

# RIIO-GD2 Repex Working Group



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3. Tier 1 mains PCD
  - Detailed overview of proposed DD policy position
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4. Detailed overview of proposed DD policy position and initial feedback on common policy areas
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5. Next steps and topics for next Repex WG
6. AOB

- Run through our proposed DD positions
- Provide opportunity for initial feedback on key issues
- Detailed discussion of data request and issues raised in SQ responses
- Present our initial analysis and discuss next steps
- We are not intending to discuss cost assessment or engineering issues – these will be picked up in other meetings (bilaterals, CAWGs)

## Tier 1 mains

PCD

- Allowances adjust to reflect outturn mix, restrictions on upward adjustments, over-delivery to NARM

## Tier 1 services

PCD

- Allowances adjust to reflect outturn mix, restrictions on upward adjustments, over-delivery beyond deadband into NARM

## Tier 2A repex

Volume Driver

- Allowances adjust to reflect outturn mix

## Common re-openers

- HSE policy
- Tier 1 stubs (Ofgem proposed)
- Diversions (Ofgem proposed)

## Bespokes

- London Medium Pressure - Cadent North London (Ofgem proposed re-opener)
- IP services – SGN Scotland (company-proposed bespoke PCD)
- [REDACTED]– SGN Southern (company-proposed bespoke PCD)

<b>Mechanism</b>	PCD
<b>Target</b>	Total decommissioning workload volume
<b>Workload Categories</b>	12 (3 work types x 4 diameter bands)
<b>Volume limits</b>	Any workload over target allocated to NARM (taken in proportion from each Workload Category)
<b>Cost assessment method</b>	Totex regression
<b>Cost adjustment mechanism</b>	For each workload category – calculated as difference between Baseline Workload and Outturn Workload multiplied by ex ante unit costs
<b>Cost adjustment frequency</b>	Once, at end of period
<b>Cost adjustment limits</b>	Maximum 2% increase. No limit on reductions
<b>Reputational measures</b>	Cost adjustments >2% downwards will require an explanatory report to be submitted.

- Do you have any initial comments or questions on the proposed mechanism?

Aligns with the targets agreed with the HSE – IMRRP is a decommissioning programme

Allows for a simpler mechanism

Maintains incentives to optimise engineering design to deliver efficient projects

- We sent SQ on June 17<sup>th</sup> requesting GDNs to present cost and volume data on basis of mains decommissioned for Tier 1 and Tier 2A mains replacement
- Data requested to be split out by material, technique and for 'mains decommissioned and not replaced'
- Data required to inform our approach to setting unit costs for Tier 1 mains PCD mechanism and Tier 2A volume driver

1. Initial analysis of data received

2. Comparison of allocation methodologies

3. Summary of issues raised by GDNs in SQ responses

4. Abandon only discussion

5. Next steps and ways forward



- Using the decommissioned data, we derived **industry-wide unit costs** (consolidated cost / workload) for the **12 workload activities**.
- This was done for GD1, GD2 and the total period.
- Our unit cost analysis included consideration of:
  - **Diameter band**
  - **Decommissioning activity**
  - **Replacement technique (insertion vs. open cut)**
  - **Material**
- This enabled us to assess unit costs at different levels of aggregation beyond the 12 workload activities proposed at DDs.
- In doing so, we considered:
  - Relative sizes (%) of the cost differentials between characteristics
  - Changes in cost differentials over time
  - Unit cost variation between GDN
- To calculate an industry average unit cost we followed the same methodology as for the synthetic unit costs in Draft Determinations – applying the same rules for removing outliers.

Average industry unit costs across the 12 workload activities (£/km)

			GD1	GD2	GD1 + GD2
Mains decommissioned and not replaced	All	≤3" 4"-5" 6"-7" 8"	Data redacted		
Mains decommissioned and replaced with PE pipe	Cast Iron & Spun Iron	≤3" 4"-5" 6"-7" 8"			
Mains decommissioned and replaced with PE pipe	Ductile Iron	≤3" 4"-5" 6"-7" 8"			

*GDN unit cost variation across the 12 workload activities proposed at DDs*

*£/km, bars represent max/min range of observations*

Chart redacted

- Allocating costs across the two materials plus abandon-only in GD1 shows a somewhat consistent level of overall unit cost variation between GDNs, albeit lower for cast/spun iron.

*GDN unit cost variation across the 12 workload activities proposed at DDs*

*£/km, bars represent max/min range of observations*

Chart redacted

- Looking forward to GD2, unit costs for abandon-only activities are expected to be similar across GDNs although only 3 GDNs reported costs under this category for GD2.

