16. We are ready and able to deliver

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We have a strong track record in delivering the outputs our customers want. And we are confident that we have the right plans in place to deliver this plan based on our experience and what we have learnt from the T1 period. Our people are key to delivering our plan. We have a highly skilled, engaged workforce which is encouraged to find better ways to deliver through innovative ways of working. 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 test our plans though regular deliverability checks as a standard part of our business planning processes and have mitigations in place to manage delivery risks. The checks we have made have acknowledged that whilst our business plan is an increase from the T1 period in some areas, it is deliverable.

Our flexible capital delivery model assures us that we can respond to the changing needs of customers that come with the changing energy landscape – it is resilient and adaptable to change. We introduced this model in the T1 period and it continues to be the most appropriate approach to manage uncertainty within our plans. We are confident that we can deliver work at the right time and in the most efficient way, delivering on our outputs, commitments and the consumer value that is expected.

We have a robust supply chain with access to a wide set of markets to buy the goods and services we need and are utilising existing approaches and strategies to deliver efficiently and on time to ensure we are delivering at lowest cost to consumers. We are already preparing ahead for the start of the T2 period to ensure we have the contracts in place to deliver our outputs.

Increasingly, we will need to take a whole system approach to the way we approach system access needs. This requires greater collaboration across the industry to identify the most beneficial overall outcome for consumers. We propose a whole system optimisation approach and continue to collaborate across the industry with the Electricity System Operator (ESO), Distribution Network Operators (DNOs) and other Transmission Owners (TOs). This considers a whole system approach to system access to ensure we deliver the most optimal consumer outcomes.

1. Our people are key to delivering our plans

Our most important assets are undoubtedly our people because it is our people who create value for our customers and consumers. We have delivered our outputs in the T1 period through innovative designs and approaches for the benefit of consumers. Our success at delivering is built on our sustained ability to attract, recruit, train, motivate, and engage our people. We see workforce resilience as ensuring we have the right number of people, who have the right skills, a healthy mindset, work life balance, and reflecting the communities we serve over a long-term horizon.

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 T1 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.

However, we are not complacent as, like others in the sector, we face significant challenges. Entrants to Science, Technology, Engineering and Mathematics (STEM) careers (from which we would expect to replace our workforce) are becoming increasingly scarce. EU Skills predict a demand over the next decade of 221,000 STEM qualified entrants into the sector, to support the National Infrastructure Plan. In parallel, UK education system changes are having an impact on the number of people who pursue STEM careers. UCAS have reported a drop in university applications by 4.7% in 2017 and another 1% in 2018. At the same time, we are forecasting that 14% of our workforce will retire by the end of the T3 period, and we also expect non-retirement attrition to increase as fewer employees have pension benefits linked to length of service. We will need to work harder than ever to attract and retain people with the skills we need for the future. We also recognise our workforce does not yet represent the full diversity of the communities it serves.

To complement this chapter, we have also submitted annex NGET_A16.02 Workforce Planning. The following sections summarise our key areas of focus.

Workforce capacity

14% of our total workforce is set to retire by 2029 and for our critical roles this is higher at 19%. We forecast peak retirement from critical roles to be in the early years of the T3 period. Since 2016, we have invested in a strategic workforce planning capability. Each year, the team drives a process to forecast our workforce over a 10-year period so that we can understand how workforce changes and the future needs of the business will interact, helping us to plan to ensure we will have enough roles to run a safe and resilient electricity network in the future.

Our ability to deliver relies on the availability of suitably skilled people, particularly in critical roles such as Advanced Commissioning Engineers (ACEs), Senior Authorised Persons (SAPs), Power System Engineers and, with the increasing external threats, cyber expertise. We define the critical workforce as workers in our electrical maintenance & construction and engineering job groups. Out of 1,807 people within Electricity Transmission (excludes Capital Delivery headcount which is included in annex NGET_A14.05 How we contract and deliver efficiently), 1,408 are classified as critical workforce.

