

# Draft ESO RIIO-2 Business Plan 2

(1 April 2023 – 31 March 2025)

[sli.do #757669](https://sli.do/#757669)

Please note we will start  
the webinar at 13:02

BP2 Submission and Consultation  
Launch Webinar

4 May 2022

# Welcome and housekeeping



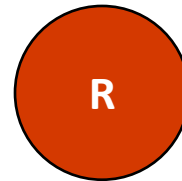
Microphones on mute



Cameras off



Please post any questions you have in [sli.do](#)  
[#757669](#) and we will answer during the Q&A  
session



Session is being recorded and  
will be posted on the ESO  
website

# Agenda

1. Welcome, housekeeping and agenda, RIIO-2 recap
2. Context to BP2
3. BP2 refreshed mission and ambitions
4. Key updates of BP2 plan
5. Role 1 updates
6. Role 2 updates
7. Role 3 updates
8. Cross-cutting activities
9. Future system operator
10. BP2 formal consultation
11. Q&A



# Re-cap: the RIIO-2 price control timeline

## The RIIO-2 price control timeline



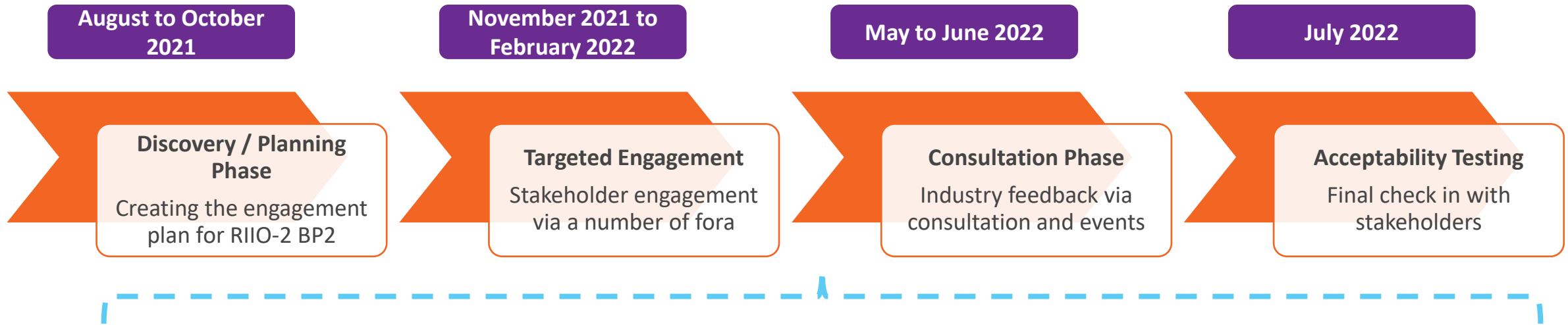
1 April 2021

31 March 2026

## The BP2 planning timeline



# How have/will we engage with stakeholders for BP2



## ESO RIIO-2 Stakeholder Group (ERSG)

The independently chaired Stakeholder Group provides valuable scrutiny and challenge throughout the development of our RIIO-2 Business Plans

