

# Safety, Resilience, and Reliability Working Group - Resilience



03/03/2020

- Introductions and actions review (10-10:15)
- Workforce resilience(10:15-11:30)
- Cyber Resilience (11:30-13:00)
- Lunch (13:00-13:30)
- Climate Change Adaptation (13:30 – 15:00)
- AOB, Actions review, and close (15:00-15:30)

Conference call details:

Dial: 0800 376 8224

PIN: 82957238#

## Ofgem RIIO-1 Sector Methodology Decision

### Proposals

- Network companies have a responsibility to attract, develop, and retain a sustainable workforce; failure to do so could result in poor customer service and/or networks becoming less reliable/more costly in the future.
- Companies should submit a sustainable workforce strategy as part of the Business Plans
  - This should extend beyond RIIO-2, and cover both direct labour and the supply chain.
  - Should look to improve workforce diversity, promote multi-skilling and increased productivity, and reflect the more advanced technology skills needed to support the energy system transition.
- Companies were encouraged to collaborate to establish a common approach to encouraging school/college leavers and/or technical graduates into the industry.
- Where plans are considered robust, proportionate and efficient, costs associated with delivering these plans could be funded as part of revenue allowances; uncertainty could be addressed through indexation of RPEs.
- Sought views on measures that could be used to hold companies to account.

## Ofgem RIIO-1 Sector Methodology Decision

### **Decision**

- Companies should plan to deliver a modern, diverse, high quality, and well-trained workforce fit for the future.
  - This should form part of the regular Business Plan submissions.
- We decided not to include any additional funding, output measures, or incentives for workforce resilience in the RIIO-2 framework.
- We were concerned that setting workforce targets would represent unnecessary regulatory intervention and potentially constrain companies in delivering effective and efficient resourcing strategies; this could lead to a drive towards sub-optimal outcomes.



# Workforce resilience

Ofgem – March 2020



# HSL report: Review of SAP and CP roles – Support for the Energy Networks Association

Challenge	Opportunity for improvement
Provision of resources especially in relation to numbers and workload of SAPs	Demonstration of genuine care & promotion of fairness & trust
Acknowledge the potential for fatigue & the impact this can have on performance	Review fatigue risk management practices and accident investigation processes

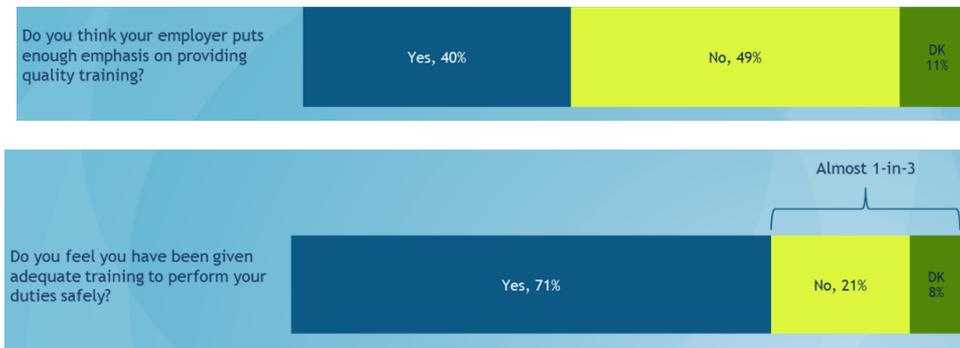
# Workforce satisfaction

- **Why?** Morale getting worse.
- “It appears that cost savings are the highest priority ... rather than focusing on the welfare of staff, safety and general running of the company.”
- **How?** A workforce survey drawn up in consultation with relevant workforce representative; core of consistent questions; independently benchmarked

# Workforce development & renewal



- **Why?**



- **How?** Ring-fenced funding pot provided on a 'use it or lose it' basis; companies required to submit details in business plans; report annually on actual levels of spending.

# Workforce diversity & inclusion

- **Why?** Women account for 12% of engineers & 7.4% of apprentices and just 6% of engineers are BAME. Net zero workforce needs 400,000 new & existing roles – 117,000 by 2020.
- **How?** Increase proportion of women in workforce to 40% & BAME workers to 10% by 2030. Commit to progressive reduction of gender pay gaps progressively through RIIO-2 lifespan

# Health & safety

- **Why?**



- **How?** Reduce work-related stress & mental health absences by more than HSE whole economy target of 5% by 2025. Measure & report annually on working hours lost due to work-related absence or illness.