We are proposing to recruit and train approximately 165 people into our critical roles to replace retirees and leavers to maintain the resilience of our networks, contribute to the UK STEM talent pool and protect consumers from having to fund premium labour costs in the future. For cyber expertise, there is a challenge on resource competence and capability, as there are not currently enough of them in the market and other sectors are more competitive. We are currently undertaking a recruitment campaign; however, we may have to pay more to acquire this expertise.

We look to minimise the impact of retirement and attrition on our skills base by exploring alternative resourcing models, for example “gig” working for people who are approaching retirement, allowing them to continue working on a part-time basis so that our business can continue to benefit from their experience, mentoring and subject matter expertise. We will expand our current pilot which helps us keep in touch with ex-employees, providing an opportunity to bring skills back into the business within a shorter period than it typically takes to recruit and train up someone who is new to our business.

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

This year, we refreshed our STEM strategy to deliver more focused outcomes: working in the external environment to ensure there is a consistent pipeline of STEM qualified young people and internally ensuring we are attractive and recruit a diverse cohort from this pipeline into our business. We have rationalised the partnerships we sponsor, the key ones being with the Royal Academy of Engineering (RAE) where we have sponsored their "This is engineering" campaign to inform and engage young people in the opportunities offered by a career in engineering. We also partner with Energy and Utility Skills who work across utility companies to ensure a workforce for tomorrow. Additionally, partnering with Smallpiece Trust and Tomorrow's Engineers to deliver an ambition outreach for school STEM days and work experience opportunities.

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 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. 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 are monitored on a quarterly basis to ensure we are on track to deliver both in the short and longer term.

Workforce inclusion & diversity

We value inclusion and diversity as we know this stimulates new ways of working and innovation. There is significant evidence around the benefits of fostering diverse perspectives, such as improved creativity, innovation, problem solving, decision-making, attraction, engagement. In line with our value of 'Doing the right thing' we believe that focusing on improving workforce inclusion and diversity is ethically the right thing to do.

In the last year, we have been recognised as one of the Best UK Employers for Race by Business in the Community (BITC), Top UK Employers for Social Mobility, and The Times Top 50 Employers for Women. We have established Employee Resource Groups which recognise and celebrate people for their faith, race/ethnicity, sexual orientation and

gender. These groups provide valuable feedback that enables us to change policies or practices that serve to unlock the full potential of the workforce. Externally, we collaborate with Stonewall, the Business Disability Forum and Inclusive Employers.

We measure key diversity statistics and report these each year, alongside our financial performance, to be transparent about how our actions are impacting representation of diversity in our workforce. From 2017, we reported our gender pay gap; our latest UK wide data shows that our female employees were paid on average 4.4% less than males, this was significantly lower than the 15% gap reported on average across the utilities sector. Our latest diversity statistics show that here in National Grid (all functions) 13% of the workforce is female and 10% identify as being from Black, Asian and Minority Ethnic (BAME) background. This compares to the UK engineering sector which has under 10% female and 6% ethnic minority.

Our Chief Engineer, who is our diversity and STEM champion, has a stretching ambition to increase gender diversity in STEM and engineering disciplines. We have a multi-disciplined working group established to develop a proposal to achieve this ambition including sharing of best practice such as Royal Academy of Engineering (RAE), working with external organisations, and working much closer with schools and colleges to create a STEM pipeline much earlier.

Our diversity metrics show that we are performing better than the utility industry average, but we still have further to go to truly claim to reflect the communities we serve. We continue to champion our Employee Resource Groups, which have a pivotal role in supporting people with diverse experiences and raising the profile of different groups across our business, helping to attract diverse talent to come and work with us.

We now want to build on these solid foundational achievements, and in a recently established new I&D strategy we have reset our ambition: We will have an inclusive culture and diverse team which is more representative of the communities we serve. The ambition recognises that to date we have focused on diversity representation rather than inclusion and we now aim to be an inclusive employer to appeal to all current and future employees rather than solely focusing on specific diverse groups.

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 and will enable us to attract and retain the best talent.