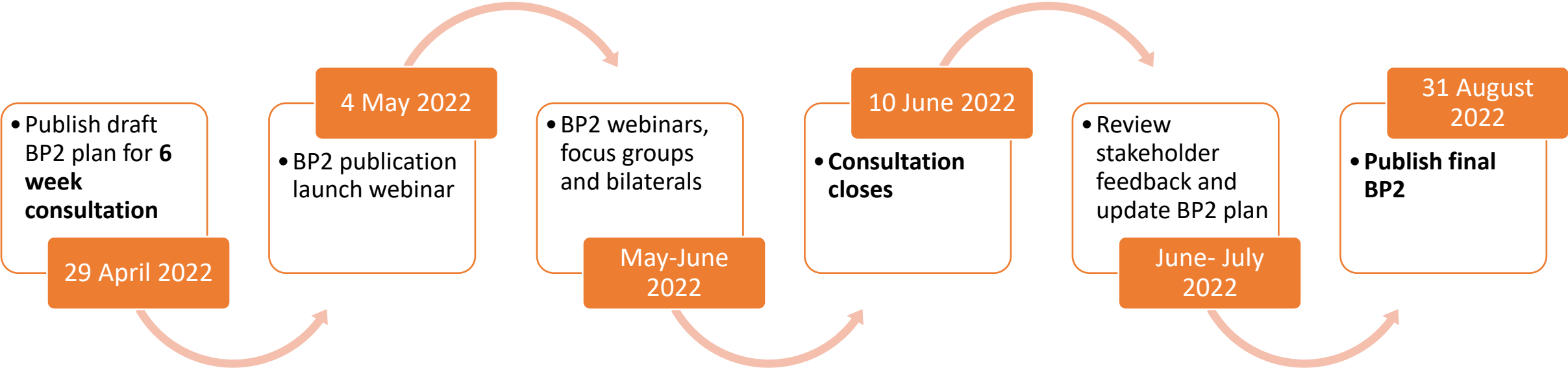
### How are we engaging?

- BAU programme of engagement
- In line with BP2 stakeholder engagement requirements set clearly by Ofgem
- BP2 specific engagement plan that includes:
  - ERSG
  - Using existing stakeholder engagement events to minimise stakeholder fatigue
  - Use of customer focus groups where appropriate
- Capturing feedback using a “you said, we did” approach

### Examples of fora we will engage with:

- Technology Advisory Council
  - Engineering Advisory Council
  - Operational Transparency Forum
  - Code Panels
  - FES Network Forum
  - ENA Open Networks
- And many more....

