

# RIIO-2 Costs & Outputs Working Group

## Gas Transmission



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This is a big slidepack, and we will park some issues. We have a slot for the 28<sup>th</sup>?  
And that many slides are for info only

**9:30 – Introductions**

**9:40 – Purpose of working group**

Objectives

Terms of reference

Timelines for activities & deliverables

**10:15 – RIIO-2 Cross sector Development**

**10:30 – Interactions with User  
group/Challenge Group**

**10:40 – Break**

**11:00 – Take-always from Framework  
Decision Highlights Implications for setting  
outputs & incentives**

**11:30 – Review of RIIO1**

Summary of key performance to date

Summary of Cost approach for RIIO1

What's worked well

**12:30 – Lunch**

**13:00 – Lessons of RIIO1**

**13:30 – Scenario planning**

**14:00 – National Grid presentation on Scenarios**

**14:30 – Cost Benefit Analysis**

Why do we need CBAs

**14:45- National Grid presentation CBAs**

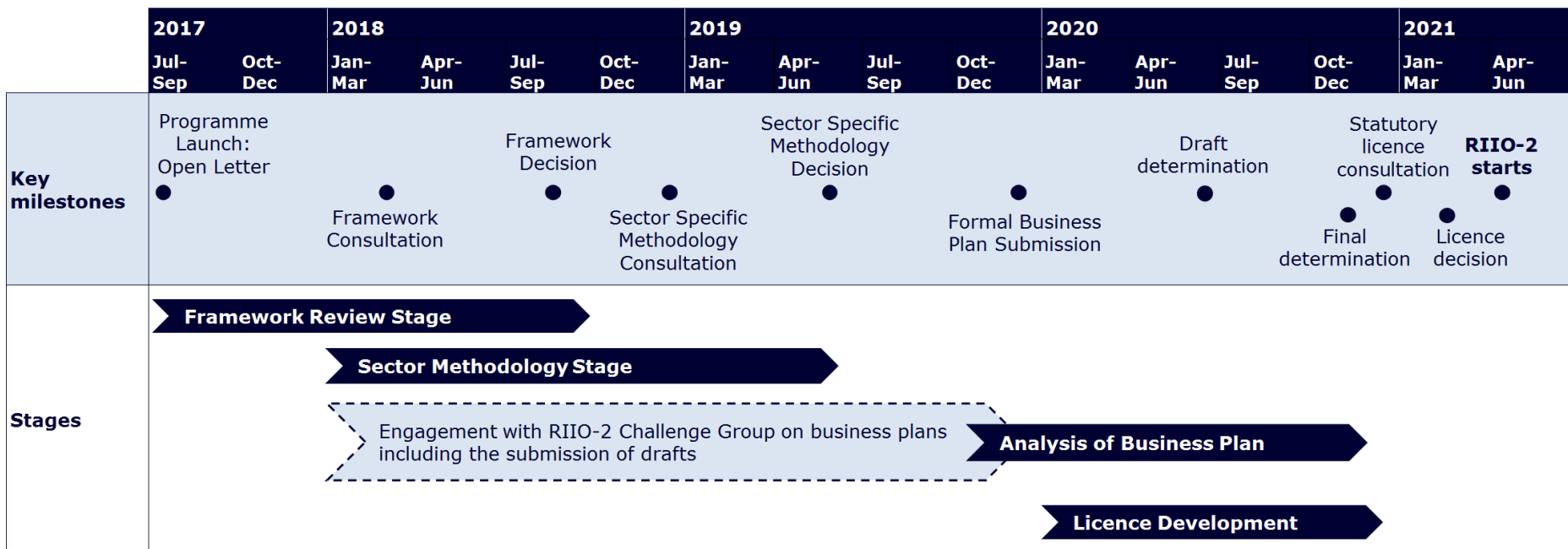
**15:00 – Future Work**

**15:15 – Next steps**

**15:30 – Close**

## Timeline for activities and deliverables (1 of 2)

### Indicative High-Level RIIO-2 Plan for ET, GT, GD and ESO Sectors



**Initial thinking only – further development/consultation to follow**

**Table 1: Indicative high-level milestones for developing sectoral price controls for electricity transmission, gas transmission, gas distribution and electricity system operator**

| <b>Indicative high-level milestones ET, GT, GD and ESO</b> |   |
|--|---|
| March 2018   | RIIO-2 framework consultation   |
| April 2018   | RIIO-2 enhanced engagement guidance   |
| July 2018  | RIIO-2 framework decision   |
| December 2018  | Sector specific methodology consultation  |
| May 2019   | Sector specific methodology decision  |
| Q4 2019 <sup>41</sup>                                      | Companies Business Plan formal submission to Ofgem (along with RIIO-2 CCG and user group reports on Business Plan to Ofgem) |
| Q1/2 2020  | Open hearings   |
| Q2 2020  | Draft determination   |
| November 2020  | Final determination   |
| December 2020  | Statutory Licence consultation  |
| February 2021  | Licence decision  |
| 1 April 2021   | Start of RIIO-2 price control for ET,GT,GD and ESO  |

# **Purpose of Working Group**

- **Inform GT business plan submissions**
  - ✓ **Content**
  - ✓ **Form**
  - ✓ **Evidential base required**
- **Inform development of analytical techniques for assessment of business plan**
- **Forum for Ofgem, NGGT and stakeholders to jointly inform the development of a toolkit approach for assessing efficient costs in the RII02 business plan.**
- **Forum for working out the practical implementation of performance monitoring through course of RII0-ET2**

- **Group is an advisory body, not a decision making body. Ofgem is under no obligation to accept views raised by the group**
- **While consensus is welcome in some areas, it is not the aim of the CAWG**
- **Membership comprises Ofgem, NGGT representatives and other interested parties**
  - ✓ **Expectation that members will be active participants**
  - ✓ **Chatham House Rules apply**
  - ✓ **Discussions not binding on GEMA**
  - ✓ **The meetings will be minuted, with views and opinions attributed at a company/organisation level.**
  - ✓ **minutes will be disseminated to those who could not attend and published on Ofgem's website**

