RIIO ED1, additional drivers)
- Non-NARMs replacement & refurbishment

3) Areas where EJPs are supporting evidence and may be required in the following areas subject to a materiality threshold;

- Vegetation Management
- New programmes proposed by DNOs eg poorly-served customers, energy efficiency
- Resilience, eg Flood protection, Black Start
- Cyber resilience
- Operational IT
- Telecoms
- Inspections, Maintenance, Faults, ONIs (Any Step Changes due to faults)
- Losses
- Innovation and DSO Transition
- Core CAI for direct activity

4) Areas where an EJP may required, only if materiality threshold has been exceed and there is significant engineering led investment;

- Diversions
- Other Legal & Safety programmes
- Overhead Clearances
- Undergrounding

NARM is a comparative measure of network investment efficiency and allows comparison across asset categories. It is not on its own sufficient justification of efficient expenditure, on a particular project or asset class. We expect a toolbox approach in assessing and justifying DNOs investment decisions.

- NARMS will identify assets with high overall risk scores that are candidates for intervention to reduce that risk, but NARMS does not detail what form that intervention may take, or why the proposed investment is economic and efficient.
- From GD2 experience has shown that additional system, models and in-house decision support tools which overlay NARMS have been used to determine volumes. We are expecting that similar processes and tools to be adopted in ED2, this requires additional narrative explanations.
- The EJPs do not undermine the NARMS processes. The outputs targets as determined by NARMS will be fixed but the allowance is fungible. DNO's can reallocate funding to meet new or emerging needs, and the outputs will be considered met as long as an equivalent risk reduction is achieved.
- NARMS development and reporting arrangements will continue, this development will allow us to track performance and substitutions as the price control progresses.

For NARMS schemes, we are aiming to maximise transparency, ensure that there is a robust internal challenge process and that all volumes proposed are deliverable.

- For asset captured by NARM we consider that there should be a **high level paper, BP chapter or annex**, this should be linked to **the price control outputs** and should cover the notional breakdown of the targets, RIIO ED1 track records in previous price controls and cover the deliverability of the proposed volumes in the price control period.
- Where DNO considers that NARMS data is sufficient, make the case as to why this supports the investment decision, there is no need to replicate the data in EJPs but clear referencing to NARMS submissions will be required for traceability. This needs sufficient clarity to be clear to wider audience (challenge group etc).
- **For high value asset replacement schemes covered and justified by NARMS** we believe there are valuable transparency gains in separating out large investment proposals. Example would be offline build of 132 GIS substation. **This may require a separate materiality threshold (£ or % TBC).**
- Additional EJP for NARMS replacement & refurbishment (**Optional Triggers TBD**)
  1. NARMS investment volumes are not supported by CBA due to secondary drivers.
  2. Additional models and in-house decision support tools (DST) which overlay NARMS have been used to determine volumes.
  3. There are significant non obvious step changes in asset volumes from previous price control periods (% increase units).
- Named assets and routes enhance confidence that the work requested is required and should be provided where reasonable to do so, and the assets are known. If the case is based on degradation projections, the basis of this projection should be clear.



EJPs should provide clarity on the decision making process. The text does not need to explain basic concepts, the purpose is to understand the decision making process with the outcomes captured in the BPDs. EJPs should have a supporting narrative on data. This should detail what data is held, how it has been used and how the data and supporting analysis supports the investment decision.

The narrative should provide the following

- What has changed and why are we doing this work and what happens if we do nothing?
- What is the outcome that we want to achieve?
- What changes if the spend has been successful?
- What is our internal challenge process, is this the correct answer ?
- What uncertainties have we considered?
- A clearly defined scope and output, the boundaries of the spend must be clear *ie the spend will only replace/repair/renovate the protection relays at our sites and does not include costs to remediate associated cabinets or secondary wiring etc.*
- Explanatory notes on the CBA (See Slide 3)

The evidence could include

- references to the outputs of other industry standard assessment methodologies (ie FES)
- references to legalisation or standards.
- asset condition data.
- degradation projections.
- power flow assessments.

## **Actions, next steps, AOB**

- The next meeting date for the CAWG is tbc.
- We will circulate notes and an actions log from this meeting.