# Next steps towards publishing our BP2 plan

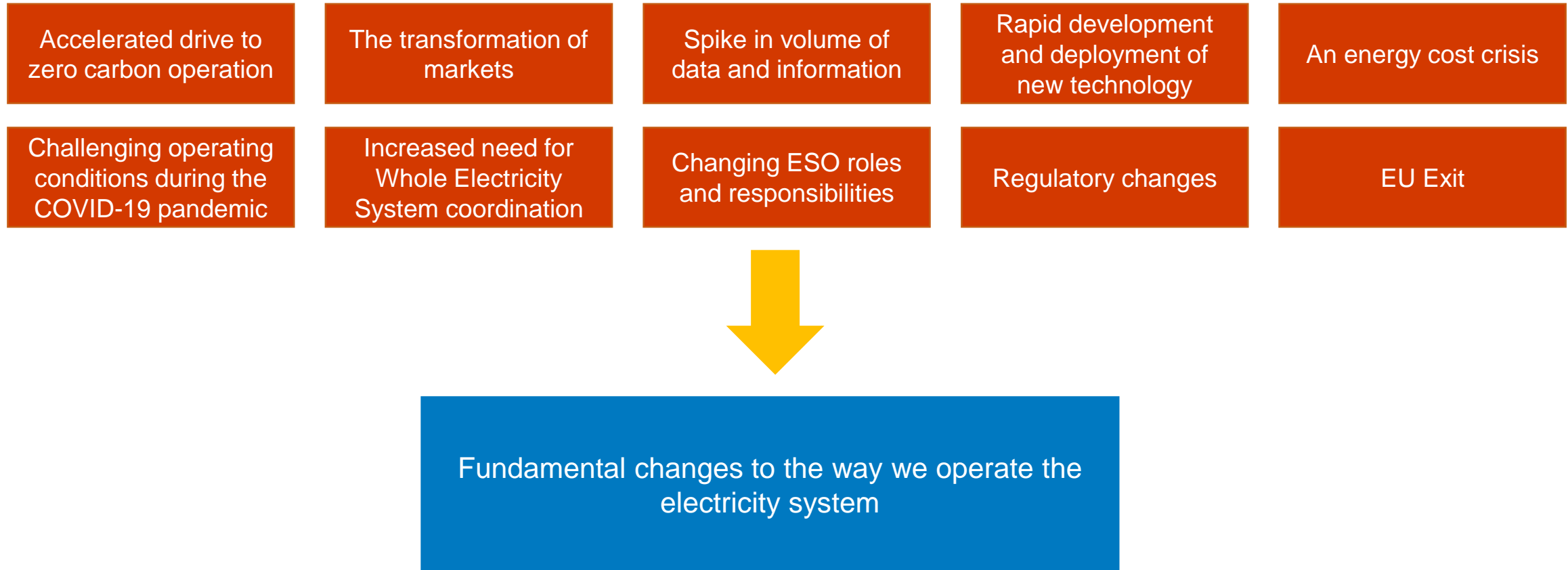


## 2. Context to BP2



# Context headlines for our BP2 plans

A number of new themes have emerged, while others have become more significant since we produced our BP1 plans:





# The increased complexity of operating the system

Some examples of how the changing environment has increased the complexity of our business:

Balancing actions now regularly exceed

**50%**

of national demand. In 2012 the average was around 5%.

**150%**

increase in wind generation between 2016 and 2020

**30%**

increase in balancing mechanism instructions issued daily from 2014 to 2020

**68%**

increase in Physical Notifications since 2018

**100%**

increase in transmission connections applications in 2021

**65%**

of balancing instructions in 2020 were to small market participants (55% in 2014)

**1,800**

daily balancing instructions issued to market participants in 2020 (up from 1,400 in 2014)

Other factors driving complexity include:

- Decreased inertia from thermal stations
- Reduced reactive power capacity
- Increased constraint and balancing costs
- Increase in code modifications
- Increase in data flows to Control Centre

# Change to our BP2 plans

The new themes in our external environment and increased system complexity mean we've rethought our activity in the following ways:

**1** Brand new activities to support the transition to net zero e.g. Early Competition and Offshore Coordination

**2** Increased activity for our teams resulting from increased decentralisation of the energy sector

**3** Activity from BP1 replanned or expanded to deal with growing system complexity



# Our focus for the BP2 period



### 3. BP2 refreshed mission and ambitions



## Refreshed ESO mission

Given the level of energy industry and societal change since the start of RIIO-2, we have refreshed our mission and ambitions to reflect this evolving context and frame our BP2 plans

### Our refreshed mission is...

*“...to drive the transformation to a fully decarbonised electricity system by 2035 which is reliable, affordable and fair for all”*

Our refreshed mission aligns to the **2035 government target**, is under our **current license remit** of electricity and assumes the need for a **whole-system approach**. Our ambitions have also evolved...

# Refreshed ESO ambitions

We have five distinct and action-oriented ambitions, three are largely unchanged and two are new



Ensuring the electricity system can operate carbon-free by 2025

A clear, short-term, ambitious, achievable, and well accepted goal, internally and externally



*New!*

Being the net zero employer of choice

Our mission can only be realised alongside our people, who have the needed skills & desire to be part of the net zero journey



Engaging as a trusted partner

Using our unique position at the heart of the energy system, we must bring together the industry to meet net zero goals



Driving competition for the benefit of consumers

Our mindset of promoting competition everywhere remains critical and supports maximising consumer value



*New!*

Being innovative, digital and data driven

Innovation, data and digital technologies are a fundamental part of our core business, and to achieving our mission

All activities within our **BP2 plan** now clearly align to our refreshed mission and ambitions. They are an **evolution** from our previous set and start to look towards our **future system operator** roles

## 4. Key takeaways from BP2 plan



# BP2 activity key takeaways

- Our three ESO roles are the same for BP2
- Significant number of new and changed activities for each role:

## 5 new activities:

- Market Monitoring
- Data and analytics operating model
- Net Zero Market Reform
- Role in Europe
- Offshore Coordination/Network Planning Review