## Unit cost differentials

Characteristics	GD1	GD2	Total period
Replacement VS abandon-only*	27% higher than abandon-only	45% higher than abandon-only	34% higher than abandon-only
Ductile VS cast/spun iron*	9% lower than cast/spun iron	3% higher than cast/spun iron	nil
Open cut VS insertion**	68% higher than insertion	75% higher than insertion	70% higher than insertion

- **Replacement** activity unit costs are consistently higher than abandon-only activities. This differential is more significant in GD2.
- The impact of **pipe material** on replacement costs appears ambiguous based on new data. GD1 data may be affected by reporting issues (e.g. all replacement activity allocated to cast/spun iron).
- Unit costs for **open cut** replacements are consistently significantly higher than insertion.

\* Unit cost differential % values taken from analysis of the 12 workload activities

\*\* Average unit cost differential disaggregated by diameter band and technique only.

Unit cost differentials (% relative to baseline)

Diameter band	GD1	GD2	Total period
≤3"	Baseline	Baseline	Baseline
4"-5"	+ 14%	+ 22%	+ 17%
6"-7"	+ 65%	+ 78%	+ 69%
8"	+ 140%	+ 160%	+ 148%

- Unit costs increase with diameter bands on an industry-wide basis, with few exceptions.
- The rate of increase in unit costs grows with diameter band.

GDN unit cost variation across diameter bands only

£/km, bars represent max/min range of observations

Chart redacted

Chart redacted

- Industry average unit costs are slightly higher based on GD2 data with the exception of  $\leq 3''$ .
- Unit costs based on GD2 forecast data are more variable at higher diameter bands.
- Unit cost variation based on GD1 data is more stable across diameter bands.

Unit cost variations by technique and diameter band

£/km, bars represent max/min range of observations

Chart redacted

Chart redacted

- Across both price controls, unit costs are more variable for the open cut technique.
- The level of variability increases with diameter band.



- GDNs used a number of assumptions to fulfil the SQ.
- Generally, GDNs appear to have approached the SQ in similar ways, which gives us some confidence that the data can be used for comparative purposes (e.g. calculation of industry average unit costs).

### Workload Approaches

Generally, workload data appears comparable with a similar approach taken by each GDN. GDNs have good data on insertion volumes. Difference between total mains laid and mains laid via insertion is often assumed as open-cut.

Workload are informed by:

- lay:abandon ratio
- insertion:open cut ratio

2 out of 4 companies assumed zero abandon-only workload.

### Cost Approaches

Synthetic cost curves were used to map costs to decommissioned diameter bands as data was not often collected in this format.

Cost ratios were used to produce relative cost differences.

Abandon-only costs were estimated at 80-89% of insertion.

Those that make zero abandon-only workload assumptions made no associated cost assumptions.

Network Company	Workload	Costs
Cadent	<ul style="list-style-type: none"> <li>GD1 workloads have been allocated based on a top down analysis of the laid vs. abandon length.</li> <li>The insertion ratio is used to split between insertion and open-cut.</li> <li>Less assumptions applied to GD2 data.</li> </ul>	<ul style="list-style-type: none"> <li>GD1 costs based on a synthetic cost model to allocate costs by diameter and an assumption on the ratio of costs between abandon only, inserted and open cut.</li> <li>Less assumptions required for GD2.</li> </ul>
NGN	<ul style="list-style-type: none"> <li>Start with insertion, which data is available for.</li> <li>Open-cut is difference between total length laid and length laid by insertion.</li> <li>Abandon only is difference between total length abandoned and the sum of insertion and open-cut.</li> </ul>	<ul style="list-style-type: none"> <li>Allocated costs based on cost curves on a top-down basis.</li> <li>Assumed ratios for the relative cost differences between diameter band, materials and techniques.</li> </ul>
SGN	<ul style="list-style-type: none"> <li>Start with insertion, which data is available for.</li> <li>Open-cut is difference between total length laid and length laid by insertion.</li> <li>The remaining decommissioned length is split between insertion and open-cut.</li> </ul>	<ul style="list-style-type: none"> <li>Project sample and lay unit costs used to establish an estimated cost for each decommissioned band.</li> <li>Allocating costs between open-cut and insertion based on contractor rates.</li> </ul>
WWU	<ul style="list-style-type: none"> <li>Workloads are accurate.</li> </ul>	<ul style="list-style-type: none"> <li>GD1 costs mapped to decommissioned bands based on GD2 costing assumptions and insertion/open-cut workloads during GD1.</li> <li>GD2 data is a direct lift from internal model.</li> </ul>

The Networks provided Ofgem with feedback on data robustness and other related concerns. We outline these below:

- Because this data is not readily available, Networks may have used **different assumptions** to complete the data request. Additionally, the timescales required to do so were relatively short, potentially impeding quality checks. This could affect both the robustness of the data and the effectiveness of cross-industry comparisons.
- There is a concern regarding **engagement ahead of FDs**.
- Costs related to abandon-only projects (e.g. governor installations, reinforcement) are hidden as part of Totex solutions.
- **Abandonment-only activity is rare:**
  - Much of the data captured through the assumptions is where the abandoned length is a relatively small part of a wider project.
  - Most of this work was already undertaken pre-GD1.

