

# **SRRWG – Wrap up**

## Resilience and QoS



5<sup>th</sup> May 2020

- Introductions and admin (10:00 – 10:15)

## **Resilience wrap up**

- Cyber resilience (10:15 – 10:35)
- Workforce resilience (10:35 – 11:00)
- Flooding, tree cutting, black start, and CNI (11:00 – 11:45)
- AOB (11:45 – 12:00)

## **Lunch (12:00 – 12:30)**

## **QoS Wrap up**

- Worst Served Customers – SSE and NPg (12:30 – 13:30)
- Planned interruptions – ENWL (13:30 – 14:00)
- Exceptional events (14:00 – 14:20)
- Short Interruptions (14:20 – 14:40)
- Target setting (14:40 – 15:00)
- VoLL (15:00 – 15:20)
- Guaranteed Standards (15:20 – 15:40)
- AOB and close (15:40 – 16:00)

## **Summary of working group discussions/position**

- DNOs already taking steps to maintain and improve cyber resilience.
- NIS regulations established in this space to increase overall cyber security and cyber resilience.
- Overall aim for RIIO-2 is that all network companies (including DNOs) maintain and prepare their systems so they are protected and can withstand an ever-evolving cyber-risk landscape.
- Each network company will have to perform a self-assessment against the Cyber Assessment Framework (CAF), and submit both a Business IT Security Plan and a Cyber Resilience Plan as part of the business plans.

## **Next steps**

- Propose to align ED2 with the other sectors (as discussed at earlier meeting)
- DNOs to develop cyber plans ready for submission as part of the business plans.
  - Ofgem's cyber team will be working with DNOs to discuss their plans.
- Ofgem's Cyber and RIIO teams will work together in assessing business plans and subsequent licence drafting.
- Ofgem expect there to be little wider stakeholder engagement on cyber resilience plans (question over the value that can be added by stakeholders). But there should be discussions between companies and across sectors.

## **Summary of working group discussions/position**

- Ambition is to increase transparency around steps DNOs are taking.
- There are a range of measures available to help with this
  - Workforce satisfaction, diversity/inclusion, mental health in the workplace.
- Important to ensure DNOs are taking steps to ensure resilience of current workforce, and plan for future changes.
  - Staffing profiles, skills shortages and/or changes in roles
- Need to avoid unnecessary regulatory intervention – we do not want to constrain companies in delivering effective resourcing strategies.

## **Next steps**

- Ofgem to consider how this should be taken forward.
- Initial view is to align with the other sectors and seek views on whether any further measures should be considered.
- All stakeholders to review metrics or external reporting that could be used to increase transparency.
- SSMC Questions – where do you think our focus should be?

## **Summary of working group discussions/position**

- Current metrics around flooding and tree cutting seem largely fit for purpose.
  - Some questions around the way costs are set (particularly for tree cutting).
  - Potential for either/both of these to be brought into a wider 'resilience' metric.
- Black Start and CNI arrangements largely fit for purpose.

## **Next steps**

- Ofgem to consider the positioning for the SSMC for each issue. Initial view at this stage is that ED1 approach will continue into ED2
  - That covers funding arrangements and any 'outputs' such as a resilience metric.
- SSMC: what are your thoughts on the questions to ask – i.e. should the focus be on outputs, reporting metrics, funding?

**Lunch**

# Worst Served Customers

**Author:** Greg Farrell



INTERNAL



## Existing Worst served customers incentive

- Worst Served Customers (WSC) are defined as:

***A customer experiencing a total of 12 or more higher voltage interruptions over a three year period and a minimum of three higher voltage interruptions in each year during the three year period.***

- The four fast track DNOs have differing spend allowances per customer and improvement criteria compared to the slow track DNOs.
- SSEH do not have a WSC allowance as they have separate funding for WSCs through Ex-Ante Allowance.