- **Meet at ~ 5 week intervals - Scope of additional ad hoc meeting if unanimous agreement within the group.**
- **Run through to business plan submission (late 2019)**
- **Publish brief, non-attributable minutes**



- **Review RIIO-GT1 cost analysis work program**
  - ✓ **Determine what is still suitable, what needs to be changed**
- **Review Cost Drivers and Assessment methods for**
  - ✓ **Totex**
  - ✓ **Capex**
  - ✓ **Opex**
- **Consider the approach to and treatment of:**
  - ✓ **Business support costs**
  - ✓ **Contractor modelling**
  - ✓ **Whole life costs**
  - ✓ **Innovative solutions**
  - ✓ **Investment avoidance**
  - ✓ **Associated investment costs**
- **Cross Sector WG to discuss specific common areas**

## **Establish principles for identifying and using:**

- Data sources in comparative analysis
- Expert review
- CBA

## **Determine appropriate cost drivers**

### **Unit costs**

### **Benchmarking approach**

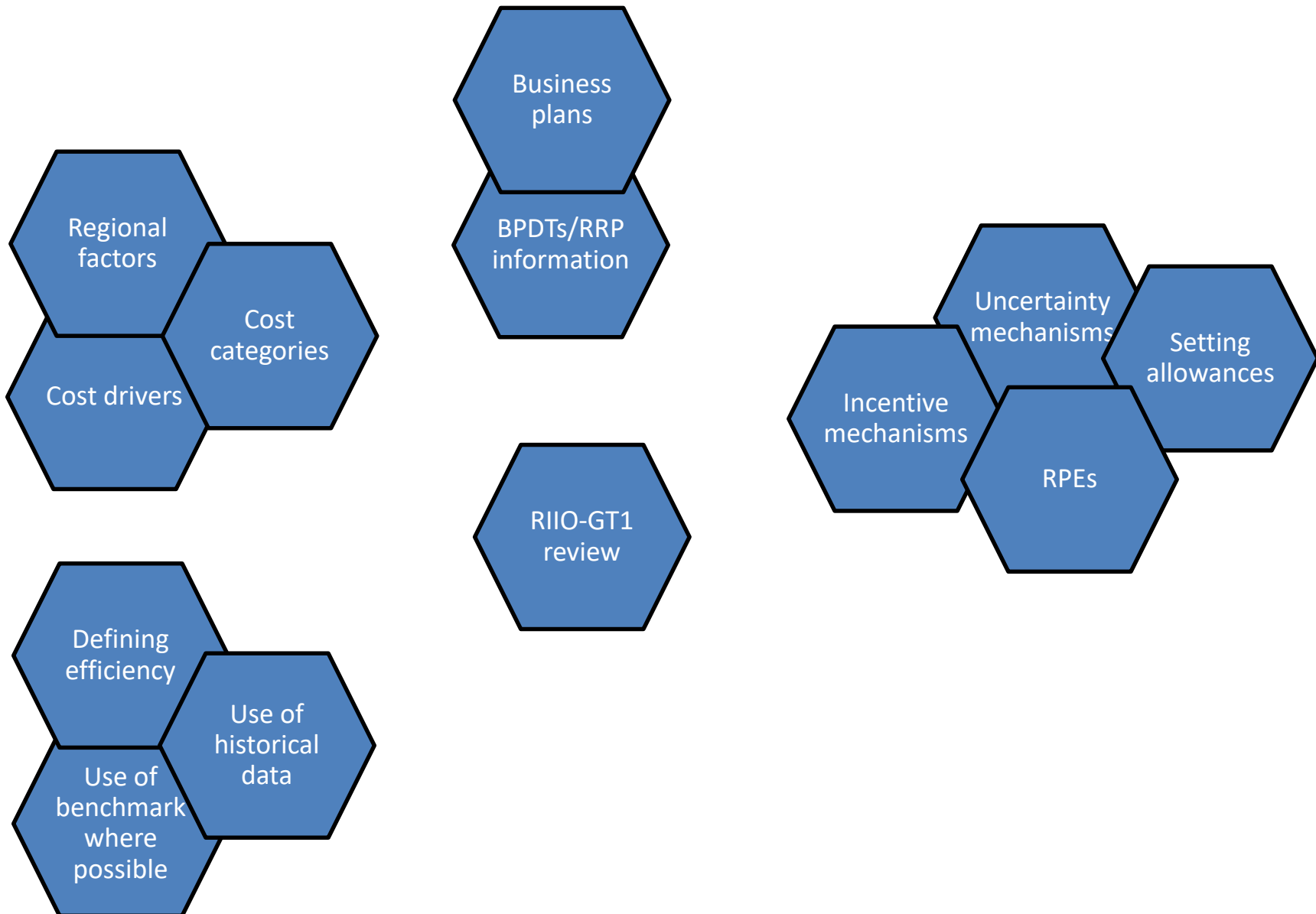
- Bottom up
- Top down

## **Identifying material uncertainties and developing uncertainty mechanisms (overlap with policy WG)**

## **View on future work requirements**

- Volumes
- Scope/nature of work
- Compatibility with whole system view

## Themes

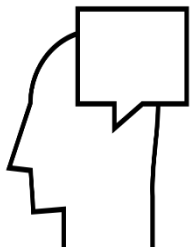


# **RIIO-2 cross sector development**

| Who (owner)               | What (Work stream)   | How (specific/examples)   |
|---------------------------|--|---|
| GT C&O                    | <ul style="list-style-type: none"> <li>Price Control Deliverables (PCDs)</li> </ul>  | <ul style="list-style-type: none"> <li>Costs, volumes and outputs</li> <li>Uncertainty mechanism</li> </ul>   |
| Cross sector              | <ul style="list-style-type: none"> <li>Resilience</li> </ul>   | <ul style="list-style-type: none"> <li>Cyber security</li> <li>Asset resilience</li> <li>workforce resilience?</li> </ul>   |
| Cross sector              | <ul style="list-style-type: none"> <li>Competition</li> </ul>  | <ul style="list-style-type: none"> <li>Review options to increase both early and late competition</li> <li>review Network Options Assessment process/methodology carried by SO to enhance competition</li> </ul>  |
| Cross sector              | <ul style="list-style-type: none"> <li>Stakeholder Engagement Incentive (SEI)</li> </ul>   | <ul style="list-style-type: none"> <li>Review options for SEI, ie retain incentive, reform incentive or introduce bespoke SE related outputs?</li> </ul>  |
| Cross sector              | <ul style="list-style-type: none"> <li>Innovation</li> </ul>   | <ul style="list-style-type: none"> <li>Develop/change/add existing arrangement such as NIA, NIC</li> </ul>  |
| Cross sector              | <ul style="list-style-type: none"> <li>Vulnerability</li> </ul>  | <ul style="list-style-type: none"> <li>Gas, electricity – updating existing standards (interruptions, methods to identify vulnerable customers etc.)</li> <li>Gas- looking into fuel poverty schemes</li> </ul>   |
| Cross sector              | <ul style="list-style-type: none"> <li>Whole system</li> </ul>   | <ul style="list-style-type: none"> <li>Intention is to capture benefits of whole system coordination where it is appropriate to do so through the price control. Unlikely to have a specific output.</li> <li>Will work with network companies to identify specific approaches</li> </ul> |
| Cross sector              | <ul style="list-style-type: none"> <li>Information revealing devices (IRDs)</li> <li>Return adjustment mechanism (RAMs)</li> </ul> | <ul style="list-style-type: none"> <li>IQI?</li> <li>Reward/Penalty for good/bad BPs?</li> <li>Business plans incentives</li> </ul>   |
| Energy Systems Transition | <ul style="list-style-type: none"> <li>Charging and connections</li> <li>SO Separation</li> </ul>                                  | <ul style="list-style-type: none"> <li>Improving and clarifying access arrangement &amp; review of use of system charges to enhance flexibility</li> <li>Separate price control for SO</li> </ul>   |

## What we found:

- Some of the areas we identified have been and will be further developed in full cooperation with RIIO-2 teams, where relevant. This includes all the sector specific outputs such as: reliability, social and environmental outputs