2. Learning in T1 makes us fit for the future

We have carried a deliverability assessment out on our plan, the full detail of which can be found in annex NGET_A16.01 Deliverability. This section covers our main challenges and how we are mitigating these. We also provide an overview of all the changes and efficient ways of working we have implemented in the T1 period that provides confidence that we can deliver our plan.

Planning and resourcing requirements

The annual strategic workforce planning is used within the business to ensure our plans are adequately resourced. Our planning processes have aimed to ensure an even mix of work volumes across each year and in each operational team, supporting deliverability of the plan from both a resource and procurement perspective, ensuring that there are no spikes in volumes that might cause a risk to deliverability. Our engineering resources are also mobile both zonally and nationally. We are forecasting an increase for OHL fittings, protection and control and Optel. We have shared our plans with the ESO and no material concerns have been raised on the plan volumes.

For OHL we have a nationally mobile delivery team to deliver volumes. We are mitigating risks through the new ways of working terms and conditions to maximise daylight working hours and contracting additional resource through our flexible delivery model. For protection and control, more than 90% of the planned works are identified as low or medium complexity for which we have the skillsets and experience. If you look at this work in isolation, we estimate that that we will require 20% more commissioning engineering availability. We have plans in place to address the shortfall through the utilisation of new strategies, optimal bundling of works and alignment of workload. We also have plans to internally grow our commissioning resource.

To deliver the portfolio of Optel works, as well as elements for increased portfolios of protection and cyber works we have calculated we will require an additional 9 telecoms engineers. These are skilled roles, in a competitive market. We have ongoing training and recruitments plans. Other options to meet the shortfall include, training-up of suitable electrically qualified craft-fitters from wider substation resource pool, use of contract staff or partnerships with external telecoms companies.

Our remuneration offering for Cyber professionals is currently below market median in the UK and our approach for recruiting into these roles primarily uses graduate entry and development of existing IT and engineering employees into cyber roles, supplemented by external hire for specific skill-sets (such as risk and vulnerability management). We also have some flexibility to leverage our US resource and potentially outsource some activities. Within ET, cyber resource increases from 14 in 2021 to 25 in 2025 with a focus on operational technology. Roles will be embedded within the existing organisation and filled by developing operations and engineering staff into cyber roles, with clear career pathways put in place to support succession and retention. We are also collaborating across the utility and oil and gas sectors to explore options to address the shortfall in cyber professionals.

Organisational design

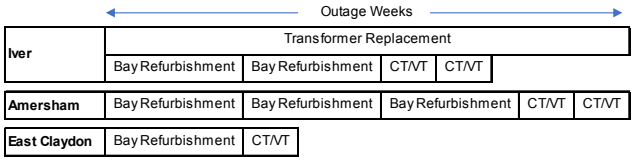
In 2018, we made changes to our organisational structure through the PEx (Performance Excellence) Value project. This was a bottom-up review of our business that focused on where we could deliver value for customers, drive efficiencies on all activities and build a structure to deliver in an efficient manner. It put the customer at the heart of our business, to increase the capacity and efficiency of our work delivery. This puts solid foundations in place providing the required level of resource and capability to deliver our plan.

Reduced system access

With the constraints on system access, we have identified ways of optimising our plan to reduce the level of system access required. We have introduced new systems such as Single View of the Plan (SVOP) which provides visibility of all the work being delivered and creates cohesion across the organisation. We have also been identifying the most efficient bundles of works to decrease the overall volume of system access requirements and optimal intervention timescales to ensure we deliver all the works planned. By looking across the T2 period, this has enabled us to identify opportunities to optimise the plan, reduce total outage requirements and minimise the likelihood of non-delivery. We have engaged our operational teams to review the work packages to ensure that the practicalities of multiple works on site are achievable. We have provided the following case study.

Work bundling case study: Amersham – Iver – East Claydon

There are 20 assets on this circuit that need interventions during the T2 period. By reviewing the work requirements at each site across the T2 period, we identified 13 asset interventions that could be bundled into a single outage, reducing the outage requirement from 54 weeks to 16 weeks (70% reduction), enabling delivery of the works within a single outage season. This improves efficiency by reducing mobilisation time, and reducing contractor and outage management costs.



