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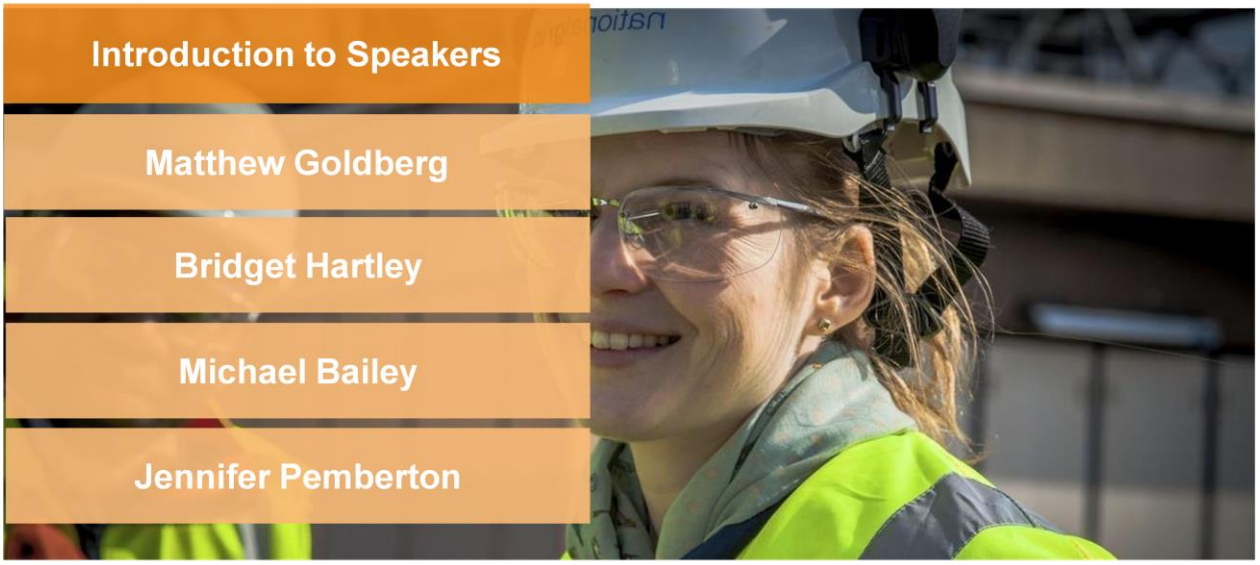
National Grid Gas Environment Workshop

26th June 2018



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Embedding environmental impacts in to our investment decisions

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Structure and outcomes

Outcomes	• **To gain a clear understanding of:**
	  • **your ambition to embed the cost of carbon in to decision making**
	  • **your views on how we should manage emissions**

Structure	• Overview of our carbon obligations across our operations • A facilitated discussion on tables with a scribe to capture qualitative feedback • Vote

Questions	Open discussion
	• Should we have a consistent approach to managing our carbon footprint across all activities?
	• Currently we are incentivised to manage our vented emissions:
	  • What outcomes would we be looking for out of this incentive?
	  • What changes might need to be made to achieve this?
	Vote
	• Should we be focusing on all our emissions e.g. vented and fugitive?

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How do we impact the environment

	Local	Global
Air Emissions	NOx	Venting (Compressors)
		Venting (pipelines)
		Fugitive (Leaks)
Energy Consumption	Operational Energy Use	Transport of gas from A to B
Land & Water	Discharges to watercourses	Natural Capital
	Loss of vegetation	
	Contaminated Land	
Nuisance	Visual Amenity	
	Noise	
	Light pollution	
Resources	Waste	Resource Consumption

We recognise that the activities we undertake can have a negative impact on the environment. We use a range of recognised methods and techniques to identify, assess and mitigate our environmental impacts. We always seek to avoid causing this damage where we can, however, where we can't, we will look for opportunities to offset this impact.

This table highlights the main areas of impact that we can have, with the areas highlighted in green where we are currently incentivised to reduce and manage our impact. This covers venting from Compressors but not from pipelines. Our most significant impacts come from our emissions to air, either through combustion by burning gas in our turbines to keep the National Transmission System moving, or from methane emissions from operating the network. This is at a local level with Nitrogen Oxides (NOx) and Carbon Monoxide (CO) and Carbon Dioxide (CO2) at a global level being generated through natural gas combustion.

We also recognise that we have a role to play in limiting the impact we have on the environment from the materials we use to build our assets and during operation, known as embedded carbon. We are currently scoping what this looks like.

We can mitigate our impact on the environment by building environmental considerations into our investment decision making.

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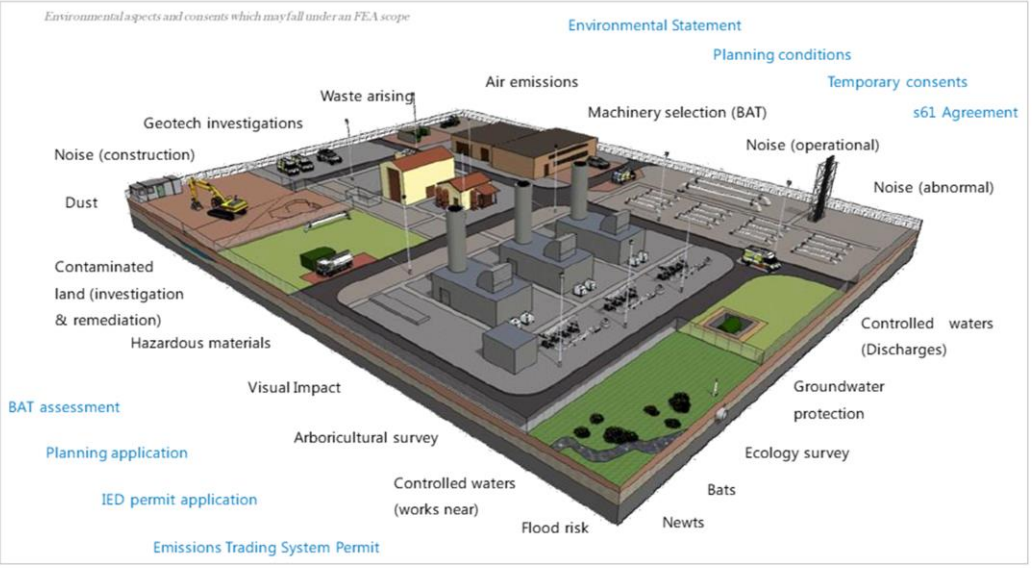
Our Environmental impacts and aspects