## Existing worst served customer incentives are ineffective

Licence condition: CRC 3H	Annual allowed expenditure on WSCs to-date (TIM neutral) (£m, 12/13 prices)													Allowed spend / qualifying criteria		
Term in Licence condition: WSCC	31-Mar-2016	31-Mar-2017	31-Mar-2018	31-Mar-2019	31-Mar-2020	31-Mar-2021	31-Mar-2022	31-Mar-2023	DNO	Total spend of WSCs approved to-date	Available allowance for WSCs in RIIO-ED1	Remaining available allowance in RIIO-ED1	% of allowance approved to-date	Maximum allowed spend per customer on WSC projects	Required interruption performance improvement over a 3-year period to qualify for the WSC funding	Anticipated RIIO-ED1 approved WSC expenditure at current run-rate
	0.1	0.3	0.7	-	-	-	-	-	ENWL	1.1	3.4	2.3	31.5%	£1,000	25%	2.9
	-	-	-	-	-	-	-	-	NPgN	0.0	2.7	2.7	0.0%	£1,000	25%	0.0
	-	-	-	-	-	-	-	-	NPgY	0.0	4.2	4.2	0.0%	£1,000	25%	0.0
	0.1	0.1	0.1	-	-	-	-	-	WMID	0.2	14.7	14.5	1.5%	£800	20%	0.6
	0.2	0.1	0.1	-	-	-	-	-	EMID	0.4	6.9	6.5	5.5%	£800	20%	1.0
	0.1	0.9	0.0	-	-	-	-	-	SWALES	1.0	2.6	1.6	39.3%	£800	20%	2.6
	0.0	0.2	0.1	-	-	-	-	-	SWEST	0.4	3.1	2.7	11.9%	£800	20%	1.0
	-	-	-	-	-	-	-	-	LPN	0.0	0.2	0.2	0.0%	£1,000	25%	0.0
	0.0	0.4	0.0	-	-	-	-	-	SPN	0.5	7.4	6.9	6.3%	£1,000	25%	1.2
	0.0	0.2	0.1	-	-	-	-	-	EPN	0.3	10.7	10.4	3.3%	£1,000	25%	0.9
	-	-	0.0	-	-	-	-	-	SPD	0.0	5.0	5.0	0.4%	£1,000	25%	0.0
	-	-	0.0	-	-	-	-	-	SPMW	0.0	2.2	2.2	1.1%	£1,000	25%	0.1
	-	-	-	-	-	-	-	-	SSEH	-	-	-	-	£1,000	25%	-
	0.5	-	0.3	-	-	-	-	-	SSES	0.8	7.5	6.7	10.7%	£1,000	25%	2.1
									All DNOs	4.7	70.6	65.9	6.7%			12.6
Allowed expenditure source	<a href="https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-financial-model-following-annual-iteration-process-2018">https://www.ofgem.gov.uk/publications-and-updates/riio-ed1-financial-model-following-annual-iteration-process-2018</a>															

- 77% increase in the number of customers off supply >24 hours since 2015-16.
- £5.8m spent on WSC schemes in RIIO-ED1 to date (12-13 prices).
- Anticipate c£12.6 being spent on worst served customers in ED1

## Options for amending the WSC incentive going forward

1. Keep as is (in terms of non SSEH incentive)
  - Ineffective
2. Amend
  - Either to amend parameters of existing WSC scheme or to reconstitute scheme
  - Options explored overleaf
3. Drop altogether
  - Would appear a difficult sell in the face of increasing quantum of poor performance (albeit affecting a smaller population)

## OPTON 1: Amend WSC parameters

- If we were to continue with the current scheme we might like to:
  - Vary the parameters of the current scheme:
    - Reduce the threshold from 12 to 9 or 6
    - Change the length of the qualifying period or the monitoring period
    - Change the required level of improvement from 25%
    - Revise the allowance per customer from £1,000
  - Consider including LV interruptions in the incentive – Smart Meters should give us improved information on customers are suffering repeated faults at all voltages
- However this form of incentive scheme would remain administratively burdensome

## OPTON 2: Ex-Ante Allowance

- In their Business Plan SSEH state
  - *In developing their thoughts for RIIO ED1, Ofgem invited DNOs to bring forward their own proposals for addressing Worst Served Customers, recognising that the current arrangements were not sufficiently effective in incentivising significant investment or improvements in reliability for these customers. In creating our investment plans for Worst Served Customers we have considered where we should improve reliability, and which areas of our network are worst affected.*
- Quote from Final Determination
  - *All DNOs other than SSEH have a ‘use it or lose it’ allowance to address customers deemed to be worst served in terms of reliability. SSEH has several schemes relating to worst served customer performance funded as part of its ex-ante allowance. It does not therefore have the wider worst served customer mechanism.*
- In their Business Plan SSEH proposed spending £25m on four specific schemes to benefit 3,400 WSC.
- Ofgem allowed £18m, which still equates to £5,300 per customer
- SSEH provided reductions in CI/CML targets to align with the IIS improvement from these specific investments
- Specific CBAs were provided in business plan for 6 WSC schemes (4 providing benefit, and 2 rejected by SSEH to demonstrate appropriate evaluation)

