

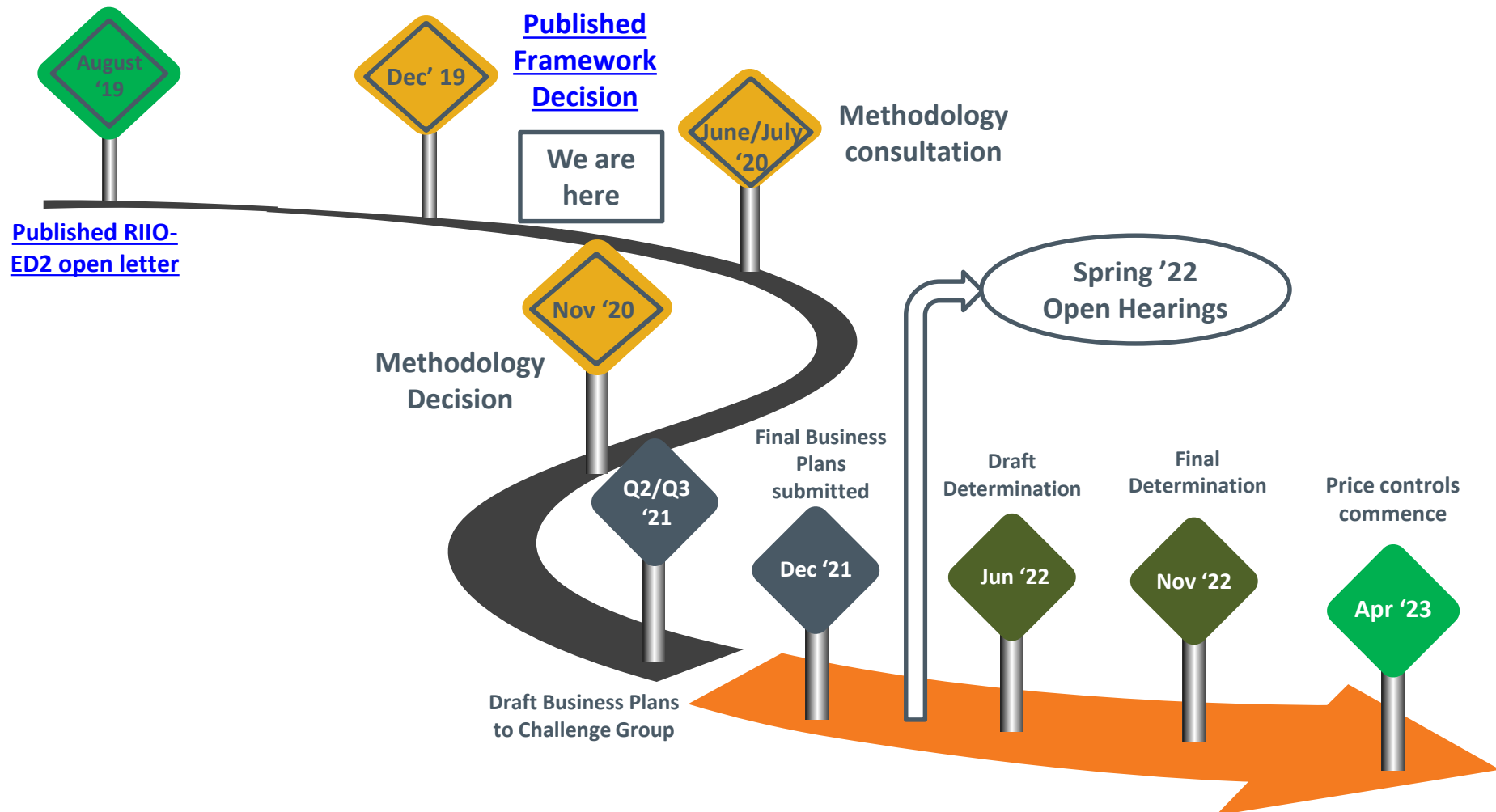
RIO-ED2

Cost Assessment Working Group – Meeting 7



Electricity Distribution Team
28th April 2020

- Welcome and Introductions: 10:00-10:15
- Review of DNO responses to ED2 Uncertainty Mechanisms: 10:15-10:45
- Bespoke Uncertainty Mechanisms: 10:45-11:15
- Ofgem presentation on lessons learnt from other sectors on the use of Engineering Justification Papers (EJPs) and key principles for ED2: 11:15-12:00
- Cost Benefit Analysis (CBA): 12:00-12:30
- WPD CBAs: 12:30-12:45
- Lunch: 12:45-13:15
- Scenarios and Forecasting: 13:15-13:30
- Discussion item: Future WG work plan and SSMC: 13:30-13:45
- Actions, Next Steps, and AOB: 13:45-14:00



- We propose to hold a WG session approximately every three weeks with feedback sessions to make sure all ground is covered and prioritised appropriately.
- We plan to run sessions in the Glasgow and London Ofgem offices.
- Depending on room availability, we may need to restrict the number of representatives that each member organisation sends to meetings of the Group

Date	Location	Summary	Items to cover
14 January 20	London	Introductory session	ToR, Priorities
11-Feb-20	Glasgow	Key principles	
25-Feb-20	London	Totex, BPI & interpolation, Regional and special factors, How it all fits together	Drivers, duration periods, role of history vs forecasts Review totex models
13-Mar-20	London	Role of disagg modelling	Review of ED1 and GD2 disagg models PR19 and middle model reviews
27-Mar-20	London	Productivity, frontier shift, indexation, RPEs	
8-Apr-20	London	Uncertainty Mechanisms How it all fits together (again), Scenarios and Forecasting	
28-Apr-20	Glasgow	Uncertainty Mechanisms EJP and CBA development	

Review of DNO responses on ED2 Uncertainty Mechanisms

- At our last working group (CAWG-6), NPG gave a presentation on ED2 Uncertainty Mechanisms.
