

## Engagement in support of NOMs Methodology

Stakeholder	Engagement	Date
Citizens Advice	Webinar	26/01/18 & 01/03/18
Environmental Agency & Scottish Environment Protection Agency (SEPA)	Webinar	07/03/18
Gas Distribution Networks	Meeting	01/05/18
Distribution Network Operators	Webinar	09/03/18
HSE	Meeting	10/01/18
ETO (NG)	Meeting	05/03/18

Citizens Advice	Webinar	01/03/18
When will the consultation be live?	The consultation will be live from 3 <sup>rd</sup> April 2018 to 18 <sup>th</sup> May 2018.	
Is the probability of failure externally audited?	During the initial model build process, we commissioned PIE consultants to validate the outputs. A validation plan will also be produced and submitted to Ofgem for another layer of verification. The outputs of the methodology will be used for Asset Health investment planning.	
How do the results from the old methodology compare to the new one?	The new methodology has a number of benefits. Principally it allows better justification of investment with greater transparency in reporting the benefits against the investments made. This will allow Ofgem and stakeholders greater visibility to assess whether we are delivering best value from our asset investments. The new methodology also allows us to add a number of constraints to the model (e.g. cost to consumers). We therefore don't expect to see a large impact on costs to consumers unless this has been agreed with stakeholders.	
What impact does this have on customers?	The methodology allows us to understand the impact on customers. This is measured in terms of both private (impact on bills) and societal costs (such as value of carbon emitted or the value of a loss of life). These valuations have been arrived at using industry-standard valuations and through using regulatory economics experts, who have developed similar service valuations for other utilities.	
How do you deal with data when there are different levels of certainty against different data types?	We are able to define uncertainty bands against all model inputs and assess the impact of this uncertainty on outputs (e.g. monetised risk). We will use this to test how different input data assumptions change our proposed investment plans and to plan future data/model improvements.	
Is there any stress testing around risk constraint? Can the tool consider different risk targets?	Yes, a key purpose is to understand stakeholder requirements in terms of different types of risk (safety, environment, availability etc.) and deliver an asset health programme to meet stakeholder needs and expectations. The model has uncertainty modelling built in to allow us to test the sensitivity of all model inputs on key outputs. This will help us to focus on improving input data that has the biggest impact on investment and risk.	
Why we use RPI but not CPI?	RPI is used in the valuation of loss of life. It was recommended by	

	our specialist regulatory consultants. We will continue to review the relevance of RPI vs CPI as our work progresses and align this to other cost/benefit analysis being undertaken as part of our wider investment programme.
Do you compare your model with real world outcomes?	Part of the validation process is to compare the model outputs to real world outcomes. This is reviewed and shared with Ofgem as part of their acceptance of the NOMs methodology and part of the validation plan. This will not be in the public domain but we would be happy to share through our regular discussion forums.

<b>Environmental Agency/ Scottish Environmental Protection Agency</b>	<b>Webinar</b>	<b>07/03/2018</b>
How do you handle compliance works in your decision making?	The compliance works are not subject to an optimisation within the methodology. Compliance works are captured in other elements outside of the NOMs process. Investment decisions for compliance are taken outside the NOMs methodology framework. These will be independently justified through Cost Benefit Analysis (CBA). However, the Asset Health benefits of compliance works are assessed, which means we may need to spend less on specific condition-related works to achieve our target risk levels.	
Do NOx emissions have been considered in the methodology?	NOx emissions aren't currently captured in the NOMs methodology. NOx emissions are captured through daily and monthly processes, which feed into other decision making processes outside of the NOMs assessments. We have a duty to limit our environmental impact through our operations by utilising the least polluting combustion units to meet the needs of the transmission network. Part of our annual Network Review process with our environmental regulators discusses future compressor running strategies for the coming year, with a proposal for agreed run hours. A review will be conducted to identify whether we can include DEFRA's monetised emissions strategy in future revisions in the NOMs methodology for NOx emissions.	
Is Best Available Technique (BAT) analysis done in the NOMs methodology?	BAT is used in the justification for compressor strategy works and the outcomes of the decision making are fed into the methodology as "must do works"	
Where the incident values come from?	The values were supplied by our environmental consultants. These are based on actual penalties occurred by similar industries in the UK. We recognise they may not be directly applicable to ourselves but it is important to include these values as part of our assessment of service risk.	
Is the optimisation done on a network or asset level?	Optimisations are done on an asset level in the methodology tool. These will be assessed and grouped into deliverable portfolios of Asset Health work as part of creating our T2 investment plan.	
Does CO2e include methane? We are aware that OFGEM already have "incentives" regarding this but it would be	Yes, the CO2e value assumes 100% methane with a Global Warming Potential (GWP) value of 25. We recognise this is conservative as other "unburned" hydrocarbons have a lower GWP value. Our NOMs Methodology currently considers losses	

good to know how these relate to NOMS.	through condition-related failures, and as such “burned” fuel gas is excluded. We have a number of drivers to help us manage our emissions including incentives and legislation. If an investment decision is made (to replace an asset to meet IPPC legislation for example), this will be reflected in the NOMs methodology by an improvement in asset condition/health. This may mean we need to spend less on specific condition-driven works.
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<b>Cadent, Scotia Gas Networks (SGN), Northern Gas Networks (NGN) and Wales and West Utilities (WWU)</b>	<b>Safety and Reliability Working Group (SRWG)</b>	<b>01/05/2018</b>
Social Cost of a Fatality / Major injury	We confirmed that our value was £19 million, based on the 2003 HSE value inflated to 2016/17 prices. The GDNs value is currently £16 million (the 2003 value). We agreed that further SRWG meetings would be used to further align values within our SRF.	
Carbon Inflation	It was noted that UK Government has published a further set of carbon costs and inflation assumptions. We agreed to review these prior to submission of our final NOMs Methodology. GDNs will review as part of their annual review.	
Transport Disruption	Currently the GDNs do not model the social costs of disruption to transport caused by asset failure. We agreed to share more details of how we model this within our Service Risk Framework (SRF)	
Pipelines Corrosion Modelling	The GDNs recognise that our approach towards modelling corrosion risk and the dependency on Cathodic Protection is more advanced than theirs. We agreed to share more details to enable them to potentially improve their models (subject to data availability)	
Pipelines Model Granularity	Currently we model our pipelines in units of 12 metres, whilst most GDNs model risk for a whole pipeline section (except WWU who have split their network into 1 km sections). This causes difficulty in modelling benefits on investment as risk is “smeared” over the whole pipeline section. Our approach allows localised risk to be more accurately quantified. We agreed to share the pros and cons of modelling at this level of granularity.	
Validation	We have agreed to share relevant Monetised Risk valuations to support validation of our Methodology and improve the GDNs Methodology	

<b>DNOs</b>	<b>Webinar</b>	<b>09/03/2018</b>
No notable outcomes		

<b>HSE</b>	<b>Meeting</b>	<b>10/01/2018</b>
No notable outcomes		

<b>ETO</b>	<b>Webinar</b>	<b>05/03/2018</b>
No notable outcomes		