



Our plan is deliverable

21. Our plan is deliverable

Key messages

Our plan is ambitious. The checks we have made as part of our business planning processes give us confidence that it is also deliverable. There are four key areas that we assess our plans against: people (including future workforce resilience), system access, delivery model, and supply chain.

Our people are key to delivering our ambitious plans. We have long-term plans to make sure we have a resilient, diverse, technically skilled and highly engaged workforce that is fit for the future.

We have developed our **portfolio planning delivery model** and will continue to use our campaign approach, developed during RIIO-1, to drive successful and efficient delivery of work.

System access becomes more constrained in RIIO-2 and beyond with an increasing asset investment plan. We have developed our **access plan over a 10-year period** to demonstrate deliverability of our work plans across both RIIO-2 and RIIO-3.

We have a **robust supply chain** with access to a wide market to buy the goods and services we need, and we use proven approaches and strategies to deliver efficiently and on time, at lowest cost to consumers.

As we always do, we will keep the deliverability of our plan under review. Our planning cycle is a continuous process and our plan will continue to be refreshed in the lead up to and throughout RIIO-2. This will make sure it is flexible to reflect stakeholder engagement and the uncertainty in the energy landscape.

1. Our people are key to delivering our plans

Our most important assets are our people. Workforce resilience is about having a workforce with the right number of people with the right skills, the right, healthy mindset and work-life balance, and diversity that reflects the society we serve.

We invest heavily in the development of our people to ensure that we have a technically skilled, inclusive and highly engaged workforce, who are engaged in what we need to achieve, can thrive and feel enabled to deliver to the best of their abilities. The aim of which is to provide our business with the resilience it needs to deliver for consumers now and in the future. Our employee engagement has been at or near high performing norm levels in the RIIO-1 period. On key diversity metrics, we do better than the wider UK engineering sector. We know from our employee and industry stakeholders that we do well in engaging and motivating our people and are leading the industry with our skills training and our safety record.

We are forecasting significant levels of retirement and increased non-retirement attrition over the RIIO-2 period, and the following ten years. At the same time, entrants to science, technology, engineering and maths (STEM) careers, from which we would expect to replace our workforce, are becoming increasingly scarce. In response, and to ensure that the people we bring in represent the diversity of the communities we serve. You can read our full sustainable workforce strategy in annex A21.02.

Our workforce is resilient and we plan for the future

We already have in place many things to help ensure the resilience of our workforce. During RIIO-1, we have seen employee engagement levels in line with high-performing companies and have greater diversity in our critical workforce relative to the UK engineering sector.

Strategic workforce planning requires the establishment of a framework through which both demand and supply of resources can be described effectively. From a known starting point (today), we forecast over time to provide a view of how our supply measures up to our projected demand. The results allow us to develop strategies to deal with the gaps. These strategies include options such as recruitment of experienced hires, recruitment of apprentices, deployment of contingent labour, internal training programmes or partnership with other companies.

Workforce capability

We invest in our people because of the strong resulting business benefits, such as improved employee performance, improved morale and satisfaction, increased productivity and reduced employee turnover. In 2018/19, UK employees received an average of 5.3 days training. The opportunity to learn and develop is a key strength in the eyes of our employees as we typically score 5% above the high performing norm in our employee engagement survey. Our UK Academy, based in Eakring, Nottinghamshire delivers operational training to our new and existing workforce. Ofsted have rated our academy 'Outstanding' for the past three inspections and we are the first UK provider of apprenticeships to achieve this milestone. Through our membership of Energy & Utility Skills (EU Skills) and the associated National Skills Academy for Power (NSAP), we collaborate with other networks and suppliers to raise the profile of the utilities sector as a key employer of talent in the UK and share best practice around training the skills needed in our industry.

All our employees are encouraged to have an annual development plan with focus on current role, future career aspirations and key business capabilities that are deemed critical to business performance now and in the future. In addition, strong effective leadership is integral to both individual and company success. We have a



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carefully defined set of customer-centric leadership qualities that we expect from our leaders, aligned to the purpose, vision and values of our business.