- An action was set for DNOs to respond to the four questions posed on the current list of ED1 Uncertainty Mechanisms.
 1. Is this a complete list of existing uncertainty mechanisms?
 2. Are there any other areas of uncertainty that you think require a mechanism?
 3. Would licensees reform or remove any of the existing mechanisms?
 4. How should mechanisms be designed to address any new areas of uncertainty.

Areas of uncertainty The first step is to identify potential areas of uncertainty – with the obvious starting point being mechanisms already on the table

Cost area ^[1]	Status
Load related expenditure & net to gross ratio	ED1 reopener
Licence fees, exit charges ^[2] , business rates	ED1 pass through
High value projects	ED1 reopener
Critical site security	ED1 reopener
Street works costs	ED1 reopener
Rail electrification	ED1 reopener
Link boxes	ED1 reopener
Smart meter interventions	ED1 volume driver
DCC fixed costs	ED1 pass through
Smart meter IT	ED1 pass through with potential review
General inflation	ED1 indexation mechanism
Real price effects	Indexation proposed for GD2 and T2
Cyber costs	Proposed reopener at GD2 and T2
Cross sector co-ordination	Proposed reopener at GD2 and T2

1. Is this a complete list of existing uncertainty mechanisms?
2. Are there any other areas of uncertainty think require a mechanism?
3. Would licensees reform or remove any of the existing mechanisms?
4. How should mechanisms be designed to address any new areas of uncertainty

^[1] Excludes licensee specific mechanisms
^[2] Covers exit charges at pre-energised exit points

14

Bespoke Uncertainty Mechanisms

'As part of their Business Plans, companies can propose, with suitable justification, the inclusion of network company-designed uncertainty mechanisms.'