- Under the cross sector areas we believe that resilience (asset resilience and Cyber) and stakeholder engagement incentive have the strongest interaction with our policy work- such as stakeholder satisfaction outputs



## What you think (discussion)

- Are there any RIIO-2 areas missing from the review?
- Are there any interactions that have not been identified?
- Is there any additional information you feel we could elaborate in our next WG?

## Next Steps:

- We will continue our internal discussion with cross sector, sector specific and wider network and system teams
- We will collaborate with colleagues in Ofgem on wider areas such as access reform and access review.
- **We will update the WG on those discussions where relevant to our work**



# **Interactions with User Groups/ RIIIO Challenge Group**

### Ofgem - decision-maker

**Sector-specific  
Working Groups**

Core role: support  
development of common  
outputs and incentives, and  
approach to cost assessment

Input to Ofgem policy  
development

**Independent RII02  
Challenge Group**

Core role:  
Support Ofgem's Business  
Plans assessment

Output: independent report

### Network Operators

**Independent User  
Groups/ Company  
Groups**

Core role: provide challenge  
to company Business Plans +  
support development of  
bespoke outputs

Output: independent report

**Network Operator  
stakeholder  
engagement**



1. In preparation for the sector methodology consultations in December 2018 and decision in May 2019, Ofgem is organising **working groups** in different sectors. The membership of the workshops is open to anyone who is interested. The dates of the workshops will be advertised on Ofgem website shortly.
2. **RIIO-2 challenge group's** role is twofold. Its primary role is to challenge companies business plans. Its secondary role is to challenge Ofgem in specific areas leading up to the methodology consultation and decision for all sectors. So in the run up to the sector methodology decisions, Ofgem will be discussing issues with the RIIO-2 challenge group. These discussions will be informed by the information Ofgem will be gathering through the working groups (amongst other things).
3. The role of the **company groups** is to challenge company business plans. The companies are already working on their plans and will also incorporate Ofgem's sector methodology decisions in them. The role of the company groups is to ensure the plans reflect what Ofgem have said in the methodology (amongst other things).
4. The Chairs of both the company groups and RIIO-2 challenge group will be in touch with each other and Ofgem to ensure they are clear on direction of travel during this phase of work to be able to play their role effectively.

# **Framework decision document**

**Initial thinking only – further development/consultation to follow**

- We are looking to make the output categories for RII02 as intuitive and simple as possible, reducing overlap and potential confusion.
- We are proposing to consolidate existing output categories into three new categories as described below.
- We welcome early views from stakeholders; there will be further opportunities to provide formal feedback at a later stage.
- Task for both NGGT and Ofgem – to map current outputs and incentives to the new categories below.

**Improve the Customer Experience**

- *All consumers, including those who are vulnerable, should receive a safe, high quality, and reliable service*

**Support the energy system transition**

- *Network companies have to enable the transition to a low carbon, consumer-focused energy system*

**Improve the network and its operation**

- *A network in better condition will be safer, greener, more reliable, and more responsive to change*

**Initial thinking only – further development/consultation to follow**

- For illustrative purposes, we have mapped some existing and potential future output measures to the three new proposed output categories.
- Some measures may fall into more than one output category.