Compressor station image – In black writing are the environmental impacts we have to consider. In blue writing are the drivers

This diagram represents all of the environmental elements we have to consider at a typical compressor station (our most significant asset from an environmental impact perspective). The blue writing highlights the main drivers (legislative) that requirement us to consider our environmental impacts when making investment and operational decisions.

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Sources of emissions

Typical sources of emissions from a compressor station.

During operation these assets can leak. We estimate that leaks from our networks are about 300 tonnes of methane a year from our installations; these are so called uncontrollable emissions. We also have a number of process safety related methane emissions; these are classed as venting. This is where, if a process requires it, methane is vented from our network to return the equipment to a safe state and remove any safety risk. Last year the amount we vented to the atmosphere was just under 4000 tonnes of methane.

From a safety viewpoint; we're not generally at risk because we manage ignition sources on our sites very carefully and the majority of these releases would either be safely vented through purpose built vents or be small. We have strict ventilation requirements in compressor cabs to manage any gas releases.

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Compressors

- Our largest impact on emissions is our compressors
- Gas supply and demand patterns influence how and when they run, but we can influence what and how they are built
- We manage this through the Best Available Techniques (BAT) approach
- BAT attaches a weighting to different criteria:

Nitrogen Oxides (NOx)	Carbon Dioxide (CO2)	Visual
Nuisance	Cost	Operability
Location	Sensitive Receptors	Stakeholders

Our largest environmental impact is from our compressor fleet. These come in a number of varieties however the typically are Dry Low Emission (DLE) Gas Turbines, Non-DLE gas turbines (older units) or Variable Speed Drives (VSD) which are fully electric.

We operate the network to move gas from where it enters the UK to where it is needed; either domestically or to Europe. Different gas supply and demand patterns (outside our operational control), mean we have to operate the network (run our compressor fleet) in different ways and hence this means we have little control over the emissions from operating the network on a daily basis. However, we can influence this when we are building and specifying replacement compressor units.

Best Available Techniques use an agreed standard for assessing the needs of the network and the environmental benefit, against cost of delivery. This provides a transparent assessment of technologies to our regulators and enables National Grid to make the most efficient choice for both the network and customer. Within the BAT tool we have weighted categories to ensure that the necessary benefits are delivered from each technology and enable better decision making.

Nitrogen Oxides (NOx) take priority as this continues to be of principal concern for the environmental regulators, followed closely by carbon dioxide emissions. Other key elements include visual amenity, statutory nuisance and the location of sensitive receptors, such as sites of special scientific interest or national parks, as well as closeness to stakeholders.

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Carbon Pricing – a consistent approach

- Carbon (CO2) can be incorporated into investment decisions in different ways for example:
  - Carbon weighting (BAT- assigns a % weighting to carbon emissions)
  - Carbon pricing – assigning a monetary value to each tonne of carbon emitted.

- Carbon pricing includes:
  - traded carbon markets…
    - e.g. Our gas compressor fleet operational carbon emissions are subject to the EU Emissions Trading Scheme
  - and non-traded prices
    - e.g. Our current methane venting incentive.

When we discuss emissions with our stakeholders we can talk about a range of emissions from our operations; methane venting, NOx, CO, CO2, fugitive emissions etc.. This can often be confusing and makes it difficult to determine the right investment decision when considering all the different drivers and potential benefits. We can use traded and non-traded prices for carbon, EUETS and our own internal price of carbon to understand potential benefits. This can also be used to implement a whole life carbon cost through construction phase, operation and decommissioning.

We propose that by using a simple system of CO2e or carbon dioxide equivalent of a single price, would mean that whatever emission source or species we were talking about, it would be easy to compare the outputs and benefits to the environment and stakeholder purse.

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Embedded carbon in construction projects

- There is carbon associated with our construction projects:
  - Concrete
  - Materials
  - Transportation
- We minimise this where possible
- We could offset the remaining impacts
  - E.g. planting trees or invest in low carbon projects

We can make the biggest impact by choosing compressors that have the least environmental impact during their operational life. However the construction of compressor sites also has an impact on our environment.

We work to minimise our impact during construction. If we look at emissions from the construction of our assets then already set targets to reduce these emissions and incentivise our supply chain by including it as a weighted element at tender for major projects. But could we do more?

As a responsible company we try to reduce emissions where possible, however there will always be some emissions produced from construction so should we look to offset these and have 'carbon neutral' construction projects?

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How we build our assets – Offsetting case study

- **Case study – Should we offset?**

A typical compressor replacement project creates 13,240 tCO_2 embedded carbon

- To offset this would cost ~£173k

~0.2% of the capital cost of the project.

If we use an example scheme for this we can understand the cost implication of this approach:
Project A is a compressor replacement project
The capital carbon emissions = 13240tonnes of CO2
Offsetting costs between £6-£12.90 per tonne of CO2

So the cost to go carbon neutral for Project A would = £81k-£173 k
This equates to ~0.2% of the capital cost of the project.

Methane Emissions – Classification

Under our operational control and therefore what we're focusing on.

Venting

Deliberate release needed to gain access to our assets/maintain safety etc.

Fugitive

Leaks from pipework, valves etc.