Focus on operational productivity

Improving our productivity creates value for consumers by increasing our outputs for the same cost or delivering the same output at a reduced cost. We have focused on identifying initiatives that support our operational teams to drive performance. These include best practice initiatives reducing the variation in our standard job types. We have also introduced a new project lead role that will release ~60% of engineering resource time from non-engineering maintenance activities thereby providing the additional engineering resource required to deliver our T2 plan. We have also introduced new systems, such as Tableau, to drive performance.

New ways of working

This year, changes were made to our operational team's terms and conditions**.** The new ways of working agreement includes a seasonal stagger allowing for a 9.5 hour working day during the busy summer period to take advantage of extended daylight working hours. This increases the number of productive working hours.

3. Our flexible investment delivery model can deliver efficiently against an uncertain future

Whilst we have established a baseline investment plan for the T2 period, there remains significant uncertainty in the need for capital investments driven by the needs of our customers, network reinforcements driven by the ESO's annual Network Options Assessment (NOA) process and potentially new investments required to achieve net zero as pathways become clear. Therefore, adopting an efficient but flexible capital delivery model and a robust supply chain is key to delivering what our customers need from us.

Our investment portfolio is hugely varied, comprising strategic investment programmes, such as London Power Tunnels and Hinkley Point C connection project,

major construction projects, to reinforce and upgrade the network, as well as smaller and single asset capital investment projects.

Our flexible investment delivery model is therefore designed to have a flexible **contracting model,** flexible **operating model and resourcing** approach and robust processes for managing change. We also have a **robust supply chain** through which we procure goods and services. We have applied learning from the T1 period on achieving a balance between flexibility and securing delivery capacity. We have moved towards framework contracts comprising equipment supply only, equipment installation and a combined supply and install option which gives access to both capacity and competitively tendered rates.

Our contracting model and approach to resourcing allows us to be flexible

The flexibility of our contracting model allows us to ramp up and ramp down the work we allocate to contractors depending on customer need and means we can respond when our customers need us to. We have established a suite of competitively-tendered, multiple-tier frameworks to ensure fit-for-purpose contracting across all sizes of project. These flexible frameworks are designed to enable a blend of purchasing options to match the different delivery and programme requirements of our projects.

The frameworks comprise both equipment supply, install only and supply and install options, facilitating a flexible approach to meet the requirements of each project and deliver value. The frameworks are awarded to ensure that we contract with a portfolio of suppliers that can be flexible to meet our needs if customer workload increases. There is, however, no promise of work in these frameworks, this protects consumers if the level of capital investment reduces. We are working with many suppliers as shown in the diagram (in the inner, darker-green ellipse) and are exploring working with others for the T2 period (as shown in the outer, pale-green ellipse). This is on a supply and install basis firstly, and secondly as equipment suppliers or installation contractors (see figure 16.1 and 16.2 below).

Figure 16.1 Equipment constructors

Figure 16.2 Equipment suppliers (and installation)

Flexible operating model and resourcing approach

Major projects, such as the Hinkley project have a dedicated team of resources who can navigate the challenges of getting the relevant consents for the project, co-ordinate multiple contractors during construction to deliver a multi-year programme.

Electricity construction function – during the T1 period we implemented a structure that allocated delivery accountabilities regionally. This enables more local decision-making to support delivery for our customers.

Operations – our field force can deliver small capital projects alongside maintenance, repairs and network events. These types of projects include single asset replacements such as instrument transformers, targeted replacement of overhead line fittings, replacement and refurbishment of circuit breakers.

In deciding which of these routes is the most optimum way to deliver our capital plan, we consider resource availability, capability and lowest cost.

