

# I want to take gas on and off the transmission system where and when I want



£280m per year  
51% totex

		Engagement			
		Asset health	Efficient system operation and asset management	Network and environmental resilience	
Engagement	Stakeholder priority and context	Our stakeholders value being able to flow gas without restriction. This priority is about ensuring we have the right gas transmission system, maintained to the right level alongside a complimentary commercial framework to meet stakeholder and consumer needs. This topic covers multiple critical activities including: asset health, efficient asset management and gas system operation (having the right resources, tools, utilities and systems); network and environmental resilience			
	Topics	Asset health	Efficient system operation and asset management	Network and environmental resilience	
	Obligations	Gas Safety (Management) Regulations, Control of Major Accident Hazard Regulations, Pressure Systems Safety Regulations, Pipeline Safety Regulations, Dangerous Substances and Explosive Atmospheres Regulations, IGEM/TD/1, Maintain 1 in 20 demand capability, Workplace (Health, Safety and Welfare) Regulations, Gas Transporter Safety Case			
	Stakeholders	Gas Distribution Networks (GDNs); Customers – connected; Customer – shippers; Consumers (domestic and major); Regulators; Academics; Supply chain; trade bodies; local authorities; European TSOs; interest groups	GDNs; Customers – connected; Customer – shippers; Academics; Supply chain; trade bodies, interest groups	Environmental regulators, consumer groups Customers – connected, interest groups	
	Approach	High impact and high interest stakeholders = <b>collaborate</b> ; high impact or high interest = <b>consult or involve</b>			
	What we've heard	Network reliability, and therefore asset health, is a critical area. Stakeholders aren't prepared to tolerate any reduction to reliability or safety risk. Stakeholders have validated the critical importance of the Bacton terminal both locally and nationally.	Stakeholders continue to expect and value flexibility from the network and the services we provide	Feedback on environmental resilience was split between a proactive and a risk based approach, We have adopted a risk based approach.	
	Key trade-offs and how engagement influenced our plan	We tested the acceptable level of reliability with stakeholders (keeping cost the same, reliability level the same, improving reliability by 10%). Overall, there was marginally more support for increasing reliability by 10% compared to keeping risk the same as RIIO-1. However, stakeholders who pay the bills slightly preferred keeping risks the same. We traded off the higher supported option to the one which was supported more by those who paid the bills, which at the time was 40% cheaper than improving reliability by 10%.		We have worked with the relevant GDN on the network resilience proposals. They support construction of a new short transmission pipeline at the Blackrod offtake.	
Outputs	Measure	<b>Type:</b> PCD on Network Risk. <b>Target:</b> Maintain level of risk. <b>Type:</b> LO to maintain 1 in 20 peak day demand capability. <b>Target:</b> Level of demand capability. <b>Type:</b> PCDs for delivery of Bacton and King's Lynn projects.	<b>Type:</b> Maintenance ODI: use of days ( <b>target 11 days</b> ) and changes ( <b>target 7.25%</b> ); Constraint mgmt. ODI: limit capacity constraints. <b>Target: -£22.1m</b> ; Residual balancing ODI: price and linepack. <b>Targets:</b> 5.6mcm shoulder months, 2.8mcm non shoulder months, 1.5% SAP	Commitments: network and environmental activities	
	Comparison to RIIO-1 outputs	Our Network Asset Risk Metric methodology, uses monetised risk as a common currency for safety, reliability and environmental measures. For RIIO-2 we are committing to remove £2.96m of monetised risk value, delivering a long-term risk benefit of £296m. Specific delivery of Bacton terminal requirements. Address subsidence at King's Lynn compressor site.	Our asset management activities continue to be led by good asset management principles and we will continue our external accreditation to ISO55001. We will build new capabilities. We will continue to drive efficient operation of the system. We will maintain IT systems.	Proposals for works at the Blackrod and Tirley sites to increase network resilience.  Environmental resilience: pipeline monitoring and maintenance of watercourse crossings.	
	How we will deliver	Efficiency	13 RIIO-1 reliability and availability outputs, we remain on track to meet all by the end of RIIO-1. No specific asset health allowance for Bacton, in the RIIO-1 period.	Retain existing incentive schemes, with tougher targets. Enhancement to asset management and system operation activities.	No specific RIIO 1 output