Controlled through investment decision process - What we build

Emissions from moving the gas from entry to exit

Venting is the deliberate release of methane. We need to do this to gain access to our assets.

Fugitive is a leak for our assets.

As discussed previously, we have very little control over the final type, Emissions from moving the gas from entry to exit.

The following couple of slides will cover this in a bit more detail.

We are currently not incentivised around the leaks from our system, which we estimate to be around 300 tonnes a year.

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Managing Venting

- Our second largest emissions impact is from the gas we vent
- We sometimes need to vent gas to the atmosphere to gain safe access to our assets
- We vent for access below 7bar on all our pipelines
  (Equivalent pressure of a bicycle tyre)

Talking about venting for a minute.

As we mentioned earlier, there are process safety requirements to vent methane to the atmosphere to provide a safe working environment, whereas fugitive emissions from our pipework and valves can be considered as leaks. We are incentivised for our compressor venting to a set annual limit, everything above that limit we are required to pay a "penalty" – currently this is set at £1500 a tonne of methane and this encompasses the cost of the gas and the CO2 equivalent of emitting this methane to the atmosphere (carbon price).

As this is a significant impact on the environment we look to industry standards and innovation to reduce the amount of venting necessary to ensure safety. We currently operate a forecasting and cost benefit analysis model to first identify if the compressor will be used again within a short period of time and therefore decide whether to vent or keep the compressor pressurised. This forecasting reduces a large amount of start/stop venting. A cost benefit analysis tool enables us to understand how long we can keep a compressor pressurised before the cost of the energy keeping the compressor pressurised outweighs the cost of venting; using this method ensures that the most cost effective method is used for the environment and customer.

We are currently incentivised to keep venting to a limit of just under 3000 tonnes a year; every tonne over which we must pay for at a rate of £1500 a tonne. Last financial year we saw an increase in the sporadic nature of gas entering and leaving the National Transmission System, this coupled with operational issues, meant our venting exceeded the agreed target and required us to pay £1.4 million in disincentives. A number of innovations and operational improvements have been identified to improve this in the current financial year.

Venting from pipelines for pipeline maintenance currently isn't incentivised, however, estimates of vented pipelines are produced for operational purposes and for calculating total CO2e emissions. For comparison a pressure of 7bar is roughly equivalent to a bike tyre pressure.

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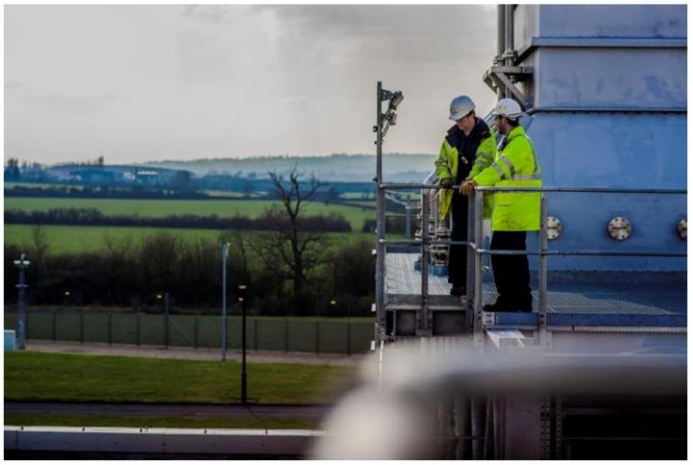
Managing Fugitive

- Leaks from our system due to aging assets and operational processes

- We manage these through:
  - Efficient delivery of maintenance to minimise releases of natural gas
  - Daily site inspections at manned compressors and terminal
  - Periodic inspection at visits to unmanned AGIs
  - Some leaks are easier to address than others



Talking about fugitive emissions for a minute.

Our assets leak, either due to their age, operational design or a combination of the two. We don't necessarily know how big the problem is, however following industry standards, we are able to estimate the leaks in our system from sampled data and calculations of our assets. We have been undertaking some industry leading research and development work to understand the scale of the problem; this has been shared with the industry and we are looking to role out more of this technology in the future.

Not been a priority before and is currently not incentivised; therefore we're not encouraged to fix it. However, we do undertake a number of methodologies to manage our leaks and remove super emitters from our network. We currently undertake daily site inspections of manned compressor stations, following a suite of policy documents to monitor leaks and feed them into our asset health management programmes. We also undertake formalised leak detection using current industry best practice; the findings of these reports are provided to our environmental regulators in line with our environmental permit conditions.

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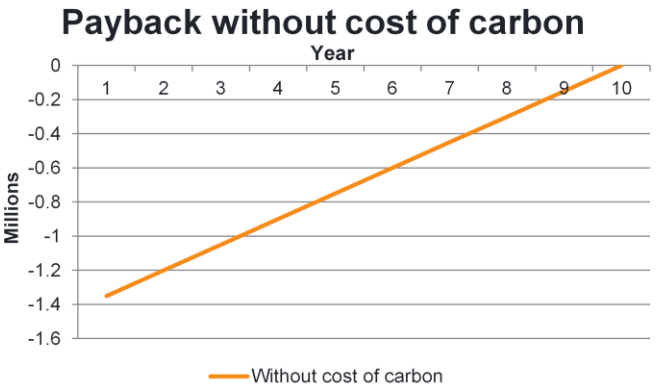
Carbon Price Case Study - Recompression

- We vent gas when we work on pipelines
- We could utilise recompression equipment to save on venting gas

Case study – Recompression

- Cost of vented gas per year: £155k - £255k
- Cost of recompression unit: £1.5m
- Pay back time: **up to 10 years**



During major maintenance of our pipelines we sometimes have to remove the gas to enable us to work on the infrastructure. This is done by isolating the pipeline and pumping the gas within it into the connecting pipelines using a mobile re-compression rig. This reduces the pressure in the pipeline from ~80Bar to ~7Bar. However, with existing technology we then vent the remaining gas to the atmosphere. We have investigated new technologies to reduce the pressure in the pipeline further and with investment, we can use new technology to reduce the pressure to <1Bar. This would represent a significant saving of gas and global warming potential from the gas entering the environment.