RIIO-2 Business Plan Guidance

Examples of information we expect for bespoke UM submissions:

- Risk/ issue addressed by the mechanism
- Who owns the risk?
- Materiality
- Frequency and probability of the issue?
- Description of the mechanism
- Benefits for the proposal
- Drawbacks and mitigation
- Value for money justification
- Treatment in BPDTs

Other considerations:

- Is the mechanism DNO specific, or is the proposal common to all DNOs?
- Materiality of the bespoke UM submission:
 - Materiality threshold for the mechanisms to be triggered should be expressed as % of allowed revenue
 - Ofgem will not prescribe a specific methodology for quantifying materiality

Engagement

- **Engagement between DNOs** for joint/ common submissions – this will avoid multiple submissions for similar mechanisms across DNOs.

Baseline vs uncertainty

- Key to establish a **consistent base case** i.e. the boundary between baseline and uncertainty
 - Link with BPI: need for submitted totex in BP to reflect baseline costs accurately
- Need to be able to clearly **map what costs are baseline/ uncertainty** – if the above point not made correctly, we might need to reallocate costs for consistency across DNOs

Materiality

- Setting a **clear materiality threshold** to limit very low materiality submission
- Develop **categories** of bespoke UMs for assessment – some lower materiality individual submissions could be regrouped into wider reopeners
 - ET/GT working on categories for Draft Decisions, which they can share once published for discussion in ED2

Simplicity/ Clarity

- Simple/ and **clear description** of uncertainty mechanism – shows real understanding of the risks and costs
- Clear **signposting of costs** relevant to UM submission in BPDs (but also signposting in EJPs etc.) – this will facilitate navigation across documents and will help develop a wider BP narrative
- We could use a **template for submission** in ED2 - to ensure that submissions do not miss key information for the assessment
 - Could develop ED2-specific template, or might have ready-made ones in other sectors' DD
 - Example: Ofwat's template for bespoke PCDs (see [Anglian Water's PR19 Annex](#))

Other

- Cross-check whether any proposed **bespoke UMs align with existing common UMs** to avoid duplication in submissions

Engineering Justification Papers (EJPs)

- In our Framework Decision, in relation to NARMs, we noted the use of 'engineering judgement' as part of a **toolbox approach** in assessing and justifying DNOs investment decisions.
- In the RIIO-2 tools for cost assessment document, under cost assessment techniques, we noted the following:
 - Needs case assessment will focus on considering the rationale for the proposed scheme/project (both technical and financial cost-benefit), the options considered for meeting the functional requirements of the project and the timing of the work. The information will draw on the supplied **engineering justification** and cost benefit analysis (CBA) documentation.
- In the Business Plan Guidance document, in relation to Cost benefit analysis (CBA) and engineering justifications, we noted the following:
 - Both the CBA and engineering justifications are **important decision support tools** as part of the **justification for investment needs in RIIO-2**.

- In demonstrating due diligence has been followed in the appraisal of potential investment decisions by companies, CBAs and engineering justifications should:
 - be **consistent with published guidance** and recognised best practice, for example the Green book and the Spackman discounting approach.
 - demonstrate **evidence of structured options development**, including consideration of whole system options and non-network options, where applicable, against a baseline scenario which involves the minimum level of intervention that would be required to remain compliant with all applicable regulation.
 - **demonstrate the value of projects across different scenarios**, and include an explicit consideration of (quasi) option values of deferring the investment; this might include the consideration of the outputs of jointly developed GDN/DNO Local Area Energy Plans (LAEPs).
 - be **clearly linked to the Business Plan**, where applicable, with sensitivity to changes in input parameters assessed, for example future energy scenarios
 - act as **a robust decision support tool**, open to scrutiny and challenge in conjunction with other appropriate means of justification for investment decisions.
 - be **transparent about which risks, costs and benefits** have neither been considered nor monetised as part of the analysis.
 - be **transparent about assumptions, inputs and rationale** for decisions, calculations and results.