## And 12 new sub-activities

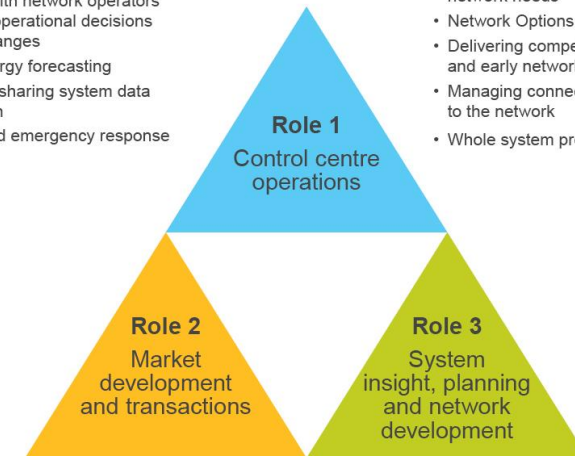
*Work related to FSO sits separately to our draft plan in Annex 5*

### Role 1 activities:

- Operating the system (monitoring and dispatch)
- Coordinating with network operators on short term operational decisions and outage changes
- Short term energy forecasting
- Managing and sharing system data and information
- Restoration and emergency response

### Role 3 activities:

- Long term forecasting, energy scenarios and identification of network needs
- Network Options Assessment
- Delivering competitive system solutions and early network competition
- Managing connections and access to the network
- Whole system process development



### Role 2 activities:

- Balancing and ancillary service market design
- Service procurement and settlement
- Revenue collection
- Policy advice and delivery of market framework changes
- Code administrator
- EMR delivery body



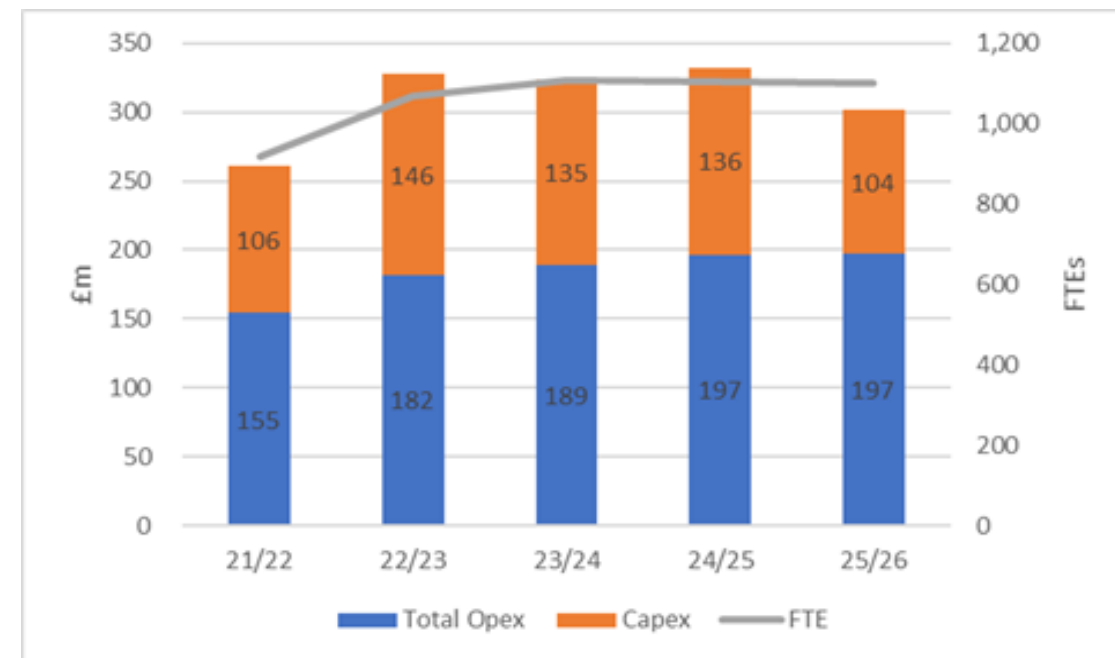
## BP2 key financial takeaways

Five-year investment increase:  
£74m opex, and £179m capex  
NPV of around £2.6bn

Two-year investment increase (for BP2):  
£42m opex, £88m capex and an increase  
of 307 FTEs (in FY24).