However with the existing financial models of applying capital costs against return on investment, this would represent a long return period for the technology. Although, as you'll see on the following slide, if we apply a carbon price to the gas, we can see a much quicker return on investment.

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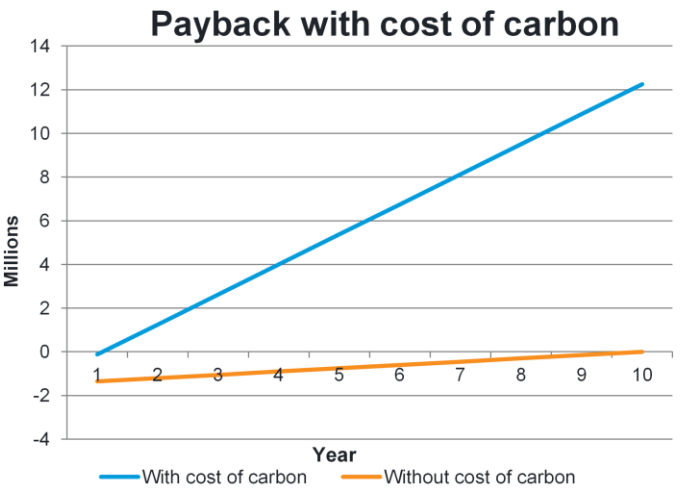
Carbon Price Case Study - Recompression

Including a carbon price significantly reduces payback period

- Add cost of carbon of £45 per tCO_2
- Pay back time: **less than 1 year**



By applying a carbon price to the vented gas, we go from having a return on investment of approximately 10 years to below 1 year. This uses a theoretical price of carbon to aid investment decisions, no actually capital is lost. In this example we have used a carbon price of £45 per tonne of CO2e and demonstrates that when we consider carbon in our investment decisions, it can significantly reduce the return on investment time.

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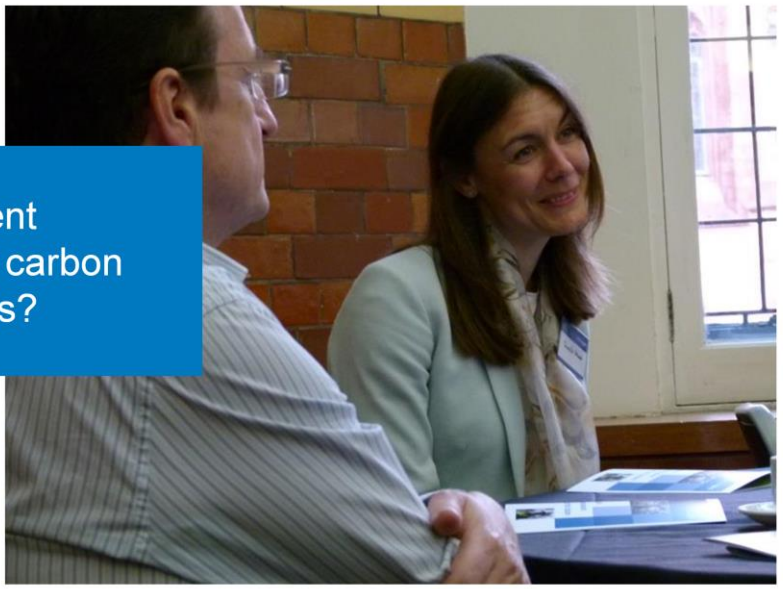
Question for discussion

Should we have a consistent approach to managing our carbon footprint across all activities?



We'd like to understand your views about this.

Should we do more to understand and manage our emissions.

On your table discuss:

Prompts:

- What are the challenges of managing them holistically? – **pink post it**
- What are the benefits of managing them holistically? – **green post it**
- All other comments – **yellow post it**
- How do others classify and manage emissions?
- Are there other ways we should be funded to reduce our emissions?

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Question for discussion

Currently we are incentivised to manage emissions vented from our compressors:

- What outcomes is this incentive looking to deliver?
- What changes might need to be made to achieve this?

We'd like to understand your views about this.

- What outcomes might customers want from a carbon incentive?
- What's the purpose/driver?
- Is the current incentive delivering that?
- What changes might be needed?

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Responsible removal of redundant assets

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Structure and outcomes

Outcomes	To gain a clear understanding of : • **What you'd like us to consider when we no longer need an asset** • **Your views on funding mechanisms for demolition and when**
Structure	• Overview of our approach and the issues we face • A facilitated discussion on tables with a scribe to capture qualitative feedback • Vote
Questions	Open discussion: • What factors should we consider when we no longer require assets for operational use? Vote • As a principle should current or future consumers pay for demolition of assets that are no longer required for operational use?

As a result of asset replacement and as a result of the changing use of the Gas Transmission Network we have assets that are no longer required for operational use.

