



# Pathfinders: opportunities for customers and challenges so far

22<sup>nd</sup> June 2021  
NGESO Markets Forum

# Agenda

Introduction

Current pathfinders and updates

Pathfinders ongoing challenges

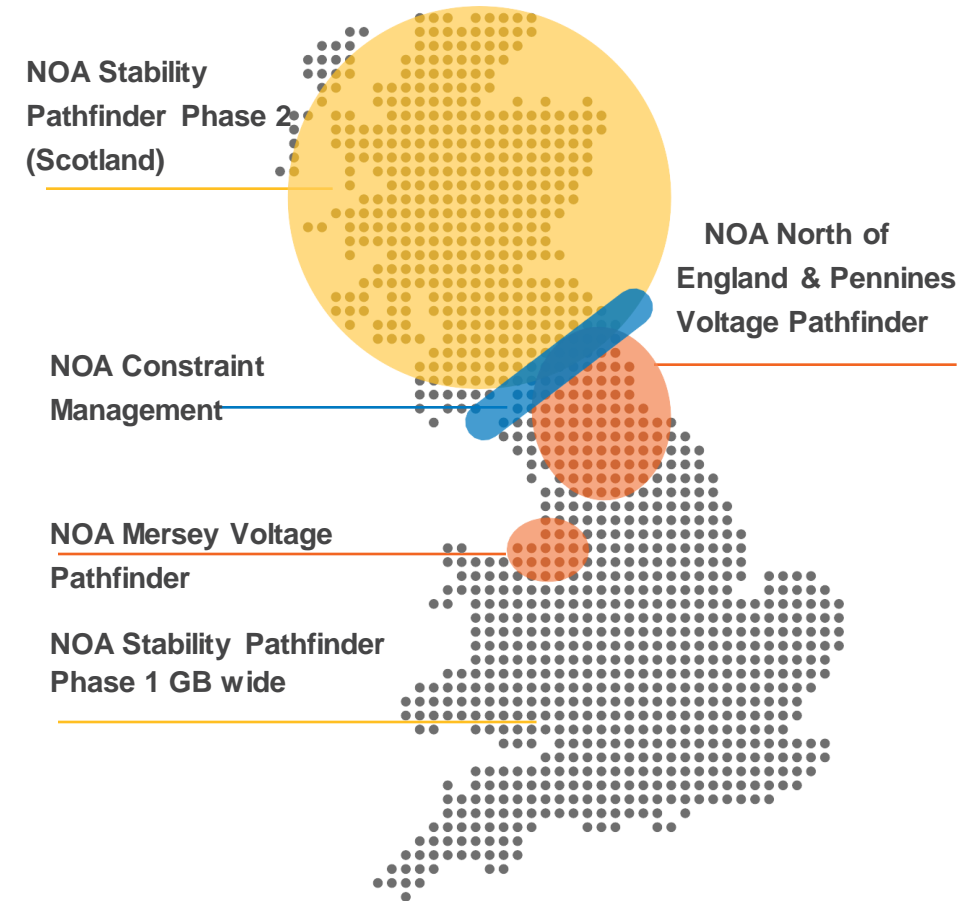
Future direction

Q&A

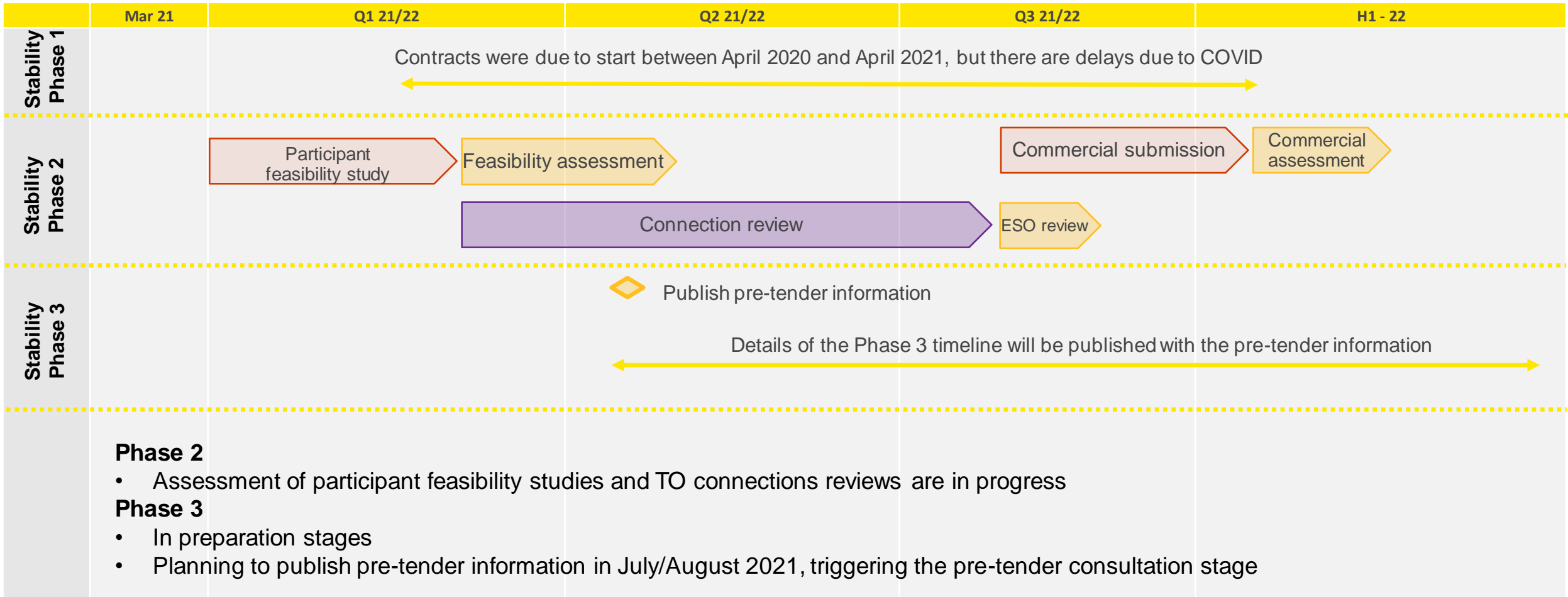
# Current Pathfinders and updates

# Current Pathfinders

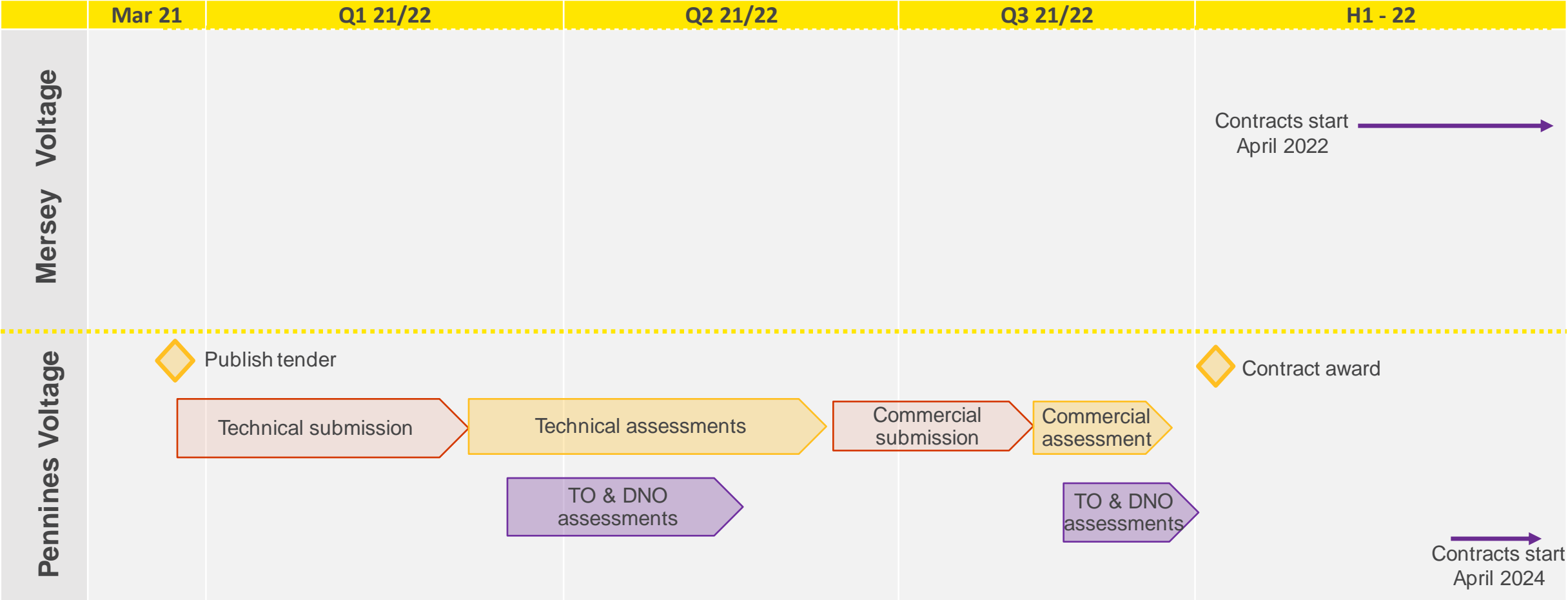
Pathfinder	Requirement	Status	Forecast Annualised Savings
Stability Phase 1	Inertia, SCL and dynamic volts	Completed	£8.7m
Mersey	Voltage	Completed	£12.6m
Stability Phase 2	SCL, Inertia, dynamic volts (Scot)	Technical assessment in progress	
Pennines	Voltage	Tender Stage (TO/DNO studies)	
Constraint Management B6	B6 Thermal Constraints	Technical assessment in progress	
Stability Phase 3	SCL, Inertia, dynamic volts (locations of SCL need)	In Development	