|  | <b>GD</b>   | <b>GT</b>   | <b>ET</b>   | <b>ED</b>  |
|--|---|---|---|--|
| <b>Improve the customer experience</b><br><br><i>All consumers, including those who are vulnerable, should receive a high quality, safe and reliable service</i> | Interruptions<br>Guaranteed standards<br>Customer surveys<br>Complaints<br>Stakeholder engagement<br>Carbon monoxide safety<br>Emergency response<br>Vulnerable customers<br>FPNES<br>Connections | Stakeholder surveys<br>Stakeholder engagement<br>Connections  | Stakeholder surveys<br>Stakeholder engagement<br>Connections  | Customer surveys<br>Stakeholder engagement<br>Interruptions<br>Complaints<br>Guaranteed standards<br>Worst-served customers<br>Vulnerable customers<br>Connections |
| <b>Support the energy system transition</b><br><br><i>Network companies have to enable the transition to a low carbon, consumer-focused energy system</i>        | Low carbon<br>- Green gas<br>- Green company ops<br>Whole system outcomes<br>Asset stranding<br>Network extensions  | Whole system outcomes<br>Low carbon (compressor emissions)<br>Asset stranding<br>Network extensions | Whole system outcomes<br>Low carbon<br>- SF6<br>- EDR<br>- Losses<br>Visual impact<br>Asset stranding<br>Network extensions | Whole system outcomes<br>Low carbon<br>- SF6<br>-Oil leakage<br>- Energy efficiency<br>-Losses<br>Visual impact<br>Asset stranding<br>Network extensions           |
| <b>Improve the network</b><br><br><i>A network in better condition will be safer, greener, more reliable, and more responsive to change</i>                      | NOMs<br>Repex<br>MOBs<br>Shrinkage<br>Workforce resilience  | NOMs<br>Physical/cyber security<br>Workforce resilience<br>Reliability                              | NOMs<br>Physical/cyber security<br>Workforce resilience<br>Reliability  | NOMs<br>Load index<br>Workforce resilience   |

## **Our July framework decision set out three types of outputs for RIIO-2**

- ✓ Licence obligation (LO):
  - ✓ Minimum standards with associated licence obligations
  - ✓ Failure to meet could lead to enforcement action and penalties
  - ✓ Not directly linked with specific funding
  
- ✓ Price Control Deliverable (PCD):
  - ✓ Specific deliverables with funding attached (eg high value capital project)
  - ✓ Clear methodology of what happens when activity is not delivered, delivered late, or delivered to a lower specification or standard
  
- ✓ Output Delivery Incentive (ODI):
  - ✓ Will apply where service quality improvements beyond the minimum standard is in the interest of consumers
  - ✓ Will reward or penalise performance; overall cost to not exceed value of performance
  - ✓ Could be relative or absolute
  - ✓ May also include reputational incentives in some areas

**Initial thinking only – further development/consultation to follow**

- This slide describes the role we expect Ofgem and companies to play in terms of proposing/ setting outputs.
- **Ultimately Ofgem will retain final decision-making on all aspects of the price control settlement.**

| ODIs (financial + reputational)                                    |   | Price Control Deliverables   | Licence obligations  |
|--|---|--|--|
| <b>Sector wide ODIs</b>  | <b>Company specific ODIs</b>  | <b>Activities to be delivered to a specified standard, are significant and/ or high-value</b><br>(incl. baseline “parameters”) | <b>Minimum standards of service</b>                              |
| Metrics/ measures determined by Ofgem                              | Companies to propose metric/ measures with Ofgem oversight                            | Companies to propose deliverables with Ofgem oversight   | Minimum standards determined by Ofgem                            |
| Targets/ incentive rates (where applicable) set by Ofgem           | Companies to propose targets/ incentive rates (where applicable) with Ofgem oversight | Companies to propose options for what happens if output not delivered Ofgem oversight  | Consequences in form of penalty/ enforcement determined by Ofgem |
| Opportunities for companies to propose targets/ value of incentive | Ofgem to determine final targets/ incentive rates                                     | Ofgem to determine what happens if output not delivered  |  |

- All activities led by Ofgem (orange) will involve significant stakeholder engagement and consultation.
- We expect companies to engage proactively and make extensive use of their user/ customer groups in developing and putting forward proposals (green). The onus is on the companies to put forward evidence-based proposals.
- Due to the nature of the GT sector – we expect ODI’s in to be led by National Grid

**Initial thinking only – further development/consultation to follow**

- We will be keen to get views on what outputs NGGT should propose as their own outputs.

**Strawman on some sector wide/ company specific areas**

**Sector/Company wide**

Safety  
 Security of Supply  
 Maintenance Outages/ Maintenance planning  
 Constraints targets  
 Demand Forecasting  
 Linepack balancing  
 Operating Margins procurement  
 Greenhouse Gas Emissions (incl. IEED)  
 Shrinkage  
 BCF  
 Environmental  
 Customer surveys/ Customer Satisfaction  
 Cost of gas for running network  
 Stakeholder engagement  
 Connections  
 Emergency response  
 Future of heat/Decarbonisation  
 Whole system  
 NOMs  
 CO safety  
 Additional customer improvements  
 Workforce resilience  
 Additional environmental measure

- Note: it is possible we could vary common and bespoke for LOs/PCDs/ODIs. Some areas could have both common and bespoke elements

- We will specify outputs as a set of consumer-facing outcomes that we expect network companies to deliver.
- We expect company specific ODIs to be driven by NGGT, i.e to propose metric/ measures, with Ofgem oversight and input.
- We will set minimum standards and these will be imposed as a condition of the licence. We will use the enhanced engagement framework to inform network companies' licence obligations.
- We will establish price control deliverables where appropriate. For these, we will provide a revenue allowance to enable delivery. In addition, the framework will set out a clear methodology of what happens if an output or input activity is not delivered, is delivered late, or is delivered to a lower or different specification.
- Where deliverables are no longer needed due to a change in circumstances, we will put in place mechanisms for consumers to be automatically refunded.



For costs, these are the measures we will take to protect consumers against from forecasting risk:

- ✓ Where appropriate, we will use competition to set prices for new, separable and high value investment projects
- ✓ We will improve and simplify incentives to improve the quality of company forecasts
- ✓ We will index uncertain costs where possible, including for labour and construction cost inflation (to the extent evidence suggests this is different from general consumer price inflation)
- ✓ We will use volume drivers where unit costs are stable but quantities difficult to predict
- ✓ Where there is uncertainty over the scope of work and the potential costs are significant for consumers, we will not set upfront allowances. We will instead use either revenue drivers or within-period mechanisms.