1. EJPs submitted – Volume and Content:

- a) EJP guidance gave licensees a degree of freedom on EJPs, which led to significant variance in approach, in terms of volume and structure of submitted EJPs. Licensee EJP submissions ranged from ~40 to ~180.
- b) EJP structure and construction was inconsistent and limited comparative analysis between licensees.
- c) Scale of investment was not always reflected by the number or content of EJPs submitted.
- d) EJPs with limited detail required significant volumes of supplementary questions (SQs) in order to carry out robust assessment.

2. Use of Data

- a) Where data was provided, it was typically in word or PDF format which limited analysis.
- b) Where data was not provided to support methods used to highlight intervention optioneering, this resulted in significant volume of SQs.

3. Supplementary Questions (SQs)

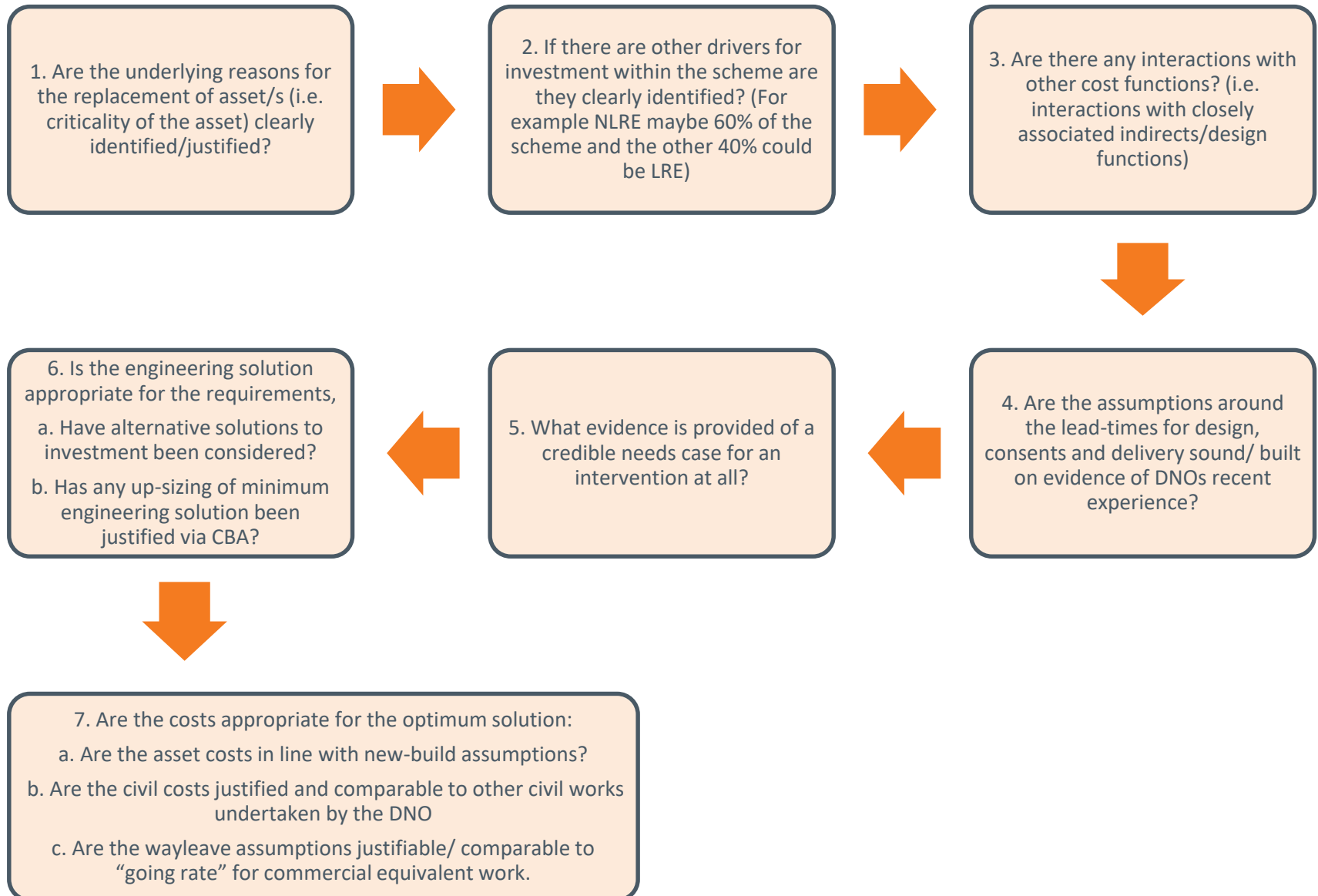
- a) Significant burden for both licensees and Ofgem.