This investment increase is driven by:

- New activities e.g. Offshore Coordination
- Expanded activities
- Direct IT capex variance driven by Balancing Programme
- Increased opex related to IT
- Property spend



Our plans deliver savings for consumers of around **£5.50** a year.

## 5. Role 1 update: Control centre operations

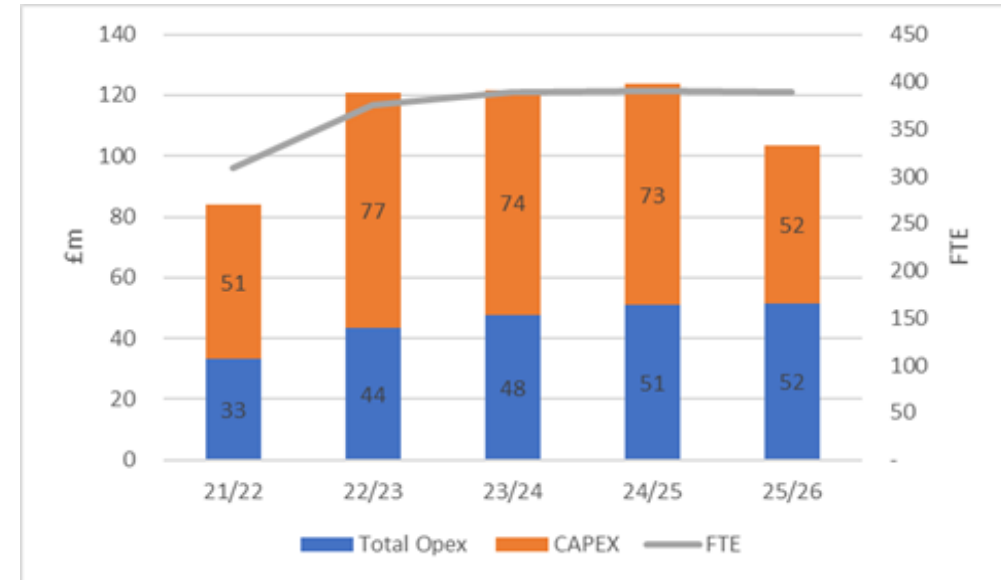


# Role 1 overview

During the BP2 period Role 1 will need to:

- Maintain our focus on the management of balancing costs
- Maintain our legacy systems
- Proactively monitor Balancing Services market activity
- Deliver the requirements of the new Electricity System Restoration Standard (ESRS)
- Continue to evolve how we use data to improve our customer digital experience
- Focus on how our processes, systems and operating environment can support the DSO transition
- We are also launching a strategic review of our balancing capability