- Where we continue to set upfront baseline allowances, we will incentivise companies to drive down costs, where:
  - ✓ The costs are within the control of the company
  - ✓ We are able to benchmark allowances against historical performance and relevant industry comparators
  - ✓ We are able to use outperformance to set lower allowances or return benefits to consumers.
- Where the cost profile of work spans multiple price, we will consider taking a long-term view of costs in setting allowances.
- We will also consider resetting certain cost allowances automatically during the price control period.

# **Review of RII01**

## Composition of RII01 cost allowance

1

- **Baseline allowance**
- We set their ex-ante allowances on the basis of the business plan (BP) to reflect areas of work where there was an established customer-driven need for the delivery of pre-agreed outputs (or works not linked to specific outputs because of their unique nature). Allowances included the company view of real price effects (RPEs).

2

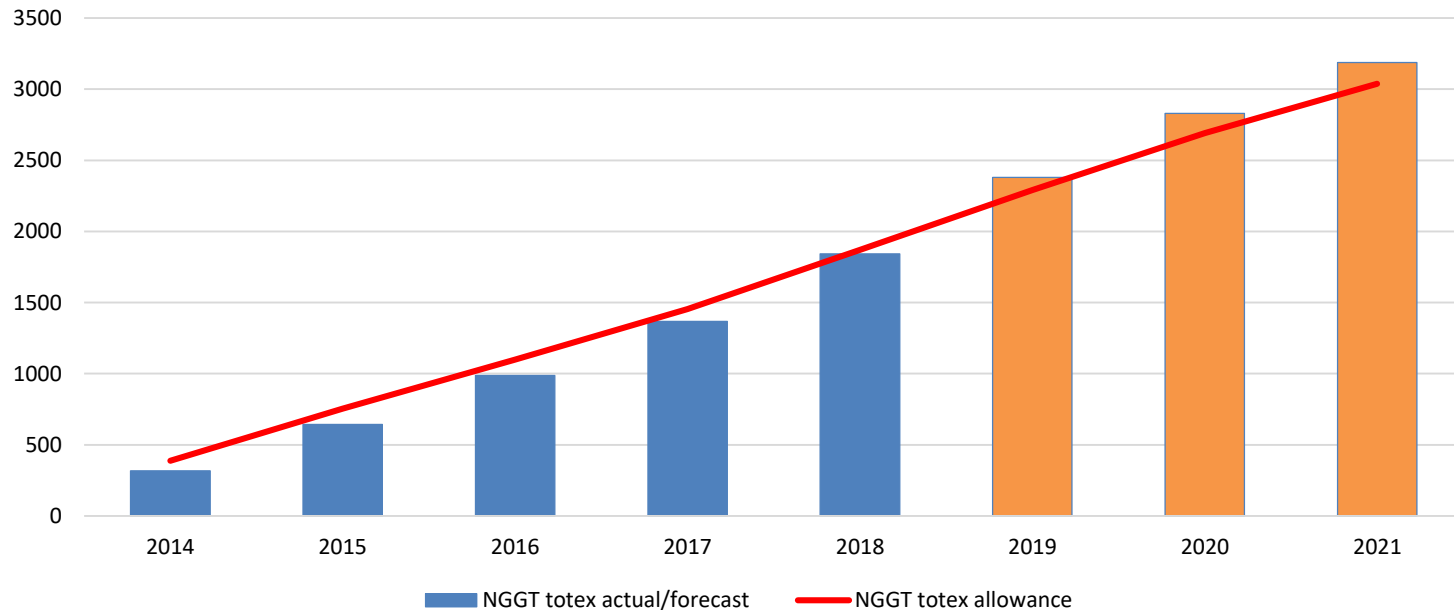
- **Volume drivers**
- The BP position was not fully funded with ex-ante allowances as part of the RII0-GT1 settlement. Instead, we included a combination of ex-ante allowances and allowances that would be released through “uncertainty mechanisms” (UMs).

3

- **Other mechanisms / Reopeners**
- The ‘automatic’ UM approach was not suitable to all aspects of the BP; there was significant uncertainty associated with some large-scale investment projects.

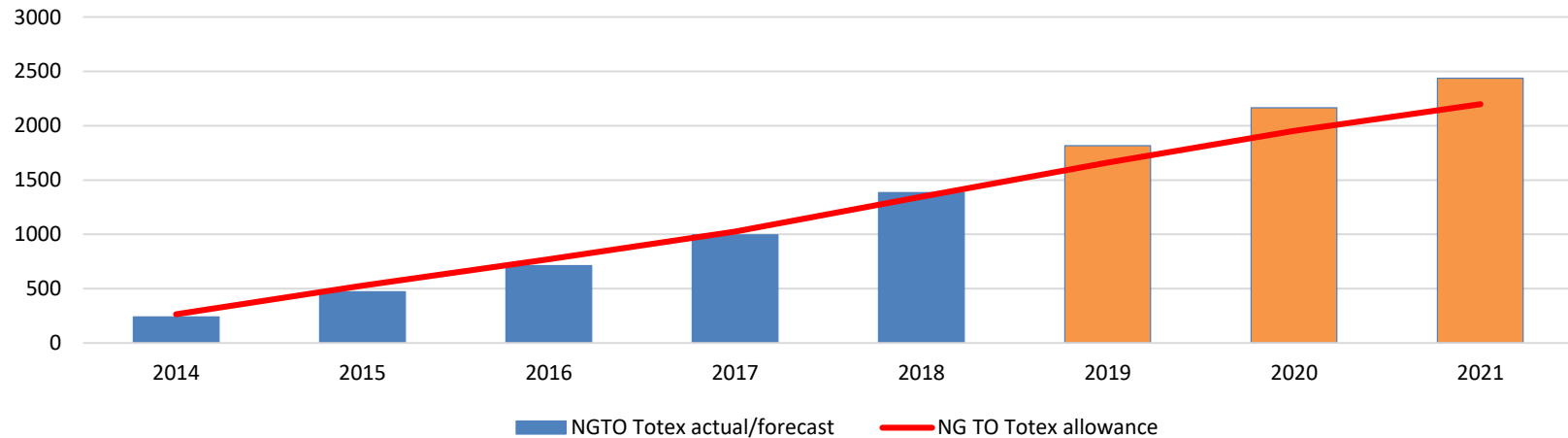
### Overall

Across RIIO-T1 the Totex is forecast to be £3.2bn against an allowance of £3.04bn.  
This results in a forecasted spend above allowances of £151m