## OPTON 3: Fold into IIS

- It is possible conceptually to merge the WSC scheme with IIS to have one overall incentive for interruptions
- Currently in the calculation of IIS payments planned interruptions are weighted so they have only half the impact of unplanned
- A similar weighting system could be introduced so that, for example, the second interruption a customer suffers in a year would have double the weight of the first, the third would have triple etc.

	Weighting	Benchmark	Weighted Score
0 higher voltage interruptions	1	1,671,210	1,671,210
1 higher voltage interruption	20	383,273	7,665,464
2 higher voltage interruptions	30	107,808	3,234,240
3 higher voltage interruptions	50	35,512	1,775,580
4 higher voltage interruptions	70	14,758	1,033,074
5 higher voltage interruptions	100	6,429	642,860
6 higher voltage interruptions	150	3,176	476,460
7 higher voltage interruptions	200	953	190,520
8 higher voltage interruptions	350	829	290,080
9 higher voltage interruptions	500	227	113,500
10 higher voltage interruptions	750	97	72,900
More than 10 higher voltage interruptions	1000	114	114,400
		<b>2,224,386</b>	<b>17,280,288</b>

- The obvious disadvantage with this type of scheme is that it would make the calculation of IIS payments very complex, increasing the difficulty of calculation and audit



# Planned supply interruptions in IIS

Considerations for ED2

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- To ensure full consideration for sector specific methodology consultation we would like to cover Planned Supply Interruptions (PSIs)
- For completeness this pack aims to cover two broad areas:
  - PSIs in ED1 (status quo)
  - and possible areas of amendment for ED2
- The pack is to explore options and does not to present preference at this stage  
... but early indication from our customer and stakeholder engagement is that planned supply interruptions are a priority area for customers and consumers.



- Set out in Special Licence Condition 2D.

2D.17 In the formula for the  $QA_t$  term above:

$TA_t$  (*the target interruptions term*) means the target for the number of Customers interrupted for Regulatory Year  $t$  and is derived in accordance with the following formula:

$$TA_t = TAP_t + TAU_t$$

where:

$TAP_t$  means the target for the number of pre-arranged Customers interrupted for Regulatory Year  $t$  and is derived in accordance with the following formula:

$$TAP_t = \frac{CIB_{t-4} + CIB_{t-3} + CIB_{t-2}}{3} \times 0.5$$





- The actual planned interruption term is defined as:

$CIB_t$  (*the pre-arranged interruptions term*) is the number of Customers interrupted per year arising from pre-arranged incidents on the licensee's Distribution System in Regulatory Year  $t$  and is derived from the relevant formula in the RIGs.

- Equivalent calculations apply for duration of interruptions.



- Currently in ED1 PSIs are incentivised based on:

## Planned supply interruptions

50% weighting of that given to  
unplanned supply  
interruptions

Set based on a 3 year rolling  
average based on the DNOs'  
own performance

- This gives rise to the following:
  - The current weighting sets an economic level at which alternative methods of mitigation (e.g. generation) can be considered
  - Over the long run, DNOs receive their own performance back as targets, i.e. there is no benchmarking
  - There is no explicit read across to the cost assessment process (where PSI mitigation costs will reside)