For the flexibility in our operating model, we look to ensure we have the right skilled individuals. Our aim is to be efficient whilst maintaining the flexibility needed. We have managed to achieve this during the T1 period by maintaining a workload/FTE ratio that is within the expected capital industry sector benchmark. There is not a simple correlation between workload and headcount. This is because we may retain a higher ratio than workload would indicate in some years in order that we can develop and then deliver the following years' volumes, due to the long lead times associated with managing capital projects. Some projects also have different project management requirements. Whilst we use contingent labour to smooth peaks in resource demand, there is still a lead time involved with recruiting specialist skilled resource. We plan our resourcing strategy to ensure that we are not a distressed buyer when works increase as this can result in higher costs.

Our optimal regional delivery structure ensures that we do not employ a “one size fits all solution”, however, the delivery approach to low total value, high volumes schemes needs to be considered. The need to manage these small (such as asset replacement), complex projects and still comply with the necessary statutory and regulatory requirements means that the percentage of cost that is linked to delivery costs changes when undertaking a greater proportion of smaller projects.

We have seen an increase in smaller projects through the T1 period which, although smaller in financial value, still have complexity in the engineering and delivery. The trend of the number of smaller projects being the larger proportion of the total capital delivery annual workload is forecast to continue during the T2 period. We have built core construction teams with the necessary skills that can be transferred to manage variability across the regions and commodity types.

Our core employees are complemented with skilled contractors. We have found utilising contractors is a cost-efficient way of managing the variability in the work plan as we can increase and decrease as the workload requires. Although contractors may attract a higher day rate than permanent employees, the costs of recruiting, the ongoing pension costs, sick pay, holiday pay and the potential costs of reassignment/redundancy if there is a reduction in workload means that for peaks in workload, the use of contractors is more economic than appointing permanent employees. This is particularly true for skills we need on a non-enduring basis such as tunnel supervisors that we only need when we undertake infrequent activities.

Using both core employees and contractors, we look to keep our resource broadly in line with the capital plan and can respond quickly if there is an upturn or downturn in customer demand, which allows us to remain efficient and flexible. Whilst we have covered the core elements of our delivery model, you can read further details in annex NGET_A14.05 How we contract and deliver efficiently.

We have a robust, competitive supply chain

Access to a wide market of goods and services is vital in ensuring we can deliver on time and within our forecasted expenditure. We are confident that we have robust processes, strategies and contracts in place that demonstrate we are ready and able to deliver. Our procurement lifecycle has three parts: category strategy framework, strategic sourcing process and contract management.

During the T1 period, our procurement function adopted a more strategic approach through a category strategy framework developing category strategies for the majority of expenditure. The framework commences with scoping the opportunity and is monitored through to its implementation in a series of stages, which ensure all the value opportunities are sufficiently considered and executed through the strategic sourcing and contract management process.

Annex NGET_A14.06 Delivering competitive value through procurement includes details on our global procurement function and the strategies that enable us to deliver value. Our procurement team undertakes category strategy, strategic sourcing and contract management. One of the key changes we made is in restructuring our global procurement function to drive additional value. We created a global team to identify and develop strategies with global synergy to explore:

- market supplier development opportunities which involved working with the businesses and identify and pursue new supplier opportunities more quickly, enabling us to lower costs whilst ensuring we meet the business needs; and
- supplier relationship management, to use the scale of our collective spend to leverage greater opportunities from key suppliers, improving access to innovation or joint development of products and services.

Significant developments have been made during the T1 period and bring benefit to how we will deliver for the T2 period. These include:

- Development of a capable supplier pool at multiple tiers with direct access to all market disciplines to ensure a ‘fit for purpose’ approach.
- Intelligent contracting that seeks to ensure a tailored efficient delivery approach on a project by project basis by utilising flexible frameworks to enable a blend of call-off options from full competitive tendering, ‘best for task’ and direct allocation to match the delivery and programme requirements of our projects.
- Development of our in-house capability in procurement, estimating, risk management, contract management and project management disciplines.
- Development of forecast driven sourcing plans to inform the supply chain and identify opportunities such as bundling packages of work.