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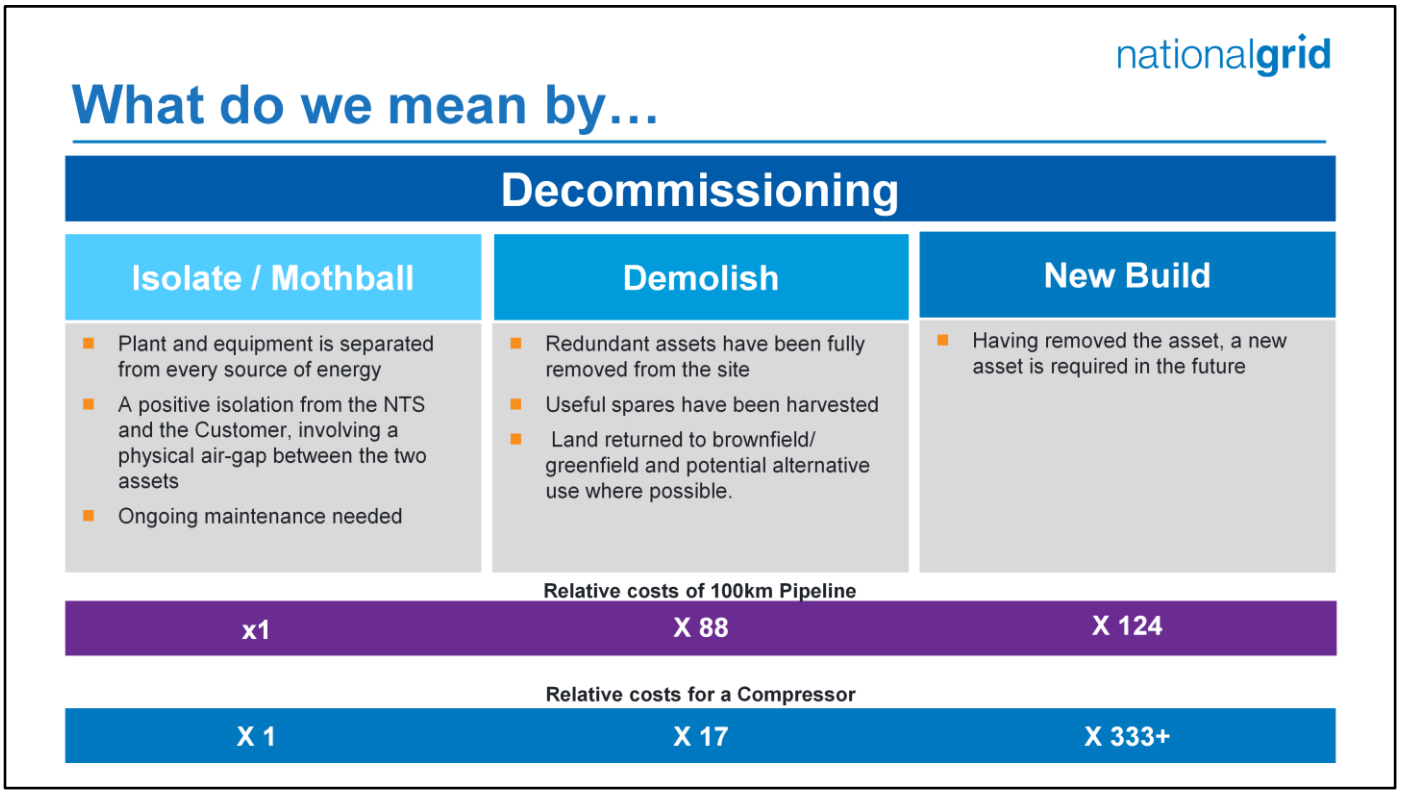
Environmental Requirements - Process

Remove environmental hazards that potentially risk polluting the land (and to an extent other environmental media)	Remove/ Remediate pollution which may have occurred during the life of the permit	Demonstrate that the site is in the same state as at the start of the permit

This slide relates to our approach for our environmentally permitted sites.

The process is heavily regulated to ensure minimal impact to the environment and the local community.

We follow best practice and have spoken to many people to ensure we have the latest thinking.



In the development of our RIIO-T2 plans 70+ sites and assets have currently been identified as either being redundant or forecast to become redundant between now and the end of the RIIO-T2 period. Many of these assets are within sites that are and are forecast to stay operational.

Only three GTO permitted sites have been “decommissioned” in the last 20 years with only one having been demolished.

Isolation

In this state the plant and equipment is separated from every source of energy in such way that the separation is secure. There is a positive isolation from the NTS and the Customer, involving a Physical air-gap between the two assets. National Grid still has responsibilities for maintaining assets in accordance with our Asset Health policies.

Demolition

All assets have been fully removed from the site, including an assessment of these for spares and the ability to sell assets to third parties. The site is been returned to brownfield/greenfield and assessed for alternative uses or sold by National Grid.

New Build

In some situations once assets have reached the end of their operational life there is a requirement to construct new assets in place of these assets. If this requirement is delayed considerably in time from the demolition of the original asset then the costs for major assets (compressors and pipelines) will be significant.

At the bottom of this slide we show how the relative costs for pipelines and compressors changes undertaking these different activities.

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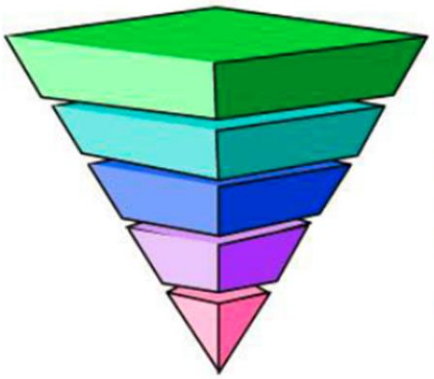
Waste hierarchy



Prevention
If you can't prevent, then....

Prepare for reuse
If you can't prepare for reuse, then....

Recycle
If you can't recycle, then....

Recover other value (e.g. energy)
If you can't recover value, then....

Disposal
Landfill if no alternative available.

Sustainable by Choice

Once we have identified assets as redundant we can utilise the waste hierarchy in order to reduce and manage waste from our decommissioning/demolition activities.

The hierarchy can also be used when planning decommissioning/disposal operations to control and minimise resources used.

The waste hierarchy sets out a set of priorities that National Grid utilises to reduce or manage waste, and to generate the minimum amount of waste possible.

The Waste Hierarchy utilises 5 stages, each of which has different benefits and risks, including for our customers, our operations and financial considerations :

Prevention – Prevent waste from arising in the first place, through implementing controls

Prepare for reuse – Can we re-use any of the redundant assets, removing assets and adding them to our spares store, or selling them to a third party

Recycle – Can we recycle any part of the redundant assets, including components, materials and substances.