Over the last two years, our operational areas within gas transmission have implemented a series of changes to provide insight into and foresight of the capabilities and competencies required to run and maintain the transmission network. The safety implications of inadequacy or failure are considerable, and both systems and processes have been introduced to improve our ability to understand the current and future capability requirements and ensure that enhanced controls and development plans are in place to sustain our effectiveness. The introduction of a competence management system has provided a platform to review and enhance capabilities and safety and technical competencies (STCs) and build in mechanisms to support a more flexible, agile workforce. Each role or line of activity now has a “passport” which outlines the core requirements for that role or activity. The outputs will drive training plans and ensure timely maintenance of STCs, along with group clarity of site and asset knowledge and relevant authorisations. The improved understanding of capability requirements across our operational teams, alongside improved operational and strategic workforce planning, allows us to identify and manage gaps and risks more effectively.

In most parts of our business, the current capability profile is forecast to continue over the next ten years; our recent organisational review was conducted on that basis. There are, however, areas which will continue to evolve. The most obvious relates to cyber threats and how best to mitigate against them.

Workforce culture and engagement

Culture is key to driving our plans forward because it promotes openness and debate, is part of doing good business and something we want to embed within our business. We have started this journey by embracing our values of ‘do the right thing; and ‘finding a better way’. ‘Do the right thing’ pulls together our foundational values of keeping each other and the public safe; complying with all the relevant rules, regulation, and policies, respecting our colleagues, customers and communities and saying what we think and challenging constructively. ‘Find a better way’ challenges us to focus on performance and continuous improvement. Our board are passionate about this, we want to ensure our people are all driving in the same direction. We are assessing ourselves regularly against a scorecard to enable focused interventions to help us bridge any gaps.

We listen to our people

The annual employee engagement survey (conducted by a third-party) provides great insight into the areas we need to change and improve to help our people deliver to the best of their ability and have an enhanced sense of

their wellbeing. The survey tracks different dimensions of engagement (the intent to perform) and enablement (the ability to perform) and helps us to compare with high performing companies and identify opportunities for improvement, as well as measuring whether we are improving over time. Our survey results show that our workforce engagement is consistently close to or above the high performing norm benchmark for other external organisations. It is from these results that targeted actions are driven out as initiatives; locally or at an enterprise level, to tackle any negative trends. We provide resources that allow action plans to be built and implemented - listening and then acting. In our last survey, we scored particularly favourably on company values, aligning to company goals and ‘proud to work here’. However, we score more negatively on enablement (the barriers people face within their role, sometimes because of IT, tools or support issues), managing change (where we need to improve communication), decision making (a concern that decisions not being taken at the right level) and care and concern (the emotional connection between senior leadership and our people). It is from these types of results that targeted actions are driven out as initiatives.

Our short-term bonus plans incentivise the delivery of financial, strategic and customer output measures and the demonstration of our leadership qualities and living our values; measures are subject to change to ensure we reflect the right focus on our priorities. There is a clear line of sight between individual performance and delivery of our business strategy. On an annual basis, every department within our business has a mandate to deliver a set of targets which are focused on what the business must deliver and how they deliver. These targets will be updated to ensure we deliver the outputs and commitments outlined in this plan. These are monitored on a quarterly basis to ensure we are on track to deliver both in the short and longer term.

We are a socially responsible employer

National Grid believes that we, and the wider energy industry, should be more representative of, and reflect, all aspects of diversity in the communities we serve. In 2018, we were ranked among the top 50 employers for social mobility by the Social Mobility Foundation.¹¹³

During RIIO-1, we have significantly increased our black, Asian and minority ethnic (BAME) diversity to 13.9% across our employees. We have done this by running internal initiatives including reverse mentoring, employee resource groups and a development programme for diverse leaders. For the second year running, we made Business in the Community’s (BITC’s) Best UK Employers for Race Top 70 list¹¹⁴ and were also a finalist in BITC’s Race Equality Awards.