# Planned Supply Interruptions in ED1



	RIIO-ED1									
	Customer Interruptions					Customer Minutes Lost				
	2015-16	2016-17	2017-18	2018-19	Average	2015-16	2016-17	2017-18	2018-19	Average
LPN	0.57	0.37	0.25	0.24	0.36	1.10	0.91	0.68	0.57	0.82
EMID	1.95	1.82	1.75	1.76	1.82	3.32	3.04	2.87	3.29	3.13
SPN	2.24	2.38	1.98	2.34	2.24	4.87	5.42	4.32	5.14	4.94
SPD	3.10	2.22	2.06	2.13	2.38	7.98	5.95	6.56	4.77	6.31
NPgY	3.09	2.36	2.60	2.11	2.54	7.57	5.69	5.82	6.18	6.32
SSES	2.61	3.43	3.32	2.92	3.07	6.15	8.20	6.58	7.37	7.08
ENWL	3.25	3.56	3.78	1.87	3.12	8.12	8.74	10.06	4.69	7.90
EPN	2.87	3.12	3.33	3.86	3.29	7.53	8.49	9.00	10.53	8.89
SPMW	4.38	3.66	3.40	3.27	3.68	7.52	9.79	8.88	10.52	9.18
WMID	4.17	5.76	4.73	5.13	4.95	11.25	12.54	11.35	10.93	11.52
NPgN	5.93	5.94	4.22	3.78	4.97	13.60	14.76	9.50	8.52	11.60
SWALES	7.14	7.33	7.24	6.76	7.12	14.34	11.51	11.03	10.63	11.88
SWEST	6.99	8.29	7.67	6.89	7.46	17.05	19.10	17.39	15.69	17.31
SSEH	6.19	11.04	10.88	8.60	9.18	11.27	23.53	24.51	18.62	19.48

All DNO IIS Performance on Planned Interruptions, all figures unweighted

- The data shows the range on both CIs and CMLs is large for PSIs
- As a sector the trend on PSIs is inconsistent



- Based on the current methodology this promotes two broad areas for consideration:

### Weighting

- Does 50% of unplanned still make sense/is justifiable?

### Target setting

- Is a 3 year rolling average of DNOs own performance still appropriate?



- There would seem four broad options for weighting:

Options	Comments
<b>Keep as is (50% of unplanned)</b>	<ul style="list-style-type: none"><li>• Simple &amp; known</li><li>• Does drive reduction in PSI to a point of efficiency</li><li>• Was justified from customer insight</li></ul>
<b>Reduce (below 50% of unplanned)</b>	<ul style="list-style-type: none"><li>• Reduce the incentive on PSIs as customers can mitigate impact</li><li>• Potentially removes distortion in mitigation costs</li></ul>
<b>Increase (above 50% of unplanned)</b>	<ul style="list-style-type: none"><li>• Could drive increased mitigation to avoid PSI</li><li>• At 100%, would remove distinction and simplify mechanism</li><li>• Gives greater incentive to avoid disruption to customers</li></ul>
<b>Differential based on customer impact</b>	<ul style="list-style-type: none"><li>• Reflect the relative impact on the customer</li><li>• Increase incentive and threshold for mitigation cost where the benefit is most needed</li><li>• More complex to develop and assess</li></ul>

- How should these be assessed through customer WTP?
- Should the PSI rate continue to be a function of the unplanned rate?



- Possible options for PSI target-setting in ED2;

Options	Comments
<b>Rolling targets as-is</b>	<ul style="list-style-type: none"><li>• Simple &amp; known</li><li>• Has driven improvement in PSI performance</li><li>• Averaging protects from single year variation</li><li>• No benefit for comparative performance</li></ul>
<b>Fixed based on company own recent performance</b>	<ul style="list-style-type: none"><li>• Simple</li><li>• No flexibility for annual variation</li><li>• No benefit for comparative performance</li></ul>
<b>Some form of benchmarking (median/customer?)</b>	<ul style="list-style-type: none"><li>• Comparative performance assessed</li><li>• More complex</li><li>• Converges method of target setting with unplanned</li></ul>
<b>Company-volunteered based on stakeholder and customer engagement</b>	<ul style="list-style-type: none"><li>• Clear link to customer and stakeholder views and enhanced engagement</li><li>• More complex</li><li>• Could give rise to very different regional experience</li><li>• Challenging to assess differential costs to DNOs in cost assessment</li></ul>



## Weighting

- **Does 50% of unplanned still make sense/is justifiable?**
  - Keep as is (50% of unplanned)
  - Reduce (below 50% of unplanned)
  - Increase (above 50% of unplanned)
  - Differential based on customer impact

## Target setting

- **Is a 3 year rolling average of DNOs own performance still appropriate?**
  - As is
  - Fixed
  - Benchmarked
  - Company-volunteered

...Plus any others discussed on the call today.