Recover other value - Can any part of the redundant asset be used for activities such as the production of energy (Fuels, heat and power) and materials from waste.

Disposal – Where none of the other categories can be utilised the only option may be to dispose of to landfill.

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Bridget

Following identification that an asset is no longer required, there are a number of things that we can

do with it.

Each of these will have different benefits and risks.

Discuss on tables the benefits and drawbacks of each aspect.

Prompts

1. *What are the benefits/drawbacks of each option?*
    1. *Operationally*
    2. *Financially*
    3. *For the customer/consumer*
    4. *Now and in the future*

Clarify what leave a net positive impact would mean we would do?

What are our legislative requirements - are there any in the pipeline (no pun intended).

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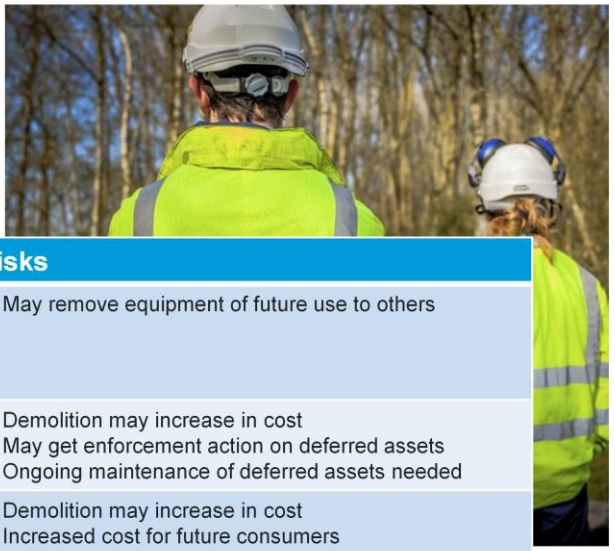
When should we do this work?

- Timing needs consideration
  - Managing operational risks
  - Which consumers should pay?
  - Can we or others re-use assets?
  - Phasing of work & decisions



Option	Benefits	Risks
Deliver all in T2	• Current consumers fund removal of assets they benefited from • No ongoing risk to manage • No ongoing maintenance costs	• May remove equipment of future use to others
Prioritise high risk projects and maintain remaining	• Costs are split between current and future consumers • Lower costs in T2	• Demolition may increase in cost • May get enforcement action on deferred assets • Ongoing maintenance of deferred assets needed
Defer all works and manage risk	• Minimises costs in T2	• Demolition may increase in cost • Increased cost for future consumers • Significant maintenance costs required to manage risk • Likely to get some enforcement action

As mentioned earlier we may have identified around 70+ sites and assets that are currently redundant or are forecast to become redundant between now and the end of RIIO-T2. The way we schedule the work, in terms of timing, and how it is funded is arguably as important as the work itself.

A number of aspects need consideration when thinking about the timing of these activities:

Managing Operational Risks? – We need to manage our ability to operate the National Transmission System, but also the risks associated with these works on the operational workforce, local community and environment.

Which consumers should pay? – Should the current users of the system, who have had the benefit of those assets pay for the demolition/ decommission, or should we postpone the works and costs (as may be suggested by a CBA analysis).

Can we or others re-use our assets? – Our plans for the removal of redundant assets also includes our strategy for the management of spares. We need to consider how assets may be re-used following their redundancy in their existing use. This may be particularly relevant if we no longer required cross-country gas transmission pipelines for operational use.

We've identified three potential options:

Deliver all in RIIO-T2

We undertake works at all sites/assets identified as redundant and isolate or demolish them as soon as they have become redundant. This provides benefits of reducing the cost to consumers through ongoing maintenance, reducing the ongoing management risk and ensuring the current consumers who have had the benefit of the asset bear some or all of the costs of removing the assets reducing. There are risks with undertaking this approach, such as we may remove equipment that could be used in the future by ourselves or other parties.

Prioritise the High Risk Sites/Assets and maintain the assets that remain

We could prioritise the isolation or demolition of high risk redundant sites and assets, maintaining the remaining redundant equipment deferred until later regulatory periods. The benefits of this approach will be lower costs to consumers in RIIO-T2 as the costs are split between current and future consumers. The risks associated with this approach is the cost to demolish the non high risk sites may increase due to the delay in undertaking action, increasing the cost to consumers. We will incur maintenance costs on assets until the point of demolition/decommission. We may also receive enforcement actions from bodies such as the Environment Agency or the HSE on our deferred assets.

Defer all the works and manage risk

The final option is that we defer all of the works for these sites/assets from RIIO-T2 into future regulatory periods. This will reduce the costs associated to these sites/assets but comes with a large number or risks including, a potential future increase in costs which will be passed onto consumers. Future consumers are paying for the benefits seen by current consumers. We could see significant maintenance costs on these assets until the point of removal which does not provide value to consumers.

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Question for discussion

What are the implications of each option to:

- Customer
- End consumer
- Local community

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Question for discussion

What factors should we consider when we no longer require assets for operational use?

Prompts:

- Are there particular asset groups which stakeholders feel differently about – e.g. pipelines?

Prompts for factors influencing our decisions – exit /entry capacity obligations, CCS / hydrogen futures, condition of our assets, planning permission / consents

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Managing Climate Change Impacts

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Structure and outcomes

Outcomes	To gain a clear understanding of your views on how we should manage deal with uncertain weather conditions
Structure	• Overview of the impacts we're seeing and the different approaches being considered • A facilitated discussion on tables with a scribe to capture qualitative feedback • Vote
Questions	Open discussion: • Are you seeing similar issues? • How should we manage these impacts? Vote • Should we be proactive or reactive in managing these impacts?

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Uncertainty

"The UK could face harsher and more frequent winter storms if global greenhouse gas emissions aren't curbed, a new study says."