**Recap:**

- Two of the four network companies assumed zero abandon-only workloads.
- Those that assumed no abandon-only activities did not cost abandon-only work.
- Those that did cost it assumed costs were 80-89% lower than insertion based on discussions with their contractors.
- During conference call on data request, networks ran through details of different types of abandon-only projects and highlighted potential issues on cost differences

**Questions for discussion**

- Do you consider abandon-only works should be captured separately in the PCD?
- Do you consider there to be a significant cost differential between abandon-only and insertion?
- Are there any additional concerns over the robustness of this data in particular?

## **Questions**

- Do you have any further thoughts on the proposed set of workload categories?
- For calculating industry average unit costs, what time period should we use? (GD1, GD2, GD1+GD2)
- Do you agree with the approach of setting GDN-specific unit costs on the basis of industry average + regional factor adjustments?

## **Next steps**

- Recap of actions from discussion
- Areas for further investigation

<b>Mechanism</b>	PCD
<b>Target</b>	Total service intervention volume
<b>Workload Categories</b>	4 (2 work types x 2 property types)
<b>Volume limits</b>	Any workload more than 10% over target allocated to NARM (taken in proportion from each Workload Category)
<b>Cost assessment method</b>	Totex regression
<b>Cost adjustment mechanism</b>	For each workload category – calculated as difference between Baseline Workload and Outturn Workload multiplied by ex ante unit costs
<b>Cost adjustment frequency</b>	Once, at end of period
<b>Cost adjustment limits</b>	No additional restrictions beyond workload limit
<b>Reputational measures</b>	Delivered workloads >10% below target will require an explanatory report to be submitted.

- Do you have any initial comments or questions on the proposed mechanism?

As set out in the DD, we propose to derive unit costs for Tier 1 services in the same manner as for mains.

**Unit cost variation for services** is shown in the figure below, without adjusting for regional factors.

Chart redacted

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<b>Mechanism</b>	Volume Driver
<b>Target</b>	None (baseline allowance and workloads set)
<b>Workload Categories</b>	3 (diameter bands)
<b>Volume limits</b>	None
<b>Cost assessment method</b>	Totex regression. Ex ante unit costs incorporate assessment of average service intervention costs
<b>Cost adjustment mechanism</b>	Difference between Baseline Cost Allowance and outturn value calculated based on ex ante unit costs for each Workload Category
<b>Cost adjustment frequency</b>	Annually, as part of AIP
<b>Cost adjustment limits</b>	None
<b>Reputational measures</b>	None

- Do you have any initial comments or questions on the proposed mechanism?



<b>Reopener window(s)</b>	1 (Jan-22)
<b>Expected trigger</b>	Sufficient clarity on scope, timing and costs of Tier 1 stubs once HSE review is complete
<b>Materiality threshold</b>	Standard 1% of average annual base revenues in either direction
<b>Requirements</b>	Submission must outline: <ul style="list-style-type: none"><li>• Needs case</li><li>• Scope, workload &amp; delivery profile (inc. outline to 2032)</li><li>• Well-justified costs</li></ul>

- Do you have any initial comments or questions on the proposed mechanism?

<b>Reopener window(s)</b>	1 (Jan-22)
<b>Expected trigger</b>	Sufficient clarity on level of costs for non-rechargeable diversions for <7 bar mains and associated services
<b>Materiality threshold</b>	Standard 1% of average annual base revenues in either direction
<b>Requirements</b>	Submission must provide robust evidence that the costs: <ul style="list-style-type: none"> <li>• Are efficient</li> <li>• Cannot be fully recovered from requesting 3<sup>rd</sup> party</li> </ul>

- Do you have any initial comments or questions on the proposed mechanism?

<b>Reopener window(s)</b>	3 (Jan-22, Jan-23, Jan-24)
<b>Expected trigger</b>	Material change to IMRRP costs due to either: <ul style="list-style-type: none"> <li>• Changes to GDN's Approved Programme (agreed by HSE)</li> <li>• Amendments to underpinning legislation</li> </ul>
<b>Materiality threshold</b>	Standard 1% of average annual base revenues in either direction
<b>Requirements</b>	Submission must include: <ul style="list-style-type: none"> <li>• Details of necessary changes</li> <li>• Full explanation of how HSE changes require these changes</li> </ul>

- Do you have any initial comments or questions on the proposed mechanism?

- Update to assessment of unit costs & methodology
- Other suggestions?

**AOB?**

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