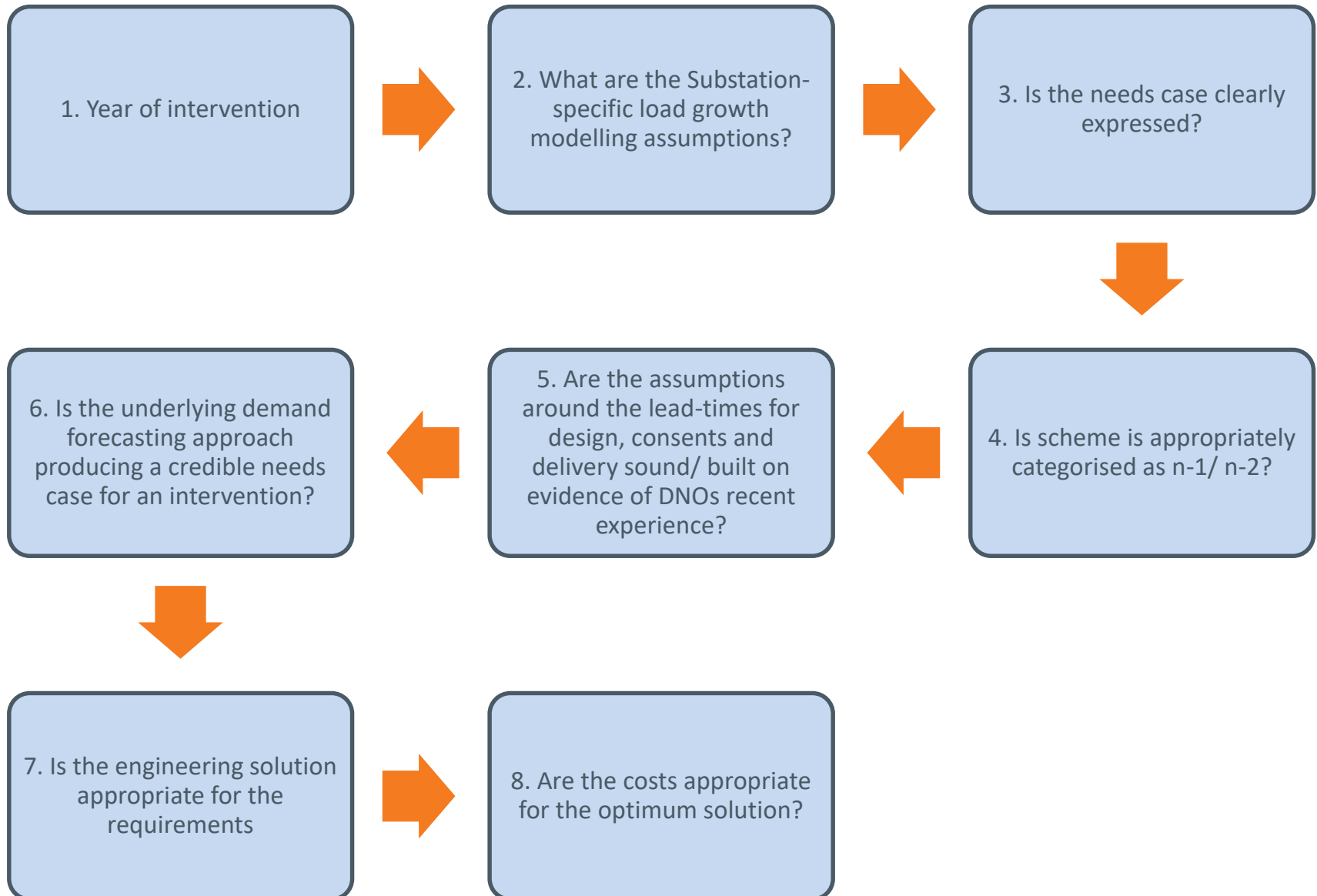
Some areas to consider in the context of ED2:

- EJP's should be structured in order to minimise the complexity of assessment and to allow comparison of the DNO investment decisions and plans. Further guidance may be required on:
 - Volumes of EJPs required – core set of EJPs which are consistent across all licensees. e.g. Grid Tx, Grid CBs, Grid Other Substation, Grid OHLs, Grid Cables, Grid Other, EHV TX, EHV CB etc.
 - Content and structure of EJPs.
 - Format of supporting data.
 - Volume of supporting data required for the types of projects and schemes that we expect to see in ED2.

Some additional views from Engineering Hub on EJPs:

- Volume based schemes. The expectation is that for a number of asset classes, the EJPs will make the case for justified volumes underpinned by agreed methods (NARMS/CNAIM etc.) or through bespoke methods. Where this is the case we would expect the following:
 - Why the chosen methodology is fit for purpose, including sample calculations.
 - Suitability of inputs, completeness of data and timeliness.
 - Summary of outputs and a comparison to ED1.
 - Deliverability, a clear explanation of why this volume can be delivered (think wood poles).
 - Protection of consumers from errors in data, method or outputs (what are you proposing if you get it wrong).
 - Value of Money and efficiencies (CBA, DST, etc.).
- Large Bespoke Projects
 - This should be similar to the EJP's used in T2, considering key drivers, optioneering, CBAs etc.
- Use of Data
 - For each EJP (volume or bespoke) a strong supporting narrative on data is required.
 - This should detail what data is held, how it has been used and how the data and supporting analysis supports the investment decision.
- Interaction between Load and Non-Load Related Expenditure (LRE and NLRE)
 - Where there is a strong interaction between LRE and NLRE the impact of each driver should be clear and unambiguous.
 - LRE should be linked back to common scenarios, output should be strongly challenged/supported.





CBAs

CBAs were used extensively in RIIO ED1 to support a significant number of investment proposals.

A common model was used across all DNOs for consistency:

- Based on guidance from “HM Treasury: Green Book”.
- NPV analysed over 4 main time periods 16, 24, 32 and 45 years.
- Short list of options created from engineering judgement and past experience.
- Likelihood of outcomes given equal weighting.
- All options evaluated against the baseline option which represents the “Do Minimum” approach.
- NPVs evaluated and used to inform investment decision.

Key Principles



In our ED2 Framework Decision:

- On **Maintaining a safe and resilient network**, we acknowledged the use of cost benefit analysis (CBAs) as part of a **toolbox approach** used to assess and justify DNOs' investment decisions and strategies.
- On **Delivering an environmentally sustainable network**, many stakeholders highlighted the need for **enhanced CBAs**, which take account of the true cost of carbon and the societal value of the options under consideration.
- On **Enabling whole system solutions**, some stakeholders thought a standard CBA model should be developed that included societal benefits, such as disruption costs, reduced transport costs, decarbonisation benefits etc. Industry stakeholders generally supported an explicit justification for whole system projects through an Ofgem-approved CBA.
- On **Competition**, some DNOs felt there needed to be rigorous CBAs carried out to establish the potential benefit of running a competition prior to it being instigated.
- On **supporting decarbonisation goals**, it was suggested factoring in carbon savings to CBAs would be important tools and evidence.

