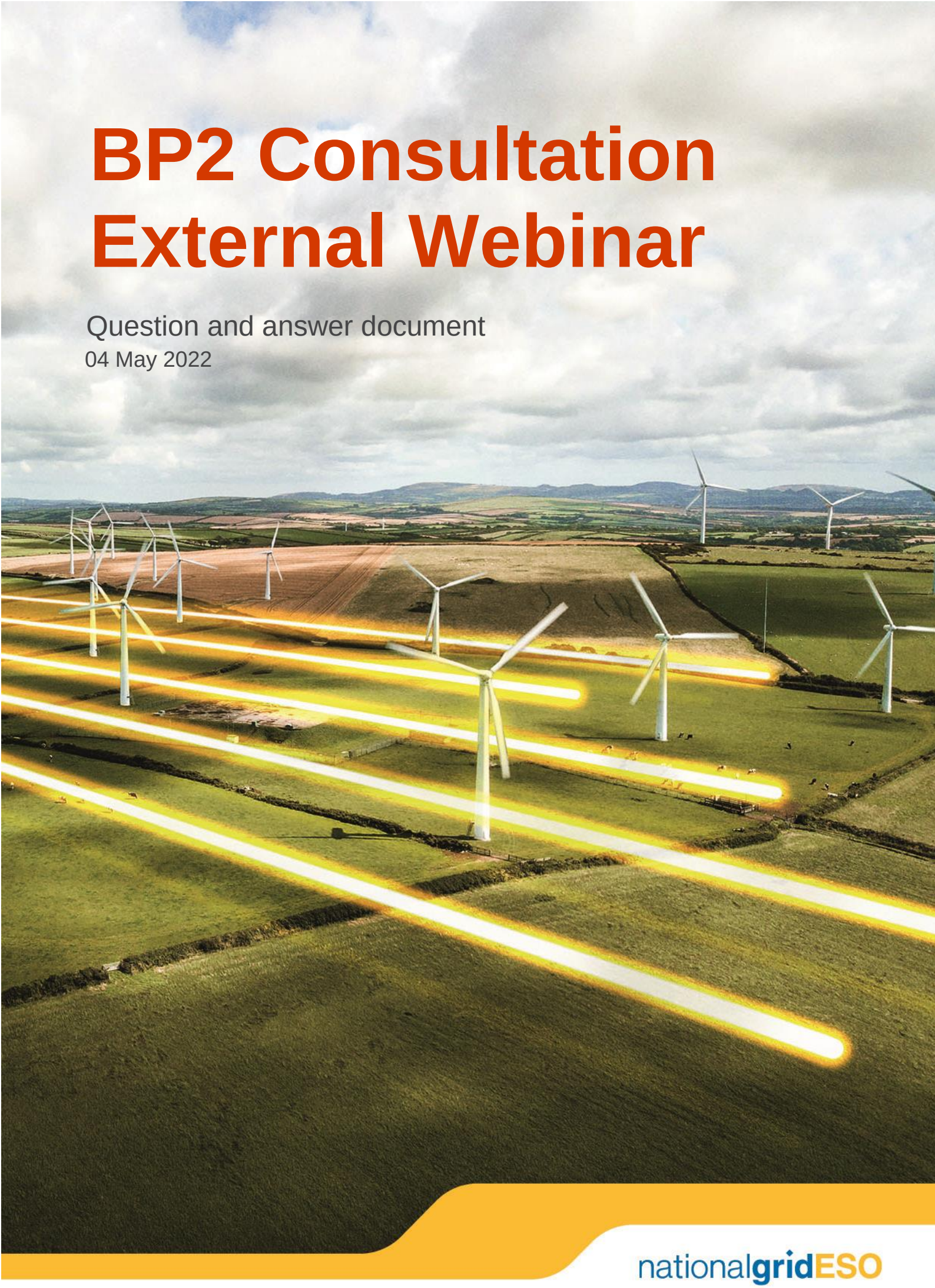
BP2 Consultation External Webinar

Question and answer document

04 May 2022



nationalgridESO

General

1. **Can you give the absolute numbers on the increased complexity of operating the system slide, rather than percentages?**

   We have passed this feedback on to our teams and are considering how we could be more specific regarding absolute numbers in our final plan.