		Innovation	Maintain campaign approach for efficient & increased delivery during existing outages. Improve capability and efficiency building on RIIO-1 transformation programmes.	Application of RIIO-1 restructuring benefits; 5% procurement efficiency commitment for equipment, spares & consumables	Driving efficiencies and allowing increased work delivery during existing outages.
		Whole system	Apply existing innovation such as GRAID and shallow dig and undertake extensive new innovation activities, such as modular construction, smart network tools, new materials and robotics.		
		Competition	10 year delivery programme managing outage reqts. to meet customer/consumer needs.	Network operation will reflect a WS approach e.g. through linepack and pressure management.	Collaboration with GDNs to deliver solutions which best meets the needs of consumers.
		Uncertainty	Projects at King's Lynn and Bacton, subject to competitive tendering.	Maintain efficient delivery and operation of the network, ensuring competitive functioning of the gas market.	Facilitate competitive functioning of the gas market by minimising planned or unplanned disruption to critical pipelines.
		De-carbonisation	Most significant risk is an unexpected asset failure or need to isolate due to an unacceptable safety risk. We need the ability to trade off risk across our asset categories, to deliver the best outcome for consumers. Utilise UM where cost uncertainty exists.	Maintain an appropriate resource profile to manage attrition and bring new skills in to mitigate the retirement profile.	Through effectively facilitating the market we support the broader management of uncertainty.
	Totex	Cost at RIIO-1 (annual forecast)	Totex: £109.3m/yr	Totex: £96.4m/yr	Totex : £0.5m/yr
		Work needed	To reduce the compressor emissions outages are prioritised & coordinated over 10 years period.	Replace 80 commercial fleet with alt. fuel vehicles; invest in 45 electric vehicle charging points across our network.	Maintaining resilience in support of the energy transition as external factors change network requirements change.
Cost at RIIO-2 (annual)		Our planned work volumes will deliver the same level of reliability in RIIO 2 as we achieved in RIIO 1. The exact combination of work we will do on the network can be adjusted throughout the price control period where this is the most cost effective solution. Bacton - Building of a new terminal ( <i>NB decommissioning costs for the existing terminal are included in the environment and community chapter</i> ). Kings Lynn – AGI rebuild due to subsidence.	Efficiently deliver our customers' requirements with the right level of resources, trained with the right capabilities, supported by the tools, vehicles and IT systems. All gas system operation related activities, including commercial and regulatory change of capacity processes; delivery of safe NTS access to allow maintenance; deliver operational strategy to maximise operational flexibility and service. Maintain core IT systems and build new capabilities.	Construction of a new pipeline to increase resilience at the Blackrod offtake. Installation at Tirley to allow maintenance without restriction to gas flow from South Wales.  Condition based monitoring surveys of pipeline watercourse crossings, work to assess buoyant lift on NTS pipelines in the event of flooding, control of animals on our sites and pipelines and maintenance of watercourse navigation markers.	
Approach to uncertainty		<b>Asset Health (excluding projects): £133m per year. Bacton: £28m per year. Kings Lynn: £6m per year</b>	<b>Asset Management: £66m per year System Operation Total: £42m per year</b>	<b>Network Resilience: £2m per year Environmental Resilience Total: £1m per year</b>	
Consumer benefit		Utilise UM for FEED for Bacton redevelopment and Kings Lynn subsidence	Availability of appropriately skilled and trained people in the right geographic areas is uncertain. Our plan manages attrition, retirement and training.	Any environmental risks identified will either deferred to RIIO-3 or risk traded during RIIO-2 under the asset health methodology	
	Consumers value safety & reliability. Bacton ensures security of supply & effective functioning of the GB gas market.	The right resources with the right tools to do their job, is vital to maintain the safety and reliability consumers demand. Building on previous and developing new innovations improve efficiency.	Will protect consumers in specific areas from disruption to supply and mitigate the impact of environmental events. Our proposed investment at Blackrod forms a CVP valued at £173m.		