# Dignity at work: good for business



- A culture of respect and engagement
- Fatigue and working time
- Stress
- Equality, diversity and inclusion
- Training & development
- Pay

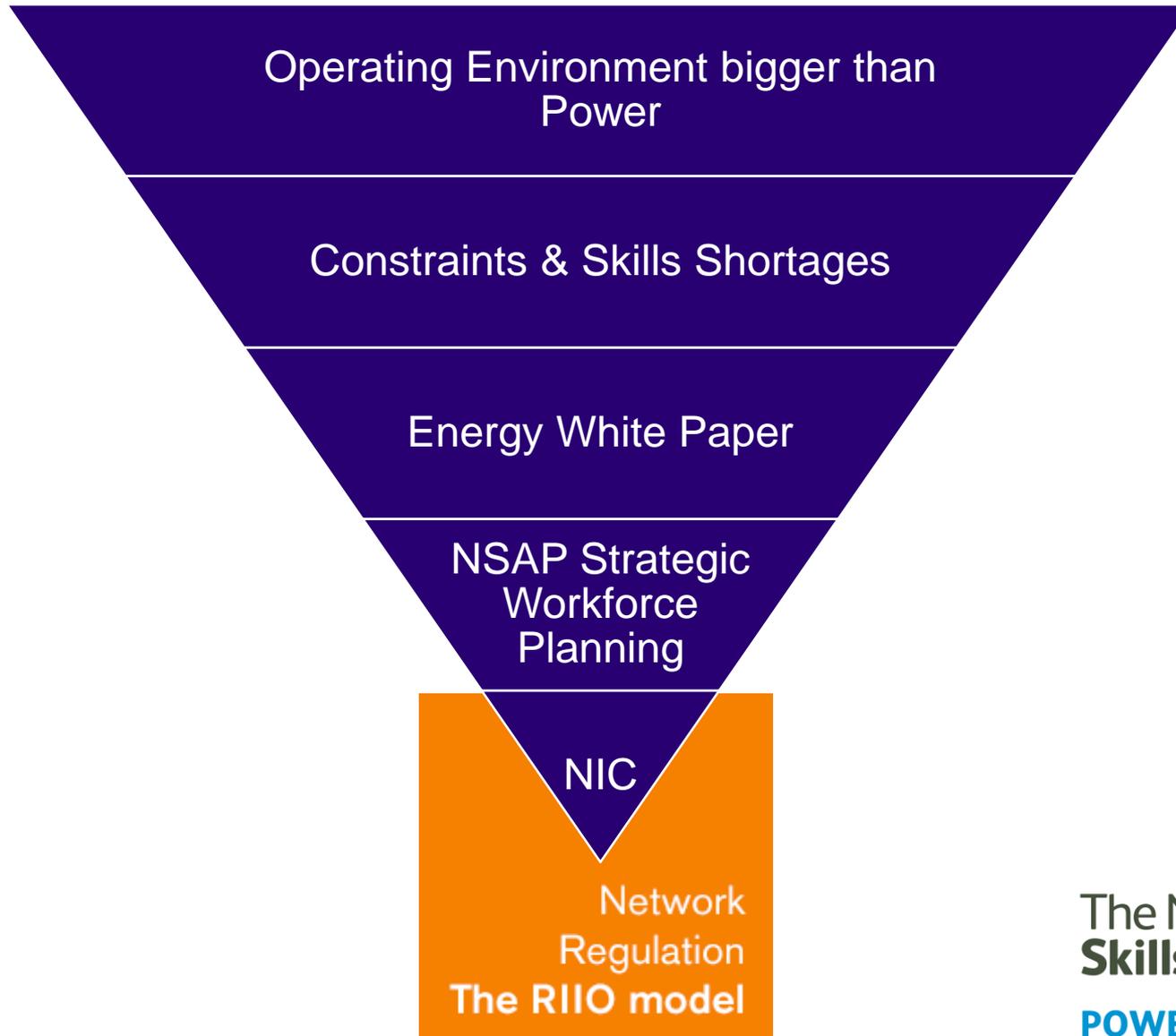




# WORKFORCE RESILIENCE – A KEY COMPONENT OF RII02

2<sup>nd</sup> March 2020

# Workforce Resilience through a statutory lens...



# So What does our analysis tell us...?



... and how do we adapt to the future?