2. **How has the potential gas embargo from Russia impacted the electricity system?**

   A. This issue has a more immediate impact than the BP2 timescale and we are working with Government and Ofgem to analyse a range of scenarios relating to the winter. Given the continuing situation in Ukraine and associated risks we have committed to giving an early view of the winter in July, in addition to the normal winter outlook analysis. BEIS has said publicly that "In light of Russia's illegal invasion of Ukraine, it is right that we explore a wide range of options to further bolster our energy security and domestic supply. That's why we are exploring slightly extending the life of our remaining coal-fired power stations to provide additional back up electricity this coming winter if needed." As has been widely reported, we are working with BEIS on this issue.

3. **Is the ESO worried and prepared to re prioritise as/when political desires change?**

   A. As the ESO, we are already responding to a rapidly changing external environment. In the two years since we submitted our first business plan there has been an acceleration of the UK Government's net zero target to 2035, the impacts of Covid-19 on operating the system and an energy cost crisis. However, our regulatory framework allows the agility to respond to a certain degree to new priorities. We will continue to prioritise/re-prioritise our deliverables when needed as we work towards our net zero targets.

4. **If you can operate carbon free by 2025, what is the significance of 2035?**

   A. The need to tackle climate change and deliver net zero grows ever more pressing and the UK Government has set an ambitious new target - to achieve a fully decarbonised electricity system by 2035

   This goal means that now, more than ever, we must go further and faster in pursuit of a decarbonised electricity system. We're confident that by 2025 we will have periods of 100% zero carbon electricity, with no fossil fuels used to generate power in Great Britain. As with coal free operation of the grid, these may be short periods at first but will still be a significant milestone on the road to net zero and these periods will quickly extend.

   The growth in renewable sources of power, with record levels of wind and solar, means there will be enough zero carbon generation to meet demand. A key challenge is ensuring the electricity system is ready to accommodate that power. Our engineers are deploying innovative, world first approaches to transform how the power system operates, such as removing the need to draw on fossil fuel based generation for critical stabilizing properties.

   By 2035 the aim is to have a fully decarbonised electricity system running fully on renewable generation. We've refreshed our mission to align more closely with this target. For more information on our milestones to net zero see our Bridging the Gap report.

Project specific

5. **Which areas do you think are most important to develop competition in the BP2 period?**

   A. We see competition as being key to being able to deliver the Government's net zero ambitions at lowest cost to consumers and in operating the network as efficiently as possible.

We fully support competition where it can drive consumer value. Over the BP2 timeframe we will be driving competition in areas such as:

- our market reforms – making sure that markets and ancillary services are supporting the net-zero transition and accessing the widest range of resources
- continuation and further development of our Pathfinder projects
- delivery of networks through work on implementing Early Competition.

6. **How will barriers to small distributed flexible assets be removed from balancing markets in line with a carbon free 2025? eg sub-1MW, performance standards**

   A. The number of small providers participating in the balancing markets is continuing to increase – in 2014 there were over 160 0-100MW providers, whilst in 2022 there are currently over 330. Therefore, we are working with stakeholders to address any barriers to entry for smaller providers and assets, as this trend is only set to continue. There are a number of initiatives being progressed to achieve this, including an upcoming Power Responsive working group on operational metering standards for domestic aggregation in the Balancing Market.

7. **As new control tools such as PMU (phasor management units) are being installed across the network. How are you making the most of the opportunities they provide?**

   A. This is something we are looking into. Having the available data and tools to monitor stability is only part of the solution, understanding what operational decisions can or need to be made is likely to be more important. We are reviewing this currently, including identifying where we need to partner with organisation to establish how we can use this data both in real-time and planning timescales to prevent and manage issues.

8. **FSO-GC0141 change- you mention extra compliance resource- but not independent engineer role or inferred extra resource needs- are these in annex 5? (where is the annex found?)**

   A. GC141 is a compliance modification as result of actions agreed following the power disruption on 9 August 2019. It is a complex modification and work is still ongoing. More information can be found at https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0141-compliance-processes-and-modelling. Due to the fact that this modification is ongoing and not concluded, specific resources are not yet set out in our plan. Annex 5, relates to resources for the FSO transition only and can be found at https://www.nationalgrideso.com/document/249516/download.