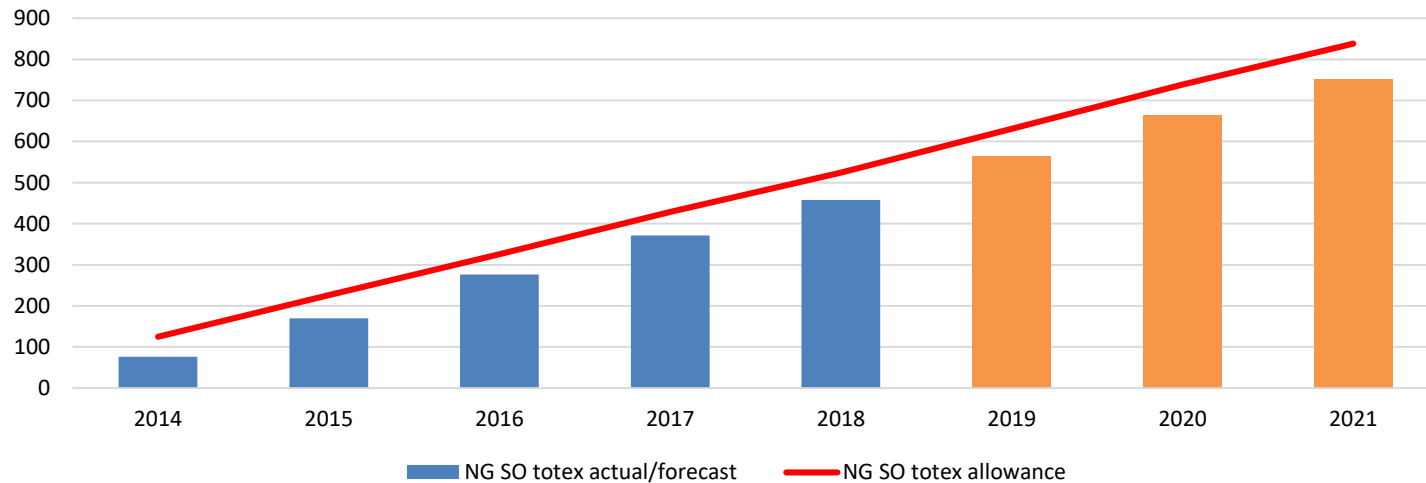
### TOs

- Overall total expenditure forecast for the RIIO T1 period is £2.20bn set against forecast allowances of £2.44bn which is an overspend of allowances of (11%).



- The forecast Overspend is comprised of:
  - Non - Operational Capex (primarily driven by data and technology upgrades)
  - Closely Associated Indirect
  - Business Support Costs

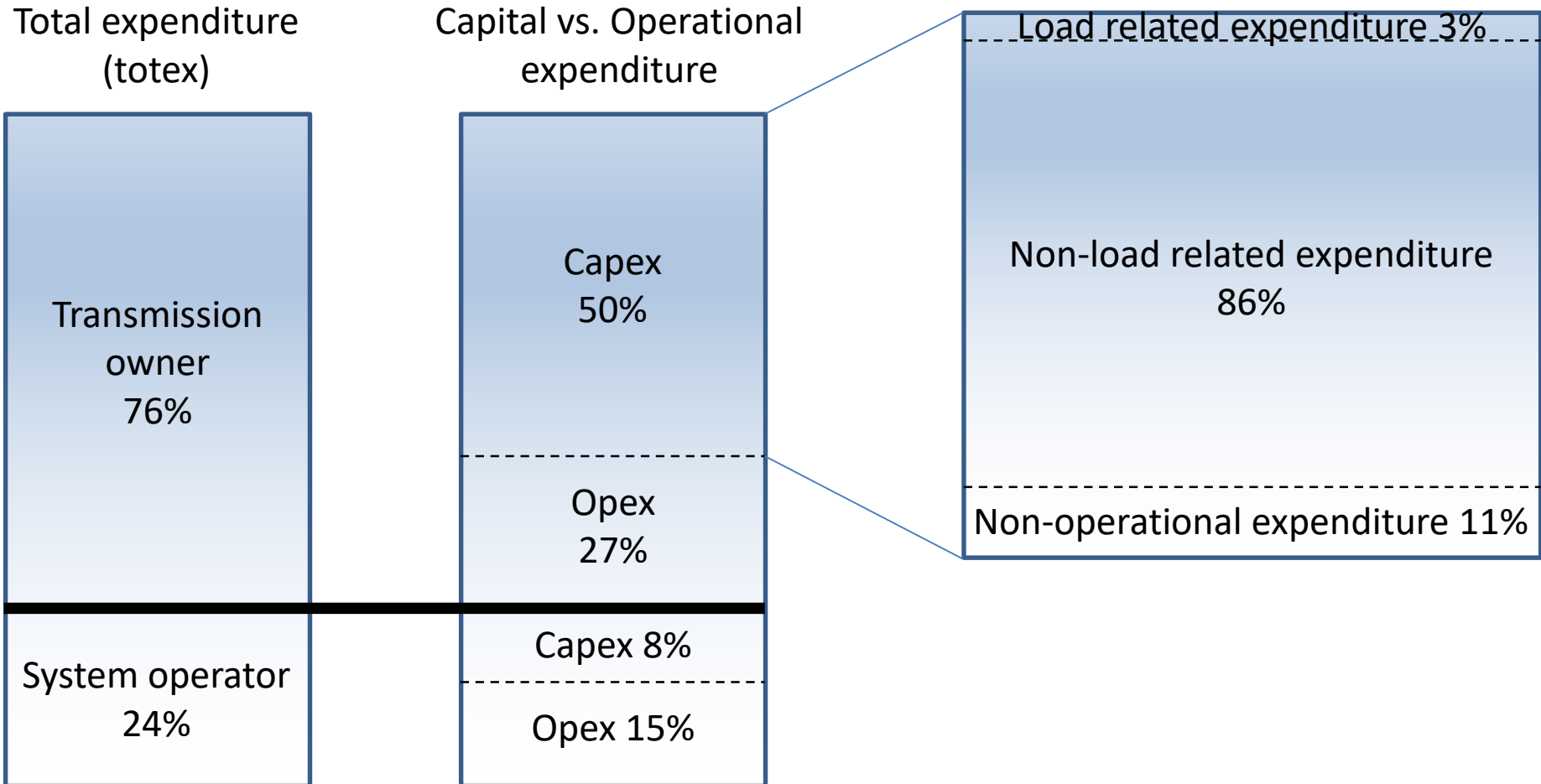
- Overall total expenditure forecast for the RIIO T1 period is £750.8m set against forecast allowances of £838.2m which is an £87.4m underspend below allowances.