The Facts:

- 2013-2014 was the wettest winter on record for the UK
- Between November 2015 and January 2016 we had the most ever rain for that period, causing some of the most extreme and severe floods in 100 years

Storm clouds rolling in over Glyder Fawr, Snowdonia, Wales, 06/2009.
Credit: Nature Photographers Ltd/Alamy Stock Photo.

Climate change is resulting in more uncertainty and more extreme weather in the UK. We are seeing more severe storms and weather events, such as flooding. Between November 2015 and January 2016 we had the most ever rain for that period, causing some of the most extreme and severe floods in 100 years

This growing uncertainty poses significant future risk to our business and our communities.

The impact of changing weather

- What does it mean for the Gas National Transmission System?
  - Flooding
  - Challenging access to assets
  - Operability challenges e.g. ice, snow, hot weather
  - Greater difference between peak and off peak demand

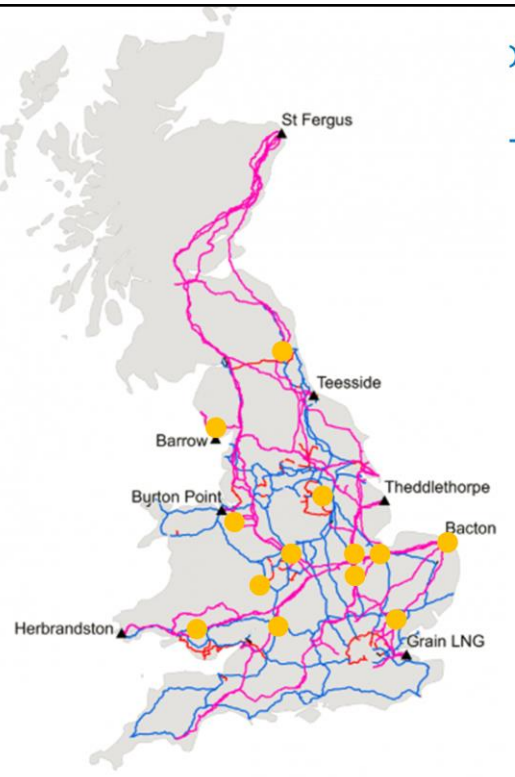
The very nature of our business means that the majority of our sites are located in remote, rural areas. During periods of inclement weather, access to these sites can become very challenging and sometimes dangerous. We need to ensure that we are running the NTS as effectively as possible, whilst keeping our people safe.

Whilst flooding doesn't always present an immediate risk to the way our assets function, any sustained period of inclement weather will prevent us from gaining access and maintaining the equipment, at a time when they are likely to be running at an increased demand due to the inclement weather.

Our sites

A large proportion of our sites sit within a High – Medium Flood Risk Zone

- Gas site within flood zone



A large proportion of our sites sit within a high to medium flood risk zone, this means that these sites are more at risk of future flooding. Flood damage can be expensive and inconvenient but it would not pose an immediate security of supply issue.

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Options for managing these impacts

Proactive	Reactive
■ Strategic and tactical risk assessment, produce plans, mitigate issues	■ Insurance ■ Deal with clean up ■ Remediate to prevent future incidents
Cost: X 1	Cost: ~ X 2.5

What approach should we take to manage the impact of climate change on our assets? Should we spend money today – taking a proactive approach to create plans and mitigate issues or should we be reactive and deal with the clean up of any potential future events? Once a flooding event has occurred, with damage for example to electrical or instrumentation systems, we would remediate and invest to prevent any future flood impacts.

Remembering that there is no immediate impact to security of supply.

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Questions for discussion

Are you seeing similar issues?

How should we manage these impacts?

What information would help you make a decision?

Table prompts

Run through all the above questions,

- Are you seeing similar issues?
- How should we manage these impacts?
- What are the implications of a proactive v's reactive approach?
- What information would help you make a decision?
- Under what circumstances would your preference change?
- What other information would you like to see on this?

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Environmental Stewardship

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Structure and outcomes

Outcomes	To gain a clear understanding of your views on our approach to environmental stewardship
Structure	• Overview of our Environmental Education Centres and the value they bring • A facilitated discussion on tables with a scribe to capture qualitative feedback • Vote
Questions	Open discussion: • What should we be doing in relation to the environment as part of our wider corporate social responsibility work? Vote • *Should we be…?*

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Our *Natural Grid* approach

- Collaboration and partnership with third parties to implement more sustainable approaches to land use and management
- Identify areas of shared interest and value
- Use a Natural Capital assessment to support decision making

Our Aspirations

- 50 sites by the end of RIIO-T1 (2021)
- Explore opportunities to use our linear footprint to create green corridors – AGIs / Block Valves etc.

Costs

- For our target 50 sites, ~£40k per year by 2021 (average £800/site)
- For all c.350 sites = £280k per year (less than ½p per year per household)

- Reactive management costs reduced
- Safety & environmental risks reduced
- Natural Capital value increased
- Positive community / stakeholder engagement

Our approach looks to manage our land proactively – using our natural capital approach to better understand the benefits, services and values associated with our land.

We look for opportunities to work with local partners to manage our surplus land in ways that not only meet our requirements – but can make a wider contribution to other social and environmental objectives.

Natural Grid takes a proactive management approach a departure from historical reactive management of land.