In the **Business Plan Guidance** document, in relation to Cost benefit analysis (CBA), and in addition to what was discussed in Slides 11 and 12:

- **Companies should apply proportionality** when submitting whole system CBA. For example, smaller or simple projects following the standard CBA template, whereas larger or more complex projects requiring bespoke analytical approaches
- Business Plans must clearly justify the need for new investment, including the **different options considered for meeting future network requirements**, including the cost of “doing nothing” and of “deferral” options and the associated cost benefit analysis (CBA).
- We will use the data collected from the draft BPDTs and supporting documents (including engineering justifications and CBAs) to test whether we have all the information we require for our cost assessment and to enable us to further develop our approach to **assessing efficient costs**.

On the 25th March, ENWL hosted a DNO workshop to discuss CBAs for ED2.

ENWL/ENA CBA problem statement:

To ensure DNOs take a proactive role in facilitating the transition to a low carbon energy system, many stakeholders highlighted (as part of 'Open Letter' responses) the need for enhanced CBAs.

The current model for ED1 has limitations which include; the inability to flex factors through time as well as around a fixed value, a narrow selection of societal values under consideration as well as environmental benefits including the 'true cost of carbon', and difficulties around scenarios/ uncertainty. These limitations impact on a range of areas such as; resilience, customer vulnerability and worst-served customers.

Topics discussed:

Ofgem
requirements for
SSM and timeline

Brief Background to
ED1

Open networks -
WS1a Flexible
Services and WS4
Whole System CBA

Evolution of CBA for
ED2; including VOLL
and ROCBA

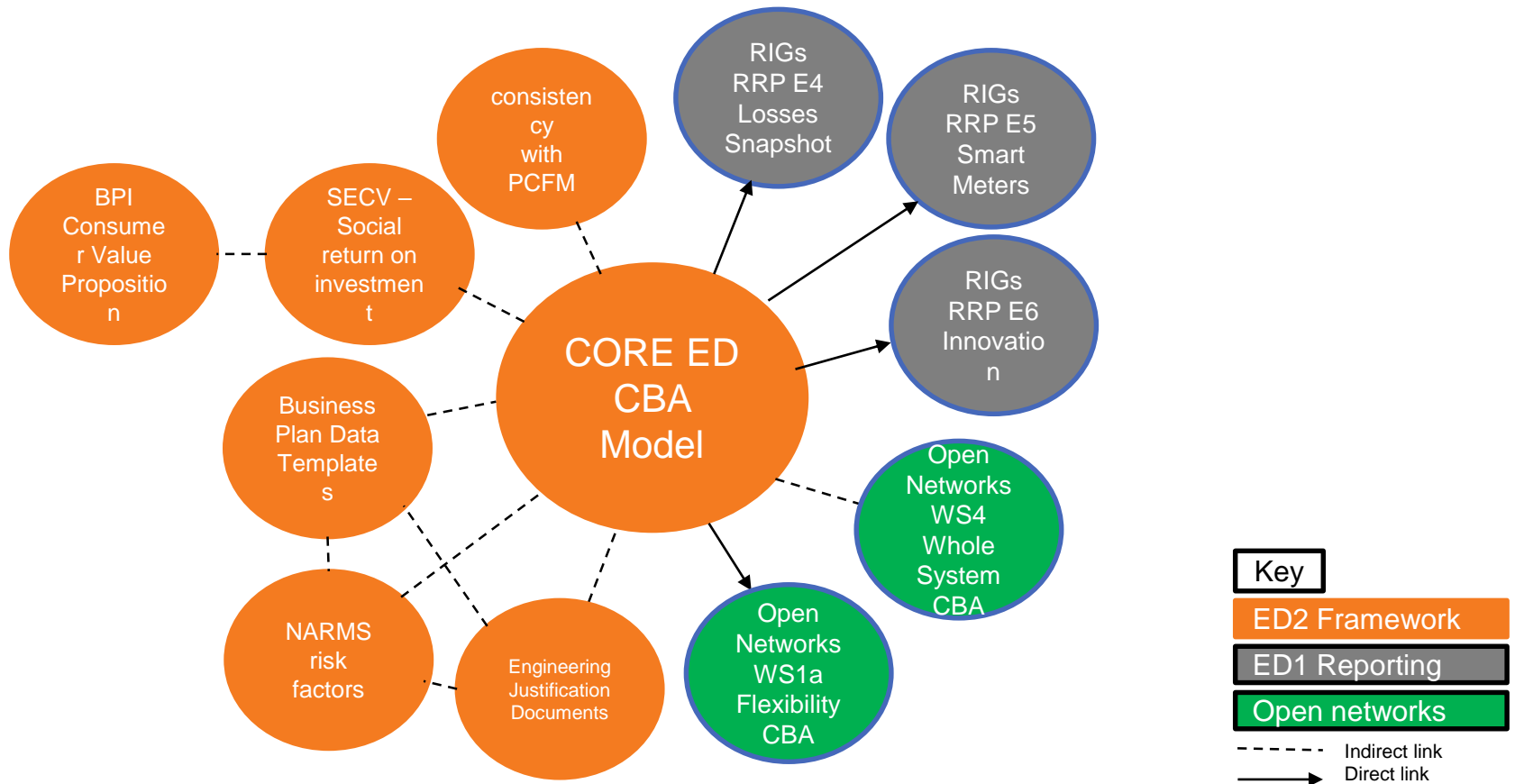
Cost Benefit
Analysis Review

CBA modelling;
possible updates to
the RIIO ED1 CBA
model

Key action for CAWG:

- Consider the role of CBAs in the wider investment justification process alongside other aspects of the justification 'toolkit'

CBA Model Interdependencies



Scenarios and Forecasting

From RIIO-ED2 Framework Decision:

- The **forecasts of growth in demand and supply** that DNOs use to establish the need for future network capacity **play a crucial role in the price control**.
- Having **consistency in these forecasts** is also important as it **allows us to benchmark companies** against each other which helps to root out inefficient costs.
- While **the energy system is in transition** it is hard to predict exactly how demand and supply levels will change in the future and so we **expect companies to plan against a range of different scenarios**.
- As we develop our methodology for RIIO-ED2 we will place **increasing scrutiny on the DFES**, to ensure these are being **developed and used in a consistent manner** and that the scenarios that they generate are credible.
- We will also require DNOs to begin work early on a **core baseline scenario** that we can use for benchmarking purposes.

- For context, demand driven revenue is only around 10% of overall network revenues in Electricity Distribution.

Different approaches – two extremes:

Allow each licensee to
propose their own
forecasts, assumptions,
parameters

Ofgem provides some
view, methodology,
scenario, parameters,
and/or forecast prior to
BP submission



- Networks forced to provide and justify their own forecasts
- Networks can be responsible for their view on outcomes (particularly if they provide multiple 'paths')
- Ofgem may end up approving a series of investment plans with inconsistent views of the future
- Greater risk of excessive returns
- Greater reliance placed on efficient operation of uncertainty mechanisms, re-openers, vol. drivers, etc
- Can reduce whole system coordination and benefits

- May constrain the ex-ante revenue pot and lead to consumer savings
- Improves consistency across networks
- Easier to compare and benchmark investment plans
- Resource requirements

Future WG Work Plan and SSMC

Future WG work plan:

- We have covered all elements at a high level. At CAWG-6 we asked 'What areas do we still need to spend time on prior to publication of SSMC?'
- Proposing **26th May for CAWG-8:**
 - High level review, where possible, of draft SSMC.

- Actions, Next Steps, AOB
- The next meeting will take place on 26th May.
- We will circulate notes and an actions log from this meeting.