9. **Surely Code Reform etc should be led by the Regulator? The ESO is not the only Code Admin and there is potential for conflict of interest.**

   A. We agree that the direction of code reform should be led by Ofgem and BEIS. We recognise the Energy Codes Review is ongoing and in our BP2 proposals highlight that our plans may need to change subject to this review.

   Our BP2 plans focus on digitalising the codes currently administrated by the ESO today and providing a more strategic role in the codes. Future plans will evolve as the outcome of the Energy Codes review becomes clearer.

10. **Would your proposals result in you taking a view as to whether there should be more transparency over eg the HVDC link? You seem to have no view at the moment.**

    A. Improving transparency of our processes is an area that ESO has been actively working on over the last few years. With regard to areas such as the transparency of third-party equipment availability, this is an area that is currently under consideration.

11. Is the Digital Twin still a thing? How does that fit in?

A. In 2021 we launched an ambitious industry-wide mission to digitise our energy system called the Virtual Energy System. This world first, real-time replica of our entire energy landscape will work in parallel to our physical system. A shared industry asset, the Virtual Energy System will improve our simulation and forecasting abilities to support the long-term vision to operate a zero-carbon electricity system. The Virtual Energy System will bring together multiple digital twins to contribute to and access real-time data on the status and operation of other elements of the system. Our work on the Virtual Energy System is outlined in our business plan and on our website at https://www.nationalgrideso.com/virtual-energy-system.

FSO

12. There was some discussion on the ESO providing a Future System Operator annex within BP2. Can you clarify what you would see in that and how you/ others are planning to consult on those areas specifically?

13. What are the key interactions between the BP2 plan and implementing the Future System Operator? Will implementing the FSO affect delivery of BP2 activities?

A. We are excited by the announcement in April 2022 by the Department for Business, Energy and Industrial Strategy (BEIS) and the Office of Gas and Electricity Markets (Ofgem) that they intend to proceed with the creation of a future system operator (Future System Operator). This organisation, which will build on the existing skills and expertise of the ESO with additional roles and responsibilities, will be key to unlocking additional value for consumers and driving towards to net zero.

Prior to this announcement, and as part of our BP2 submission, Ofgem asked to see an indicative plan for the transformational activities we would have to undertake to respond to changes in our governance arrangements. Annex 5 – Future System Operator sets out the key activities, with associated dates, timeframes and indicative costs, of transitioning to a Future System Operator.

We have signed a multi-party statement with BEIS, Ofgem and National Grid Plc which shows our commitment to progressing the establishment of the Future System Operator. We will continue working closely with all parties involved in the coming weeks and months to build on these plans and enable a smooth and successful transition.

We will continue to deliver against the ESO RIIO-2 Business Plan for 2021 – 2023 which sets out a really clear path and commitments for us to deliver. When we have greater clarity on the timelines for the Future System Operator, further work would be needed to understand if this transformation programme will have any impact on the timing of our RIIO-2 deliverables.

14. Operability issues (e.g. Electromagnetic Transient (EMT) planning, design and compliance analysis) are challenges across industry. What assumptions are you making of other stakeholder's role within solving these challenges? What is the ESO/FSO role in this?

A. Regarding any challenges on the network such as the ones mentioned, we need to understand what capabilities our stakeholders have to address these challenges. We need to also set out what the needs and operability issues are to enable our stakeholders to have a clearly defined scope of the problem we are looking to resolve. The ESO/FSO role, where appropriate, will be to procure services through competitive processes which solve these issues and drive the most value for consumer.

15. **Can you just clarify that these cost increases - across all activities - does not include any FSO related extra roles?**

    A. Our BP2 main document does not include any costs related to new and enhanced roles the Future System Operator will need to deliver. Our indicative plans for the Future System Operator set out in Annex 5 include information on how new and enhanced roles would fit with our existing three regulated Roles along with a plan and associated costs of taking these on.

    In planning new and enhanced roles for the Future System Operator, we are mindful there are currently significant industry change programmes underway. These include a number of stakeholder consultations that may well impact our assumptions, activities and costs. We will be tracking all relevant consultations to ensure that pertinent changes and decisions can be incorporated into our transition planning

People

16. **It's the quality of the people that is important more than the number. Is there money/time for specialist training and development? Some roles are unique.**

    A. We want to be the net zero employer of choice. People are at the heart of what we do and a skilled and engaged workforce is critical to our success. This becomes more important in the context of the pace of change within the energy industry and our role driving the energy transition.