- The forecast underspend is comprised of:
  - Non-operational capex
  - Business support

- Uncertainty mechanisms (reopeners) have provided additional flexibility to address significant uncertainty with some investment projects.
- Overall Stakeholder engagement has improved since start of RII01
- Company is performing against the agreed output targets.
- NGGT in line to deliver network resilience targets (rebasings exercise underway)





| Cost name   |                                   | RIIO-GT1 calculation approach   |
|-------------|-----------------------------------|---|
| Baseline    | Entry,<br>Exit,<br>Bi-directional | <b>Unit cost assumptions</b><br>External consultancies, NGG's historical project costs, and internationally available data (e.g. Gas Transmission Benchmarking Initiative, Alaskan compressor stations costings).   |
|             | Network flexibility               | <b>Project dependent</b><br>Ex ante allowance for projects that maintain the 1-in-20 obligation: other projects dealt with via uncertainty mechanisms.  |
|             | Offtakes                          | <b>Pass-through (confirmation required)</b><br>External consultancies and NGG's historical project costs.   |
| Incremental | Entry,<br>Exit,<br>Bi-directional | <b>Uncertainty mechanism: Revenue driver</b><br>Used to adjust NGG's baseline revenue in response to demand for additional capacity that is backed by a financial user commitment. Calculated upon receipt of relevant signals and based primarily on efficient unit costs for compressor stations and pipeline reinforcement work. |
|             | Network flexibility               | <b>Uncertainty mechanism: Options available</b><br>Majority of investments handled by the uncertainty mechanism as this expenditure is difficult to accurately forecast over the whole RIIO-T1 period.  |

| Cost name             |                                 | RIIO-GT1 calculation approach   |
|-----------------------|---------------------------------|---|
| Baseline              | Emissions reduction             | <b>Unit cost/uncertainty mechanism/cost benefit analysis</b><br>Liaised with agencies, consultancies, used NGG's historical project costs and international data. Reviewed costs such as compressor units parts, retrofit vs replacement, compliant vs non-compliant gas turbines, technological choices. |
|                       | Asset health (condition driven) | <b>Unit cost and benchmarking</b><br>Engineering consultants assessed forecast expenditure, accompanying justification, underlying costs, and feasibility studies.  |
|                       | Quasi-capex                     | <b>Ofgem agreed with NGG's forecast</b><br>This was anticipated and relates to the disconnection of Feeder 1 as well as for the decommissioning of some secondary assets.   |
| Uncertainty Mechanism | Emissions reduction             | <b>As per emissions reduction above</b><br>Note: non-compliant compressors to be covered by uncertainty mechanism.  |
|                       | Asset health: Feeder 9          | <b>Ex ante and uncertainty mechanism (reopener)</b><br>Majority of investments handled by uncertainty mechanism as this expenditure is difficult to accurately forecast over the whole RIIO-1 period.   |
| NOE                   | Non-operational expenditure     | <b>IT &amp; telecoms analysis and costing</b><br>Combination of questioning NGG's forecast, gaining more information, and using consultants as required.  |

| Cost name        |                              | RIIO-GT1 calculation approach   |
|------------------|------------------------------|---|
| Controllable     | Direct opex                  | <p><b>Engineering consultants: Report and proposals</b></p> <p>Driven to some extent by age and condition of network and by proposed capex. Overall ongoing efficiency applied to NGGT's forecasts was 1.5%. NGGT are investing in new IT systems in RIIO-T1 and therefore should be able to drive out increased efficiencies above those already identified.</p> |
|                  | Indirect opex                | <p><b>Engineering consultants: Report and proposals</b></p> <p>Largely driven by capital and maintenance support, operational training, operational IT, and gas drawings. Increased the efficiency assumption to 1.5%.</p>  |
|                  | Business support             | <p><b>Composite cost driver</b></p> <p>Consultants did a top-down assessment using a composite cost driver. The main costs in business support are data/technology, realigning UK Assurance team to focus on UK work, consultancy/staff costs, and RIIO-T2 prep.</p>  |
| Non-Controllable | Quarry & loss of development | <p><b>Uncertainty mechanism: Reopener - Ofgem agreed with NGG's forecast</b></p> <p>NGG would need to demonstrate that not only have they negotiated on respective claims in order to reduce the cost where possible, but that one-off claims also relate to specific project requirements.</p>   |
|                  | Non-controllable             | <p><b>Ofgem agreed with NGG's forecast</b></p> <p>Used NGG figures. Ofgem to check if future costs are outside of NGG's control.</p>  |