# THANK YOU

Steve Barrett

Director of Strategic Accounts



ENERGY &  
UTILITY SKILLS

# Northern Powergrid thoughts on resilience in ED2

Safety, Resilience and Reliability ED2 working group

3 March 2020



# Resilience is a key priority for both Northern Powergrid and its stakeholders...that won't change

- Resilience was a major theme in our ED1 business plan, and will be for ED2
- Our CEG will scrutinise our proposals for resilience
- We hold ourselves accountable to our stakeholders for the delivery of our ED1 commitments
- We have been actively addressing workforce resilience for a decade
- Cyber resilience is a cross cutting theme throughout our organisation
- As such, it isn't clear that an overarching resilience output is necessary... or possible
- But it is an area that Ofgem should scrutinise in business plans
- Stakeholders/consumers have the base expectation that we are highly resilient, whether that be to cyber threat, physical attack or climate change. They expect that we are able to respond and maintain supplies whatever is affecting them and/or us.
  - For cyber GDPR gives authorities the power to fine non-compliant organisations €20 million (about £17.5 million) or 4% of global annual turnover, whichever is greater.
  - The reputational impact of suffering either short or prolonged outages as a result of external threat is very real
  - The DNOs would “feel” the impact through several of the existing incentive arrangements

# The challenge to remain resilient to the challenges presented by an ageing and changing workforce is nothing new; it's hard coded into the Licence...

## Condition 30. Availability of resources

### General obligation

- 30.1** The licensee must at all times act in a manner designed to ensure that it has available to itself such resources, including management and financial resources, personnel, fixed and moveable assets, rights, licences, consents, and facilities, on such terms and with all such rights, as will enable it to:
- (a) properly and efficiently carry on its Distribution Business; and
  - (b) comply in all respects with its obligations under this licence and such obligations under the Act as supply to the Distribution Business, including its duty to develop and maintain an efficient, co-ordinated, and economical system of electricity distribution.

# The challenge to remain resilient to the challenges presented by an ageing and changing workforce is nothing new; it's hard coded into the Licence...

## Certificate for the Authority in relation to operational resources

**30.4** With effect from 1 August 2013, the licensee must by 31 July each year give the Authority a certificate that has been approved by a resolution of the licensee's board of directors and signed by a director of the licensee pursuant to that resolution and is in one of the following forms:

(a) **Certificate 1R**

"After making enquiries the licensee's directors have a reasonable expectation that the licensee will have sufficient operational resources including management, personnel, fixed and moveable assets, rights, licences, consents, and facilities available to itself to enable the licensee to carry on the Distribution Business for a period of 12 months from the date of this certificate."

OR

(b) **Certificate 2R**

"After making enquiries, and subject to what is explained below, the licensee's directors have a reasonable expectation, subject to what is explained below, that the licensee will have sufficient operational resources including management, personnel, fixed and moveable assets, rights, licences, consents and facilities available to itself to enable the licensee to carry on the Distribution Business for a period of 12 months from the date of this certificate.

However, the directors of the licensee would like to draw attention to the following factors, which may cast doubt on the licensee's ability to carry on the Distribution Business [followed by a description of the factors concerned]."

OR

(c) **Certificate 3R**

"In the opinion of the licensee's Directors, the licensee will not have sufficient operational resources including management, personnel, fixed and moveable assets, rights, licences, consents, and facilities available to itself to enable the licensee to carry on the Distribution Business for a period of 21 months from the date of this certificate."

## ...and it has been well managed both by DNOs and Ofgem's regulatory framework over the last decade as part of a gradual transition

- Ofgem should continue to place the onus on DNOs to ensure they have resilient workforce plans.
  - Publication of these plans can be required as part of the business plan.
  - The government has also put in place a funding mechanism for apprenticeships, funded by its apprenticeship levy, which gives DNOs a further commercial incentive to train new staff.
- If Ofgem has concerns that workforce funding might be vulnerable to short-term cost-cutting, Ofgem could employ a use-it-or lose it approach, as was the case at DPCR5.
- However we note that:
  - this has disadvantages in terms of introducing distortions into the totex approach to costs, and we do not think it is necessary as long as Ofgem incentivises companies to minimise their long-term costs; and
  - **the evidence from ED1, where workforce renewal was funded as part of totex, gives no indication that this expenditure has been systematically exposed to cost cutting.**
- Company expenditure during the ED1 period to date on operational training, which includes the cost of renewing the workforce. Shows that overall expenditure for the sector is within 2% of the plans companies set out.
- In the context of cost allowances that were well below those company plans, on average, this does not indicate damaging cost cutting.