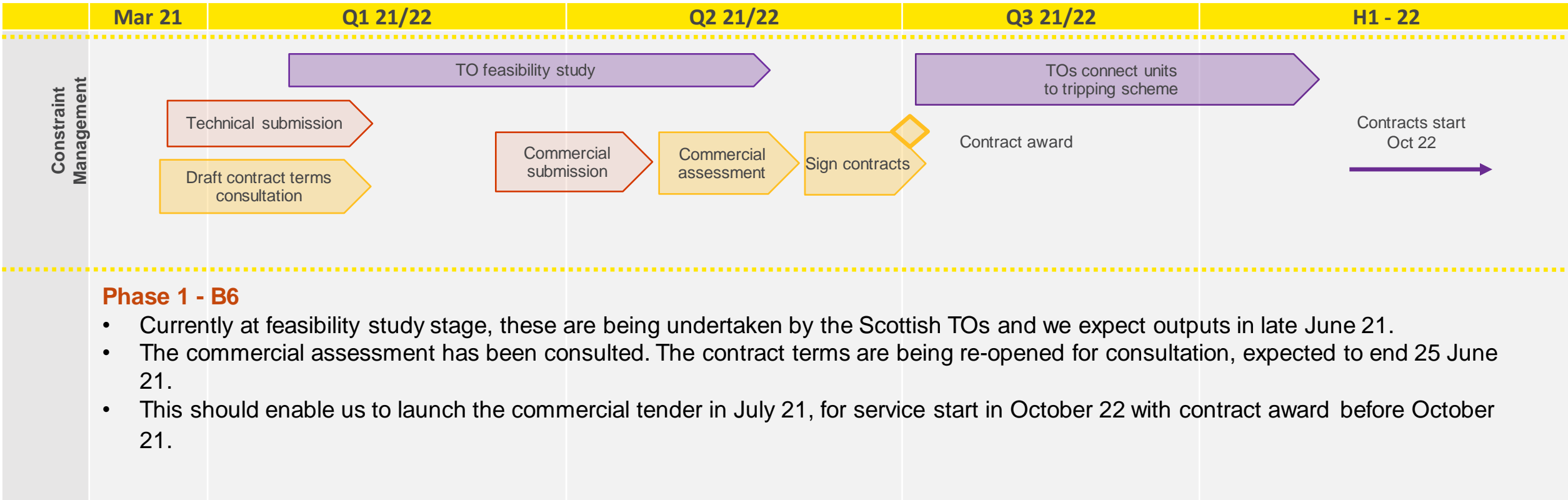
# Current Pathfinders – Stability Pathfinder



# Current Pathfinders – Voltage Pathfinder



# Current Pathfinders – Constraint Management Pathfinder



# Pathfinders ongoing challenges





## Ongoing challenges: connections

- Market includes already-connected and new solutions
- Time and cost to get connected is key to delivery of Pathfinder solutions
- Typically, previous Pathfinders have embedded TO Connection Feasibility Reviews into the stages of the tender process.
- Difficulties to date include:
  - Unforeseen time delays
  - Certainty over connection time and cost information
  - Changes to availability of sites post TO review
- ESO are working with TOs and OFGEM to explore alternatives ways of managing the interaction between the Pathfinder tenders and Connection process
  - More equitable for all participants
  - Support competition

# Ongoing challenges: developing fair competition between regulated entities and different commercial 3rd party providers

- Challenge : how to accurately compare the cost of a regulated option vs various commercial solutions.
  - Different parties exposed to different market costs
    - Regulated entities : Fixed depreciation / fixed rate of return/ no network charges
    - Commercial parties – free to define investment recovery period/returns/ exposed to connection and network charges
  - ESO is looking at approaches to improve equitability in this area
  - Testing ideas with OFGEM

# Ongoing challenges: asset class definition. Licenses, connections and charges

- Pathfinders are driving a new type of 'pseudo transmission' asset such as reactors and synchronous compensators.
- The framework is silent on the treatment of these type of assets, which creates uncertainty.
- This can impact the connection obligations and network charges that service providers are exposed too (FCL, TNUoS, BSUoS)
- This impacts both voltage and stability pathfinders (but not constraints):
  - For voltage a charging change has been approved that levels the playing field for TNUoS.
  - For stability, synchronous compensators will be treated as non-embedded customers (i.e. demand) for connection offers.
- We acknowledge this is an issue and are working with BEIS and Ofgem to explore solutions.

# Ongoing challenges: connections assessment contracts

- Pathfinders require a lot of collaboration.
- ESO needs to understand the connections feasibility of the solution in the pathfinder. This can be done through a contractual arrangement.
- The overall pathfinder delivery plan can be affected by the feasibility assessment based on:
  - volume of interest seen in the RFI/EOI phase
  - diversity of options submitted in the EOI
  - complexity of the solution
  - number of teams required to liaise across organisations to feed into the solution
- Please note; the outcome from the connections review/assessment in the pathfinder is not a connection offer and is only to facilitate the tender process. So successful participants will still need to apply for a connection.

# Future direction



# Future direction

Beyond progressing strategic issues, what are ESO looking at for future Pathfinders?

- Commercial structure & capital cost information
- One stage tender processes
- Enhancing TO and DNO relationships
- Future projects

ESO invite market feedback on the above to help develop these concepts



Any questions?