| Cost name |                           | RIIO-GT1 calculation approach   |
|-----------|---------------------------|---|
| Capex     | Capex (excl. data centre) | <p><b>Ex ante and uncertainty mechanism</b></p> <p>External consultancies and open dialogue with NGG to provide clarification on proposed expenditure so that Ofgem fully understands NGG's planned capex.</p>                      |
|           | Data centre               | <p><b>Ex ante and uncertainty mechanism</b></p> <p>Consultants/Ofgem: fund £30m baseline investment for refurbishments and data centre upgrades. Further expenditure subject to uncertainty mechanism.</p>                          |
| Opex      | Controllable (Ctrl)       | <p><b>Engineering consultants: Ex ante and uncertainty mechanism</b></p> <p>Cost increases due to changing flow patterns and supply dynamics, demand pattern variation, operational changes, headcount growth, and IS projects.</p> |
|           |                           | <p><b>Engineering consultants: Ex ante and uncertainty mechanism</b></p> <p>Cost increases due to changing flow patterns and supply dynamics, demand pattern variation, operational changes, headcount growth, and IS projects.</p> |
|           |                           | <p><b>Composite cost driver</b></p> <p>Consultants did a top-down assessment using a composite cost driver. Upward cost pressures due to management initiatives and one-off costs.</p>  |
|           | Non-Ctrl                  | <p><b>Ex ante allowance and uncertainty mechanism</b></p> <p>Consultants commissioned by Ofgem reviewed the current arrangement. Ofgem providing ex ante allowance with a further review in due course.</p>                         |

# Lessons of RII01

- **Expenditure not linked to Outputs / uncertainty around targets not considered**
  - ✓ Load and non load:
    - ☐ volume drivers parameters need to be based on appropriate scenarios
    - ☐ Projects being delivered very different from those originally envisaged and are funded through the operation of the Ums – outcomes vs output
    - ☐ Lack of clarity on what will be delivered in RIIO-T2.
- **Poorly defined Outputs.** Examples include:
  - ✓ lack of clarity over actions that should contribute to output delivery (and penalties for non-delivery).
  - ✓ The inability of volume drivers to react to external change and appropriately reward genuine efforts to provide efficient network services.

- **Insufficient linkages to related cost categories**
  - ✓ (e.g. maintenance), and lack of flexibility in allowances to appropriately reward innovation and whole system solutions.
  - ✓ Level of granularity is insufficient to understand linkages between expenditure on asset health (including non-op Capex) and network resilience
- Fixed ex-ante allowance based on the companies' **Real Price Effects (RPEs)** forecast.
  - ✓ TOs have benefitted from slower than expected growth in input prices.
- Ensuring that allowances appropriately reflect latest technologies and business practices



## More specifically on **Cost Assessment**:

1. Despite the data limitations, expectations of **improved Cost Assessment** based on larger dataset (RIIO1 + extended/updated forecasts)
2. Cost **allocations**
  - a. Are not always straightforward (e.g. both opex and capex)
  - b. Might depend on business model (e.g. work management - )
  - c. Might evolve over time (e.g. IT)
3. How granular should **cost categories** could be?
4. Review of **regional factors** (e.g. sparsity) if necessary and **RPEs** (e.g. more industry specific)

**We will:** work through these points in the development of our approach to cost assessment

5. Some **cost categories** might be combined
6. Some **drivers** need to be reviewed
7. Separate **assessments/other techniques** could be considered:
  - a. When benchmarking is inappropriate/not viable
  - b. To account for networks specificities

**We will:** work through these points in the development of our approach to cost assessment

# **Scenario planning (Change Slide Deck)**

# **Cost Benefit Analysis**

- **CBAs are needed to:**
  - ✓ **Demonstrate the range of options considered for a given issue**
  - ✓ **Demonstrate how the key parameters for each option have been quantified**
  - ✓ **Evidence the decision making process that led to the preferred choice being made**
  - ✓ **Give confidence that the proposition represents value for money to consumers**
- **CBAs have evolved over the years. We expect:**
  - ✓ **all major investment proposals to be underpinned with a CBA**
  - ✓ **best practice to be adopted for all CBAs**
  - ✓ **Uncertainty estimates to be incorporated as appropriate**

**Future work**

- The Business plan data template will be a natural evolution of current RIGs with further modifications to cater for RIIO-2 policy decisions.
- We will explore the need for greater level of standardisation between ET and GT , both in terms of general language and structure of information.
- Recognition that price controls are artificial boundaries. Requirement for greater transparency on investment cycle beyond RIIO-2. The multi-period approach better reflects companies' natural corporate cycle for investment.
- Requirement for greater transparency on companies' non-lead asset intervention strategy. Greater level of disaggregated reporting across all non-lead asset categories - further discussions required around definitions and categorisations - and the treatment of high value non-lead assets (e.g reactive compensation).

**Next steps**



- Resolve outstanding issues
- Clarify next step deliverables
- Final comments

**Our core purpose is to ensure that all consumers can get good value and service from the energy market. In support of this we favour market solutions where practical, incentive regulation for monopolies and an approach that seeks to enable innovation and beneficial change whilst protecting consumers.**

**We will ensure that Ofgem will operate as an efficient organisation, driven by skilled and empowered staff, that will act quickly, predictably and effectively in the consumer interest, based on independent and transparent insight into consumers' experiences and the operation of energy systems and markets.**

1. What does RIIO-GT1 tell us about the link between costs and outputs?
  - a) How do we capture & embed the achievements of GT1?
  - b) What are the areas where improvements are still needed in GT2?
2. What parts of GT1 in this area are driving value, and what parts are potentially redundant?
3. What new drivers are there in this area for RIIO-GT2, and what should we be expecting NGGT to achieve?
4. What options should be considered for outputs and incentives and what are the specific barriers or enablers required for change?