	Business plan	Actual	Difference
ENWL	25.6	20.2	-21%
NPg	34.7	35.2	+1%
WPD	93.7	112.2	+20%
UKPN	66.5	51.6	-22%
SP	47.9	38.6	-19%
SSE	32.0	36.3	+13%
<b>Total</b>	<b>300.3</b>	<b>294.1</b>	<b>-2%</b>

# Cyber security is ‘baked into’ many of the existing regulatory mechanisms...Ofgem doesn’t need to build something in to RIIO-ED2

- Strong incentives on customer satisfaction and reliability and availability have, as a bi-product, incentivised investment in cyber security
  - BMCS: continuous investment in improving data resilience through server protection
  - IIS: improvement in control centre and network security, particularly given smart grid technology
- A regulator exists has been established with a remit covering security of network and information systems
- GDPR jeopardy has also driven us to improve cyber resilience

*The EU Directive on security of network and information systems (2016/1148) (NIS Directive) was transposed into UK law as The Network and Information Systems Regulations 2018 (“NIS Regulations”) and came into force on 10 May 2018 for the water, health, transportation, digital and energy sectors. The NIS Regulations impose new duties on Operators of Essential Services (“OES”) and give relevant Competent Authorities (“CAs”) new powers and responsibilities to ensure OES are meeting those duties.*

*Ofgem have been designated in the NIS Regulations as a joint CA with the Department for Business, Energy and Industrial Strategy (“BEIS”), for the Downstream Gas and Electricity sectors in Great Britain.*

*OES are those gas and electricity operators which are determined by thresholds defined in the NIS Regulations and those determined by BEIS.*

*This guidance helps OES to understand their new duties and sets out Ofgem’s initial approach to the implementation of the NIS Regulations. The guidance is the first in a developing strategy.*

**NIS Directive and NIS Regulations 2018:  
Ofgem guidance for Operators of Essential Services  
November 2018**



## We already report to, and work with, a number of regulatory bodies on climate change adaptation, Ofgem is right to avoid duplicating effort

- We report to Defra on our plans/actions that we're taking to adapt to climate change as well as our progress against them.
- The next report is due in early 2021 and although it is not mandatory for us to report all DNOs have committed to issuing a report to DEFRA, these reports then form part of national climate change adaptation report
- The Energy Sectors plans are already well regarded.
  - The Adaptation Committee (of the Committee on Climate Change) scores of adaptation priorities of the energy sector as 8 out of 9 (within the CCC's 2019 report on Progress in preparing for climate change).
- Met office updated their climate change predictions in 2018 and 2019 – this updated science is likely to feature in all of our plans.
- Off the back of that climate data the EA will update flood risk maps which will provide the opportunity to ensure that we maintain our defences in line with the latest science.
- Vegetation Management is a key part maintaining resilience and volumes of work are significantly impacted by Climate Change but ensuring that are activities are not affected by vegetation is a fundamental aspect of compliance with ESQCR.

## Ofgem RIIO-1 Sector Methodology Decision

### **Proposals**

- Consider Cyber Resilience costs that are efficiently incurred as a direct result of the introduction of the NIS, and that are above BAU costs.
- All network companies to develop and submit strategic investment plans for cyber resilience.
  - Must set out the steps they propose to take during RIIO-2 (in addition to improvements identified against the Cyber Assessment Framework)
- Costs associated with strategic investment plans should form part of the Business Plan submissions.
- Ofgem propose to fund these through an ex ante 'use-it-or-lose-it' allowance where they are considered appropriate, proportional, and efficient
  - If strategic plans are not submitted by December 2019, funding for these operators could be considered through a reopener
- Deviation from the plans (without Ofgem's approval) may result in a 'claw back' of associated funding

## Ofgem RIIO-1 Sector Methodology Decision

### Decision

- Under NIS Regulations, network companies must take appropriate and proportional technical/organisational cyber security measures to manage risks posed to the security of the network and information systems.
- We do not expect either the Business IT Security Plan or the Cyber Resilience Plan to include the cost of general technology refresh/end of life replacement
  - These should form part of more general system investment plans which should already include appropriate cyber security measures.
- When submitting these plans (which should include efficient, appropriate and proportionate measures to deliver necessary enhancements to the overall security and resilience of the systems), a clear and coherent strategy with a robust risk-based approach to assessing and managing risk must be taken.
- In providing ex ante allowances, we will consider the extent to which these plans are efficient, appropriate, and proportionate.
- A mid-period reopener mechanism will be included to deal with uncertainty – designed to cover new risks/threats and new statutory/regulatory requirements, and will cover both plans.
  - We will consult on the materiality threshold to be used for this reopener as part of the Draft Determinations.

# Lunch

National Infrastructure Commission (NIC) are currently undertaking research on infrastructure resilience. This study is encompassing multiple strands of analysis, to look at how infrastructure resilience can be assessed and improved and what action government should take to ensure infrastructure can cope with future changes, disruptions, shocks and accidents.

The NIC have asked for views on 6 questions, detailed below, on topic of managing infrastructure interdependencies which are relevant for our discussions.