¹¹³ <http://ournationalgrid.com/uk/we-are-ranked-in-top-50-for-social-mobility/>

¹¹⁴ <https://race.bitc.org.uk/awards-benchmarking/best-employers-race-2018-0>



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Our female representation is 20.1% of the total workforce, though this edges higher (29.8%) in management roles. We have also secured a place in The Times Top 50 Employers for Women¹¹⁵. We have increased the population of female employees by running several initiatives including female-focused training programmes (Spring Board and Spring Forward), our UK women's network, Women in National Grid (WiNG), and ensuring that our roles attract female staff by targeting organisations such as the Women's Engineering Society. In line with other UK employers of over 250 people, from 2017 we reported our gender pay gap. Our latest data shows that our mean pay gap is 5.6%.

Table 21.01 diversity commitment

Commitment	Output
We seek to increase the overall proportion of National Grid's workforce from diverse backgrounds, in order to mirror the communities we serve. We will set annual Group targets to increase the number of hires from diverse backgrounds at a greater proportion than colleagues we have within the overall National Grid workforce today (24% female & 18% ethnic minority). We will set internal targets to increase the number of colleagues who are from a diverse background at a greater proportion than we have today within the National Grid workforce. We are committed to building an inclusive company where everybody can achieve their potential.	Commitment

Workforce wellbeing

The wellbeing of our people is important to us, particularly as we operate in more uncertain times. Our immediate risk profile is mental wellbeing, musculoskeletal injury prevention and occupational health risk exposure mitigation. We provide all our employees with access to a 24-hour employee assistance programme, offering emotional and practical support for work-related or personal issues. And we work with various government bodies on wellbeing, helping us to better understand what we can do to support the wellbeing of our own people, as well as supporting smaller organisations with their own efforts. We are aiming to:

1. Create and embed a culture that enables everyone to perform to the best of their abilities knowing they are cared for and can talk openly about their health and wellbeing.
2. Build a workforce where healthy, engaged and supportive employees can succeed and thrive.
3. Be recognised as an employer that leads in employee wellbeing, which will enable us to attract and retain the best talent.

2. Developing a portfolio planning delivery model

We have developed our investment plan over a ten-year period with work aligned to network outages in RIIO-2 and RIIO-3. We have shown that the network outages required by this plan can be achieved while minimising constraints and costs for our customers.

To evaluate and determine that our plan is deliverable we have conducted a comprehensive portfolio planning deliverability assessment based on the following principles:

- Balanced workload in RIIO-2 that maintains service risk level.
- Priority outages (to deliver the emissions programme, cyber programme, ILI runs and ILI digs) form the basis of our RIIO-2 and RIIO-3 outage plan.
- Assets will be taken out of service as few times as possible; other work on the same assets will be bundled with the priority outages.
- We will minimise the impact on directly connected customers.
- Where it is more efficient to avoid disconnecting customers by spending totex on physical solutions, this funding is sought in the plan.
- Outages causing potential constraints (restricting, but not disconnecting) customer flows have been identified. Potential orders of magnitude of constraint costs have been estimated to inform a decision on the level of risk imposed by the access plan for each year in RIIO-2.

As an outcome of the deliverability review, several network risks require an alternative solution to avoid the risk of disruption to customer supply. For example, this could be due to customers on single network spurs. While it is possible in some cases to negotiate commercial solutions, costs per day are expected to be significant and far exceed that of an alternative asset solution such as a stopple and bypass arrangement to ensure continuous supply. Such physical solution provide additional benefit by ensuring flexibility for both planned and unplanned maintenance requirements beyond the RIIO-2 period.

In RIIO-2, this amounts to 20 stopples with a cost of [REDACTED] each, with further requirements to be clarified in RIIO-3. These costs are included in our plan in chapter 14.