## **Summary of working group discussions/position**

- Severe weather exceptional event mechanism is broadly fit for purpose.
  - Questions over whether the threshold level should be revised, if it is right that events are binary (i.e. exceptional or not), and how end times should be calculated.
  - Also considered if all performance during events should be excluded (rather than just weather-related faults), or if storm performance should be substituted with a view of average performance.
- Other exceptional event mechanism is less clear
  - Threshold levels may not be appropriate (more true for some DNOs than others).
  - Role/purpose of the mechanism also discussed.

## **Next steps**

- Initial view at this stage is to retain SWEE mechanism as it was for ED1. Thresholds will be updated based on recent performance.
- Less certainty about the role of OEE mechanism; keen to get views from stakeholders.
- SSMC questions likely to be fairly open around OEEs.



## **Summary of working group discussions/position**

- Lots of discussion around whether overall CI/CML improvements are coming at the expense of worsening short interruptions performance.
- Quality and consistency of data on short interruptions means understanding overall performance changes and impact on customers is difficult.
- If the IIS can drive performance improvements through CI/CML changes, why not introduce something similar for short interruptions?
  - Considered whether this would introduce a metric in a similar way to CIs, or look at reducing multiple short interruptions.
- Agreed that customer expectations in this space are still unclear – need to understand what customers value and are willing to pay for in relation to reliability.

## **Next steps**

- Bare minimum approach is to improve quality and consistency of short interruptions reporting across the DNOs.
  - Template improvements are being developed to build this picture over the last few years of ED1.
- Initial view at this stage – not clear what level of performance improvements (if any) we should be looking to achieve. Evidence case for an incentive still needs to be built.

## **Short interruptions reporting - UKPN**

- Identified that short interruptions are something that needs exploring, both in terms of the impact on consumers and their willingness to pay, as well as the availability of relevant data.
  - There is a general understanding of the impacts on customers of short interruptions, and a perception that the impacts are possibly increasing.
  - WTP research may be required to understand this in more detail.
- The results of the “Short short ints suvey” show that there is some common ground on data availability, but work is needed to ensure consistency of reporting
  - Most DNOs capture the data, but some might require manual intervention to allow fuller reporting
  - G43 seems a popular way of categorising data
  - The template that was circulated needs further development and testing using 2019/20 data if possible (to identify which short interruptions are part of a wider fault, and which are auto-recloses)
- How is this taken forward? Proposal that this is done through the ED1 QoS working group.

## **Summary of working group discussions/position**

- ED1 methodology is, broadly, effective at setting ambitious targets.
  - There are some minor errors in the spreadsheets which have since been corrected.
- Alternative methodologies may be available and could continue to keep DNOs focusing on reliability.
  - These would have some known issues – comparability of performance, complexity etc.
- Some tweaks to existing methodology may offer some scope for change
  - For example – new CML methodology, LV disaggregation
- Should there continue to be a focus on an 'average' level of performance for DNOs? And should performance converge over time?

## **Next steps**

- Initial view at this stage is that the existing methodology (with corrections) should be rolled forward.
  - Performance improvements in ED1 (and end of DPCR5) mean targets for ED2 look challenging.
- Questions remain around whether targets/performance should converge over time, and approach to setting targets for CMLs.

## **Summary of working group discussions/position**

- Existing measure of VoLL based on 2008 customer expectations.
- VoLL underpins IIS incentive rates, as well as NARM and CBA methodologies.
- Worth considering whether ED1 VoLL is still applicable to current (and future customers).
- A more reflective VoLL can be derived from updated studies (Impact Research and Frazer Nash).
- Disaggregation of customer types can give more reflective values.
  - Similarly, updating ED1 VoLL for inflation brings the single biggest change.

## **Next steps**

- Consider options for how to update VoLL for ED2.
- Initial view is that we will use the SSMC to test options, including updating for inflation, further disaggregation (domestic: SME ratios and urban/rural split), and/or regional values.
- Keen to understand the views of wider stakeholders.

## **Summary of working group discussions/position**

- GS are more or less fit for purpose; the main changes that need to be made are to the statutory instrument.
- Payment levels for all standards will need to be updated to reflect the new price base
- All standards (bar two) are now automatic

## **Next steps**

- Consider options to update payment levels
  - Alignment with GD may be the starting point.
- Further thoughts welcomed on making payment of all standards automatic.

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**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.**