### **Working with other sectors and dependencies**

1. Do you work with other sectors to improve the resilience of your own infrastructure system? If so, can you provide an example(s) and if not, why?
2. What range of things do you do to understand and address the current and future vulnerabilities in the physical networks that arise from cross-sector dependencies and interdependencies? This might include collaboration, data gathering and sharing, peer review, shared R&D, shared responsibilities, MoUs, modelling and analysis, service level agreements. What else would you like to be able to do, and what are the barriers to that?

### **Timeframes**

3. What time horizons do you typically use when planning investment in your infrastructure system? Do you think the planning horizons you use promote resilience?

### **HLIPs**

4. How do you prepare for high impact but infrequent hazards or failures?

### **Systems**

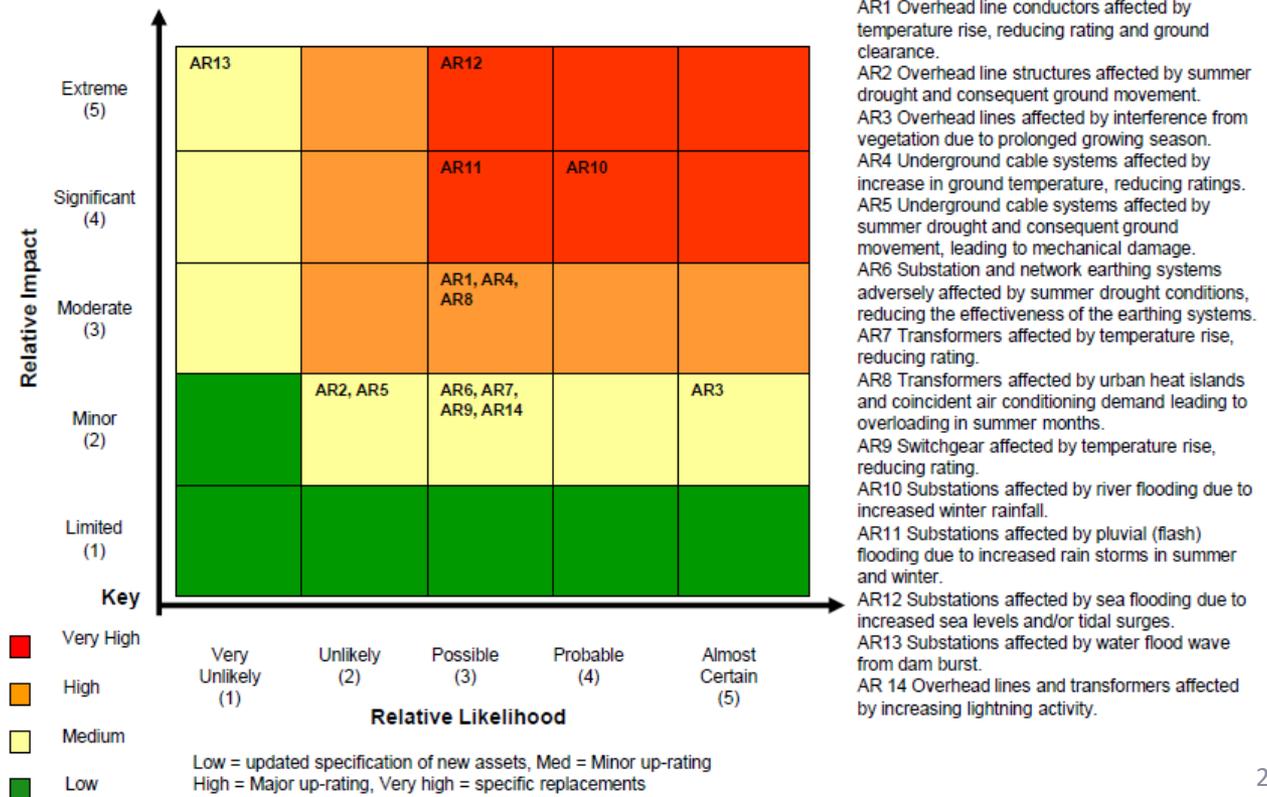
5. Are there any examples of methods/tools/incentives used within your sector that support optimisation/resilience planning across infrastructure systems?

### **Efficiency**

6. Can you give examples where resilience and efficiency are directly in tension and/or examples where the objectives of efficiency and resilience have both been met?

- Top three risks are:
  - AR10 - river floodir
  - AR11 – pluvial floc
  - AR12 – sea floodir

**Risk Matrix Showing Overall Impact (Refers to UKCP09 projections for the end of the century assuming a High Emissions Scenario and 90% probability level and no adaptation measures taken)**



**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.**