How we deliver work

Efficient and effective delivery of our capital plan is dependent on skilled and experienced National Grid resources across a range of disciplines. Our Operations team maintains equipment which is key to facilitating access to the network. This team also provides local site knowledge and controls safe access to each asset locally through permit systems, in conjunction with the system operator.

¹¹⁵ <http://ournationalgrid.com/uk/were-named-in-top-50-employers-for-women-list/>



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Our Pipelines Maintenance Centre (PMC) has a large portfolio of specialist skills and experience on emergency and planned solutions in the field of pipeline repair, replacement, maintenance and intervention. PMC expertise helps identify and deliver the most efficient asset interventions.

Our Capital Delivery team develops, directs and controls projects, managing the relationship with our main works contractors. This team provides specialist project delivery and contract management expertise.

Our Capital Delivery and Pipelines Maintenance Centre delivery units give us the flexibility to manage and deliver projects from simple valve replacements to large new compressor projects.

During RIIO-1, we have developed our campaign approach, for example, with the National AGI Renovation Campaign and are piloting an agile Repair and Re-life Project with flexibility to identify and intervene with an element of local autonomy over work prioritisation.

The campaign approach is particularly effective when applied at a feeder level or a whole site in the case of plant and equipment. It allows the preparatory inspection, investigation, risk assessment, planning and procurement activities to be completed as far as possible before the outage. This allows the maximum amount of intervention and risk reduction to be bundled into a single 'campaign' across the length of the feeder.

Where there are individual or groups of assets that do not 'fit' into the planned 'campaign' approach, we will ensure that these risks are remediated as efficiently as possible through individual or small groups of targeted interventions. Finally, where asset interventions do not require outages then the campaign approach will still be applied to maximise the opportunity for delivery of the same type of work across many locations. This enables efficient procurement through significant volumes of common works.

Measurement

To assure delivery, we align our performance measurement with our delivery partners, monitoring and incentivising performance in both design and delivery phases. Our performance measures are developed to manage a variety of factors. This includes continuous improvement of safety and environmental impacts, with the application of industry standard earned value metrics embedded in our existing project controls processes.

Through our procurement processes, we are seeking a collaborative relationship with our supply chain, creating opportunities to share risk and reward for innovation and efficient delivery. We will measure this with productivity targets whilst ensuring our high levels of safety and environmental performance are met. We will also look to our suppliers to encourage local economic growth and promote equality, diversity and inclusion in their own workforces.

3. We have developed our access over a 10-year period

The increase in work on the network during RIIO-2 means we have thought differently about how we manage our maintenance and construction activities, while ensuring we deliver the service our customers need throughout the year. It is important that the RIIO-2 incentive arrangements on maintenance, capacity constraints and customer satisfaction support minimising the impact our work could have on our customers.

We will use, wherever possible, the campaign approach we developed during RIIO-1 that, alongside our procurement strategy, which makes extensive use of native competition, will drive successful and efficient delivery of work.

Our campaign approach is applied to maximise efficiency savings and reduce risk associated with working on difficult to access or buried assets. Work is delivered by a joint delivery team including our engineers, our local operations teams and the delivery unit. This enables work plans to be monitored and optimised to reflect the most recent information.

In RIIO-2, we will continue to rollout innovation projects such as GRAID, shallow dig, composite pipe supports and 3D Modelling (BIM). These will be critical to the successful and efficient delivery of our programmes of work.

System access

System access is the first step in scheduling work. We take the priority works that are linked to specific delivery dates or require significant outages and phase other work around these to minimise outages and customer disruption.

Table 21.02 system access commitment

Commitment	Output
We have sought to minimise the disruption of our investment plan on our customers by planning work effectively, and using commercial tools and physical options	Commitment

We have developed our access plan over a 10-year period to demonstrate deliverability of our work plans for RIIO-2 and RIIO-3.