We are preparing for the T2 period by undertaking a series of competitive procurement events, with contract awards expected by the end of 2020. Our contract strategy is designed to be sufficiently flexible to deliver the business plan as it evolves through the challenge and review process, whilst delivering value to the end consumer through application of our key contracting principles. One element to this is the profiling of our workbook to realise efficiencies from the supply chain. The indicative contract award timeframes permit the detailed design works for our projects in time for the build works commencing Spring 2021.

4. Risks and opportunities in delivery

Managing a portfolio of major and small capital investment infrastructure projects with multi-year timelines, changing requirements and complex challenges comes with inherent uncertainties that have the potential to affect cost, schedule and quality. These uncertainties (such as obtaining specialist resources, working next to and around a live network, working in major conurbations and changing customer requirements) drive changes in the workplan. When managing the variability inherent within the plan, we ensure we have a flexible contract model; flexible overall operating model and resourcing approach (all of which we have covered earlier in this chapter); the final aspect is robust processes for managing change.

Robust processes for managing change

Change driven by external factors, such as customer requirements changing, and other events, such as weather or system constraints, have the potential to cause delays and drive additional costs on our projects. To guard against these changes impacting the overall deliverability of our plans, we operate a change control process via the project controls function. The change control process provides the following benefits:

- The programme cannot be changed without going through this process, meaning we get early visibility of issues raised, allowing for timely discussions on potential impacts of change and options to mitigate.
- We get visibility of the issues that are happening on our projects and can prioritise across the whole portfolio to make the best overall decisions.
- These change requests are key inputs into our lessons learnt. We can review the planning and execution of projects, increasing the chances of a positive outcome the next time we undertake a similar project.

Identifying risks and opportunities

We have enhanced our approach by identifying risk earlier in the process, allocating them to the party best placed to manage or mitigate each risk (normally NGET, the main contractor, or the equipment supplier). This enables us to reduce the level of contingency cost across our portfolio of projects, whilst protecting customers and consumers from the potential cost of unforeseen events happening during delivery. In addition, forecast driven sourcing brings a more strategic, forward looking view. It seeks to extract best value from project delivery through:

- early assessment of supplier market capacity and capability
- bundling works by site, region, year for more efficient delivery
- identification of potential innovation through early contractor involvement
- focus on lean asset design, such as the delivery of protection and control equipment with a reduced outage period
- developing and trialling a range of alternative approaches to delivering our projects with a view to reducing delivery times and costs, such as time lapse video trials that monitored and analysed productive time on circuit breaker replacement projects.

5. We are taking a whole system approach to system access

System access is one of the major constraints we have in delivering our plans. We have less control over this as it involves a range of interfaces with the ESO, DNOs and directly connected customers. We are taking a whole system approach (see annex NGET_A7-8.03 Whole systems) and have been collaborating across the industry. For our deliverability assessments with the ESO, we have participated in Joint Planning Committee Operational Assessments (JPCOA). These look at cross party collaboration and co-ordination of outages in conjunction with the ESO. We apply the Network Access Policy (NAP) and share learnings in the NAP forum across all TO's and the ESO which promotes better future planning of outages. Internally to England and Wales we have promoted closer stakeholder relationships across NGET and the NGESO through regular liaison meetings over and above the normal operational requirements.

We have shared our plans with the ESO and no material concerns on the volume or deliverability of our plan have been raised. This allows productive conversations about the larger operability challenges. We have engaged on and are proposing to make a step change through an interface optimisation mechanism to provide the ESO with TO services they can market test to minimise the cost of the transition for consumers. The detail of this mechanism can be found in chapter 7 *We will enable the ongoing transition to the energy system of the future.*

We have shared details of our plans with the DNOs to understand their limitations and network challenges related to our work and, subject to specific preference of each DNO. We have received positive feedback and no material concerns have been raised. We are exploring closer working relationships with the DNOs to improve the chance of success and limit stakeholder impacts. Further engagement is planned with them over November and December 2019 to share more details and gather feedback on our plan.

We are tailoring our approach with our stakeholders and customers to get the best mutual outcome and to work efficiently to each company's needs. Further detail can be found in annex NGET_A16.01 Deliverability.