We are spending our money smarter in ways that deliver value to us and others

Some initial upfront investment to catalyse partnerships and reverse some decline - On average each site costs £800 per annum

Better, Bigger More connected

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Environmental education centres

Skelton Grange Environment Centre
Skelton Grange Road
Stourton
Leeds
LS10 1RS

West Boldon Environmental Education
West Boldon Substation
Newcastle Rd
West Boldon
Tyne & Wear
NE36 0BG

Bishops Wood Environmental Centre
Crossway Green
Stourport-on-Severn
Worcester
DY13 9SE

Iver Environment Centre
Slough Road
Iver Heath
SL0 0EB

We partner with charities to run four Environmental Education Centres (EECs) on our surplus land. These centres provide a range of educational services including green gyms, horticultural therapy, courses for children & adults

They also provide:

- Valuable access to nature for a cross section of society
- A unique environment for learning outside the classroom
- A valuable asset in the local community

EECs Manage our land on our behalf - engaging the environment

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Environmental education centres

- For every £1 of National Grid investment, the centres leveraged £5 of additional external funding
  - 46,542 visitors last year
  - 25,000 educational visits
  - 26,000 volunteer hours
  - >10,000 attendees at community events
- Supports access to nature for socially and/or economically disadvantaged communities
- Running cost of c.£32k per centre per year
- ~£500k construction cost for a new centre (½p per year per household)

Visitor satisfaction 9.6 / 10

100% of adults reported increased wellbeing or had developed new skills

For every £1 of National Grid Investment on average our EECs have leveraged £5 of additional 3rd Party funding, from a wide variety of sources – including : Big Lottery Funding (Access to Nature - Plastic Bag Tax, Peoples Postcode Lottery). This helps to support the wide variety of programs delivered by the centres.

The sites also contribute to wider schemes –

Access to Nature - over 15,800 people benefitted

Education, Health & Wellbeing

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Question for discussion

What should we do in relation to the environment as part of our wider corporate social responsibility work?

Table prompts:

- Should we ensure that our land delivers benefits to others, not just National Grid?
- If so, in what areas?
- On what scale should this be for RIIO-2?
- What other areas should we be looking in to?
- Which of these areas could we do more on?
- Do our Environmental Education Centres align with what we should be doing?
- Should customers pay for this?

HB9

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Q&A

Bridget Hartley	Matthew Goldberg	Michael Bailey	Jenny Pemberton
Gas Transmission RIIO T2 Manager	Environmental Assurance Manager	Environmental Operations Specialist	Stakeholder Strategy Manager

Further info www.yourenergyfuture.nationalgrid.com

Jenny Pem

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What happens next

- Please continue to engage with us
  - If you were unable to attend our event, you can feedback here: https://www.surveymonkey.co.uk/r/NGGT_ENV
- Our commitment
  - We'll process everything you've told us
  - We'll summarise your feedback and share it with you by the end of July/early Aug
  - We'll ask our Stakeholder Group to scrutinise this and we'll use it to form our RIIO-2 business plan
  - We'll publish our plan and all updates on our website, and keep you informed through our webinars and newsletters

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Other events

- Regional and Terminal site events to understand
  - Future needs of the network – What our customers need the Gas Transmission System to deliver in the future
  - Information Provision – What information do stakeholders need?
    - St Fergus: 3rd July
    - London: 9th July
    - Bacton: 12th July
    - Chester: 13th July

Further info www.yourenergyfuture.nationalgrid.com

Jenny Pem

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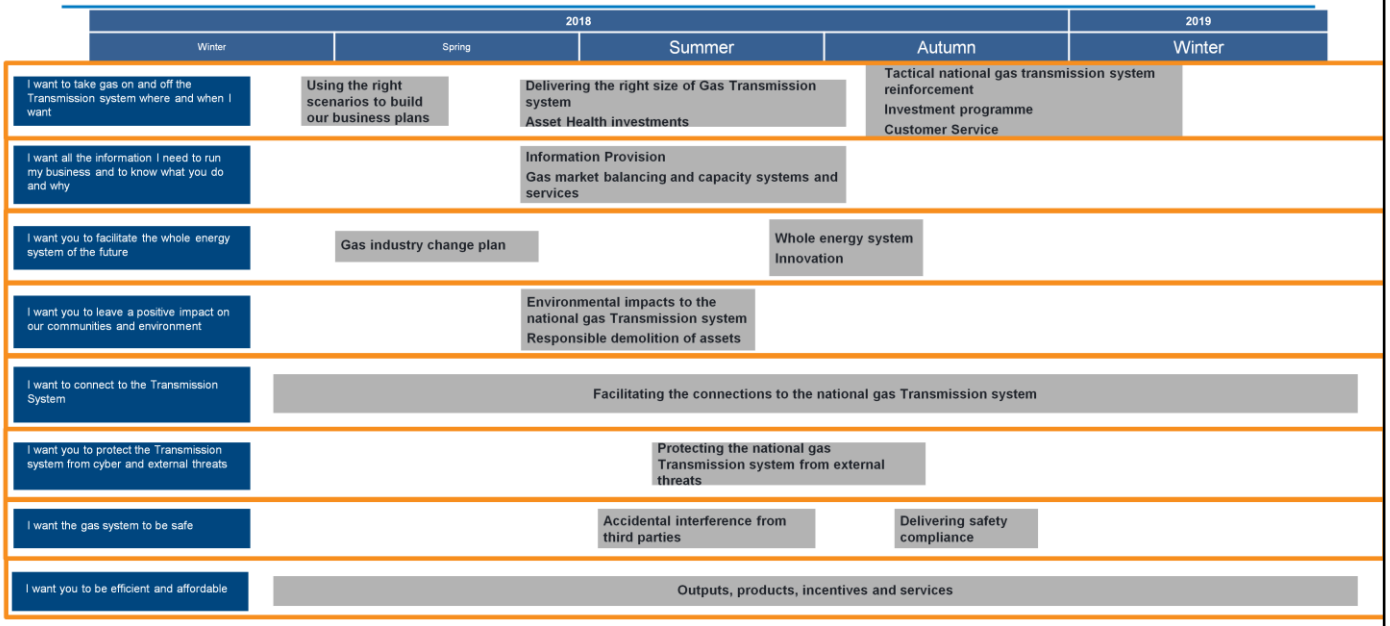
Timeline of engagement



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