## Role 1 BP2 financial highlights



### Role 1 benefit

Net present value = **£19m** over five years

Increase from £8m in BP1

## 6. Role 2 update: Market development & transactions

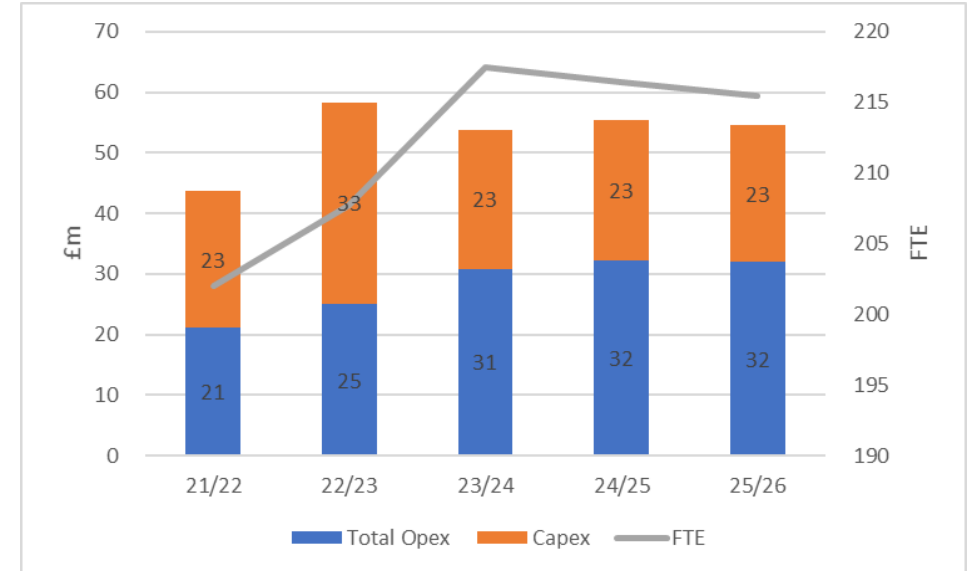


# Role 2 overview

During the BP2 period Role 2 will need to:

- Embed, optimise and continuously improve BP1 new markets
- Deliver a new frequency management strategy
- Build a better understanding of barriers to participation in flexibility
- Deliver an integrated and co-optimised day-ahead response and reserve market
- Respond to the growth of flexibility markets
- Support the development of policy and rules for the Capacity Market
- Explore possible options for the capacity mix
- Continue removing barriers to entry and simplifying code governance
- Make recommendations on the right structure for whole electricity system frameworks

## Role 2 BP2 financial highlights



### Role 2 benefit

Net present value = **£227m** over five years

Decrease from £411m in BP1

## 7. Role 3 update:

System insight, planning and network development

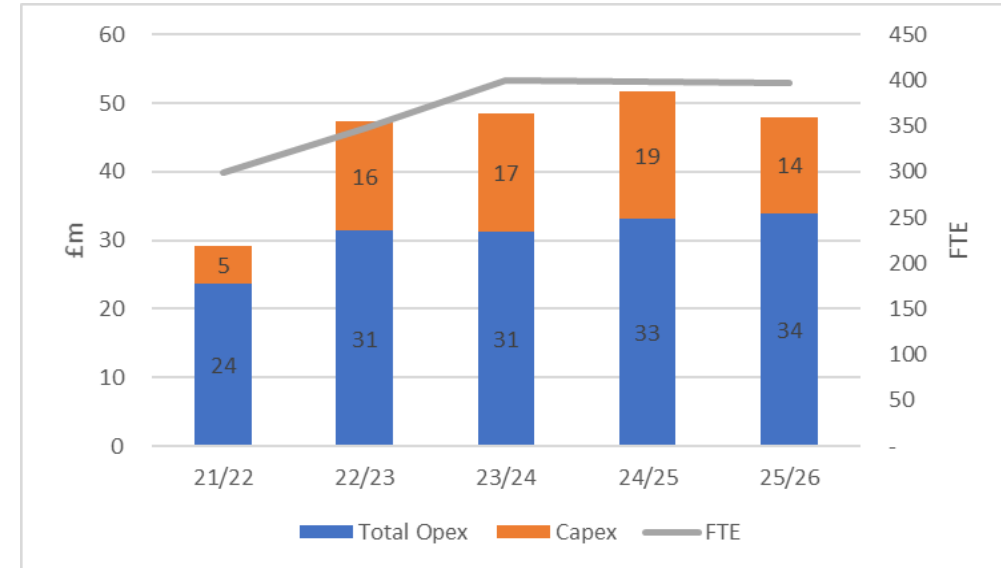


# Role 3 overview

During the BP2 period Role 3 will need to:

- Evolve and enhance our network planning
- Improve customer connections
- Facilitate distributed flexibility
- Develop networks fit for the future and improve network access
- Build on our system insights
- Additionally we will work with Ofgem and BEIS on several new activities such as:
  - Early Competition
  - Holistic network design for offshore wind
  - A new approach to network planning and development
  - Facilitating the next interconnector cap and floor window

## Role3 BP2 financial highlights



**Role 3 benefit**  
Net present value = **£2,336m**  
over five years  
Increase from £1,335m in BP1

## 8. Cross-cutting activities: Innovation and IT





# Innovation

- Our innovation capabilities have developed significantly in BP1
- In BP2 we will build on our BP1 innovation progress and capabilities by:
  - Progressing NIA projects like Virtual Energy System, the Future of Reactive Power and Stability Market Design
  - Support innovation work across our three Roles
  - Refresh our strategic priorities for innovation
  - Increasing the size of our innovation portfolio by 30%

## Funding innovation in RIIO-2

Years one to two

**£23 m**

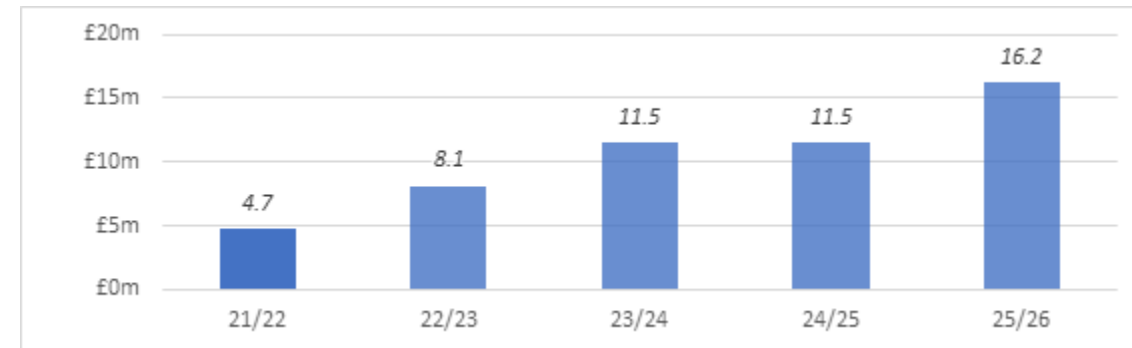
£20.7m of NIA funding plus a required 10% contribution from the business

Years three to five

**£24.3m**

minimum additional NIA funding to meet planned innovation activity and support wider business plan

Forecast NIA spend across RIIO-2:



# Technology

- A strong IT capability that contains the right blend of technology, knowledge and skills will be a major enabler for us to carry out our functions.
- Our IT investments comprise a large proportion of our overall Business Plan proposals over the RII0-2 period and we are committed to ensuring that these will effectively and efficiently enable the delivery of this plan.
- For the BP2 period we are forecasting a significant increase in ESO technology investment Totex driven by cost increases and scope changes on some of our projects.
- We continue to review our cost forecasts and therefore have submitted a cost range for our draft submission.
- There will be a specific IT annex published on 16<sup>th</sup> May supporting our IT proposals.

Our investment plan now ranges from

£433m - £574m

Compared to £407m in our original submission

There will be a specific IT annex published on 16th May supporting our IT proposals

# 9. Future System Operator (FSO)



# What do we mean by a Future System Operator



An **independent** organisation with a mandate to deliver **net zero system operation**, with enhanced **data and digital capability**



Act with a **whole energy system view**, bringing parties together to support **optimised decision-making and action** in the decarbonisation of power, heat and transport



Working with policy makers and regulators, and advising more broadly across the energy sector, to **unlock value and accelerate the net zero transition**

# The role of the Future System Operator will evolve over time

The Future System Operator (FSO) will play a vital role, creating an expert and impartial body with duties to facilitate net zero whilst also maintaining resilient and affordable whole energy system

The ESO today and  
R110-2 Transformational  
Activities

## 'Day 1' of the FSO

We will introduce the whole energy system capability for:



Network planning and market strategy across both Gas and Electricity



The Advisory role to support BEIS/Ofgem in decision making



The new capabilities will be empowered by legislation

## Future of the FSO

Future responsibilities may extend to the following:



Hydrogen



Heat



Transport



CCUS

## What comes next



We will be entering into a design phase over the next couple of months



Increased engagement across a range of stakeholders



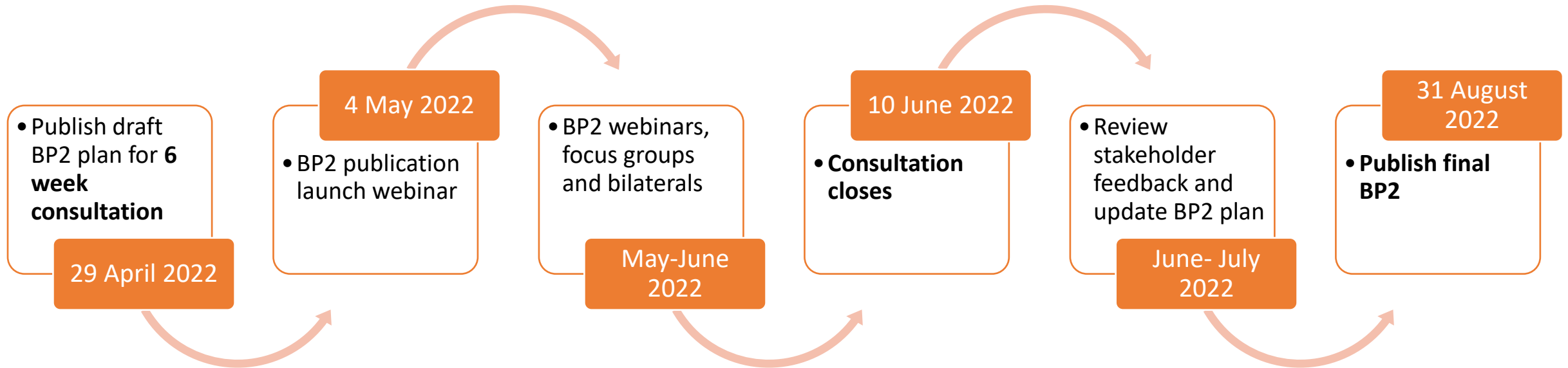
If you want to further engage with us or have any questions please contact:

- [box.fso@nationalgrideso.com](mailto:box.fso@nationalgrideso.com)

# 10. BP2 Formal Consultation



# Next steps towards publishing our BP2 plan





## How to get involved

Consultation is open until Friday 10<sup>th</sup> June

Consultation document and questions available on ESO website

You can sign up to our mailing list, email your consultation responses / queries or set up a meeting with us through [box.ESO.RIIO2@nationalgrideso.com](mailto:box.ESO.RIIO2@nationalgrideso.com)

Poll 1: What would be your preferred way of finding out more and responding to this consultation?

## Poll 2: what areas of the plan would you like to find out more about?

- Our new activities are:
  - Role 1 - A18 – Market Monitoring and A19 – Data and analytics operating model
  - Role 2 - A20 – Net zero market reform and A21 – Role in Europe
  - Role 3 - A22 – Offshore coordination/network planning review
- New sub activities are:
  - A1.5: Operational coordination with DER and DSO
  - A18.1 Ongoing activities
  - A5.4 Long-term capacity adequacy
  - A20.1 net zero market reform programme
  - A21.1 cross border initiatives
  - A6.7: Fixed BSUOS tariff setting
  - A6.8: Digitalisation of codes
  - A6.9 Whole system codes reform
  - A8.4 Early Competition
  - A16.5 Network Access Planning Automation
  - A22.1 Offshore Coordination
  - A22.2 Network Planning review
- Cross-role activities not covered above: Innovation, facilitating distributed flexibility

# 11. Q&A

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