Our current assessments demonstrate that we can gain enough system access to deliver our work plan, while minimising constraints and costs for our customers. Our planning cycle is a continuous process so our plan will continue to be refreshed in the lead up to and throughout RIIO-2 to reflect any future change and manage risks.

Access to the NTS the potential to significantly impact on our customers' ability transfer gas on and off the network, especially at the numerous offtakes located on single feed sections of pipework. We also must ensure that we maintain capability at supply points even at periods of low demand. When coupled with unpredictable and price



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sensitive gas supplies into the UK this can result in assets being required at short notice.

Work requiring network outages involves asset isolation, venting of high pressure gas, undertaking the work and then recommissioning the asset. Our systematic approach maximises the work undertaken in any outage, ensuring we reduce the total required number of outage windows and associated customer impact. This also provides efficiency during delivery through minimised project overheads, reducing overall spend and network disruption over our ten-year plan. This has been facilitated by ensuring each outage is supported by available and reliable assets elsewhere on the network. Where physical solutions have proved to be inappropriate or too costly we have ensured that we have reflected the level of risk in our constraint management incentive proposal. Please see annex A21.01 on deliverability.

4. We are confident in our supply chain

Access to a wide market of goods and services is vital in ensuring we can deliver on time and within our forecast expenditure. We are confident that we have robust processes, strategies and contracts in place that demonstrate we are ready and able to deliver.

We know that leveraging market forces and using native competition will help us get the best deal for consumers from our supply chain. To ensure we maximise this potential, we have identified that the following principles are key to our contract and delivery models:

- **Collaboration** – more collaboration with our supply chain to drive greater value and innovation.
- **Capable owner** – provide greater transparency of upcoming work, working closely with the supply chain to deliver value over the whole asset life.
- **Long-term supplier relationships** – selecting and retaining capable, flexible suppliers who deliver what they promise.
- **Simplify tendering** – a streamlined tendering process to reduce tendering timescales and costs to the supply chain.
- **Early supplier involvement** – two-stage contracts for large projects to increase innovation, simplify the tendering process and reduce whole life costs.
- **NEC4** – adopting the New Engineering Contract (NEC4) forms with minimal amendments, to ensure a collaborative approach to contracting, with appropriate allocation of project risk.
- **Construction supply chain payment charter (CSCPC)** – adopting CSCPC standards and ensuring these principles are cascaded through all levels of the supply chain.
- **Trusted tier 2 support** – enabling our supply chain to use our frameworks to purchase equipment and services from experienced suppliers.
- **Value from equipment** – procuring fit for purpose plant and equipment from global suppliers to enable delivery of our works more economically.
- **High performing delivery teams** – developing our teams' capabilities to ensure effective collaboration,

working to become recognised as 'best in class' in infrastructure project delivery and contract management.

- **Digital strategy** – a digital strategy and framework that maximises the use and benefit of new technology.

Our in-house capability for contract management will ensure our contracts perform to a high standard and that the value we expect is realised.

In line with ongoing pre-process planning activities, the current view of our procurement strategy for RIIO-2 is as follows:

- **Emissions compliance (compressors)** – Retain the use of the Original Equipment Manufacturer (OEM) Framework established in RIIO-1 and implement an Engineering, Procurement and Construction (EPC) Framework, awarding multiple sites wherever possible.
- **Asset health** – Increased use of our Pipelines Maintenance Centre (PMC) for initial asset condition assessment and repair. Opportunity to commit to a portfolio of works using a more collaborative commercial model with the supply chain to drive value engineering, planning optimisation and innovation through outperformance of unit costs via an appropriate incentivisation model.
- **Cyber (control and protection)** – Expected opportunity to commit to a portfolio of works using a more collaborative commercial model with the supply chain to drive value engineering, planning optimisation and innovation.
- **Pipelines** – Use of framework with competitive tendering for specific projects.
- **Physical security** – Use of framework with competitive tendering for specific projects.