    In our plans, we've outlined the need for specialist training and development to help us drive this transition. For each of our three Roles we set out what the core capabilities are we need our people to have. We also describe how we will invest in training our people for example:

    - Building a new simulation capability to provide automated and flexible training options for our Control Centre teams
    - Providing training to support our new market monitoring activities
    - Refreshing our Data and Analytics curriculum

    Our people, culture and capability chapter also sets out how we will develop our people through the BP2 period.

Finance

17. **How have your TotEx catch up and ongoing efficiency proposals changed since BP1 can you show the £m saving?**

    A. The core roles of the ESO continue to produce efficiencies worth £8 million per year compared to RIIO-1, with BP2 also including 1% efficiency on core activities and a 3% attrition assumption. Wherever possible, transformational activities will leverage existing resources, rather than adding headcount and cost.

18. **Which aspect of your plan contributes the greatest to the £5.50 saving?**

    A. The biggest modelled benefit has come out of Role 3 which accounts for £2.3bn of benefit. This is a significant increase in benefits since BP1The activity making the largest contribution to this increase is A15 – Taking a whole energy approach to promote zero carbon operability, which delivers approximately £1.2bn of benefit. This increase is driven by two main factors; the inclusion of a new benefits case for our distributed energy resources visibility sub-activity and a large increase in the benefits of addressing whole system operability challenges (including our work to reduce constraint costs and identify system operability needs).

    More information can be found in the CBA Annex.

19. Why has the NPV of the benefit of Role 2 reduced so much?

A. The £184m decrease in total 5-year NPV for Role 2 is mainly driven by the reduction in estimated NPV for the sub-activities A6.6 and A6.7 related to fixing Balancing Services Use of System (BSUoS) tariffs. There are two key drivers for this. Firstly, we have updated the benefits methodology to align with an analysis commissioned by Ofgem, which incorporates more up-to-date assumptions about BSUoS reform than our BP1 CBA. Secondly, implementation of BSUOS reform has been deferred to 2023, whereas BP1 assumed implementation in 2022.

20. As a follow-up to the question on efficiency, how do your unit or project costs compare to other central bodies? Was a benchmarking exercise carried out?

A. No benchmarking has been undertaken for the draft submission, but IT investments will be subject to benchmarking for the final submission. Non-IT cost assumptions are in line with the original submission and will not be benchmarked as they have already been scrutinised by Ofgem.

21. Please can we get more detail on unit costs comparisons to benchmarks and how you are driving efficiencies?

A. Details of the benchmarking exercise will be provided within the final submission when this exercise has been undertaken.

Efficiencies within non-IT costs are being driven by improving and automating processes, and enhanced planning and prioritisation. Efficiency will also be delivered by using employees in the most effective way through prioritising activities, working as one team and across teams, and increased training and capabilities.

22. How sensitive is the NPV benefit of the plan to power prices and are there some activities that could become marginal/dis-beneficial dependent on price changes?

A. The updated estimate for the net present value (NPV) of the RIIO-2 activities across all roles is £2.6bn over the 5-year RIIO-2 period (April 2021 – March 2026) and £7.6bn over 10 years (April 2021 – March 2031). All RIIO-2 activities, subject to a CBA, now have a positive 5-year NPV. The total change in 5-year NPV from BP1 is +£827m. This positive increase has three main drivers:

1. Increase to our cost of carbon assumption – the financial benefits relating to activities which limit carbon emissions and reduce environmental damage have increased. Our updated cost of carbon assumption is based on the marginal abatement cost, rather than on the short-term traded value of carbon used in the BP1 CBAs. This update is recommended by BEIS.

2. Increase to our constraint costs forecasts – the benefits linked to proportional reductions in constraint costs have increased because forecasts for constraint costs have increased by £721m over the RIIO-2 period, since BP1.

3. New deliverables providing greater consumer benefit – by doing more and going further than in our first business plan we will unlock more value and provide greater benefits for consumers.