



# Constraint Management Pathfinder

# Legal disclaimer and Copyright

## Disclaimer

This guidance document has been prepared by National Grid Electricity System Operator (NGESO) and is provided voluntarily and without charge. Whilst NGESO has taken all reasonable care in preparing this document, no representation or warranty either expressed or implied is made as to the accuracy or completeness of the information that it contains and parties using information within the document should make their own enquiries as to its accuracy and suitability for the purpose for which they use it. Neither NGESO nor any other companies in the National Grid plc group, nor any directors or employees of any such company shall be liable for any error or misstatement or opinion on which the recipient of this document relies or seeks to rely other than fraudulent misstatement or fraudulent misrepresentation and does not accept any responsibility for any use which is made of the information or the document or (to the extent permitted by law) for any damages or losses incurred.

**Copyright National Grid ESO 2020, all rights reserved.**

# Version control

<b>Version</b>	<b>Date published</b>	<b>Page No.</b>	<b>Comments</b>
1.0	22/12/2020		

# Introduction

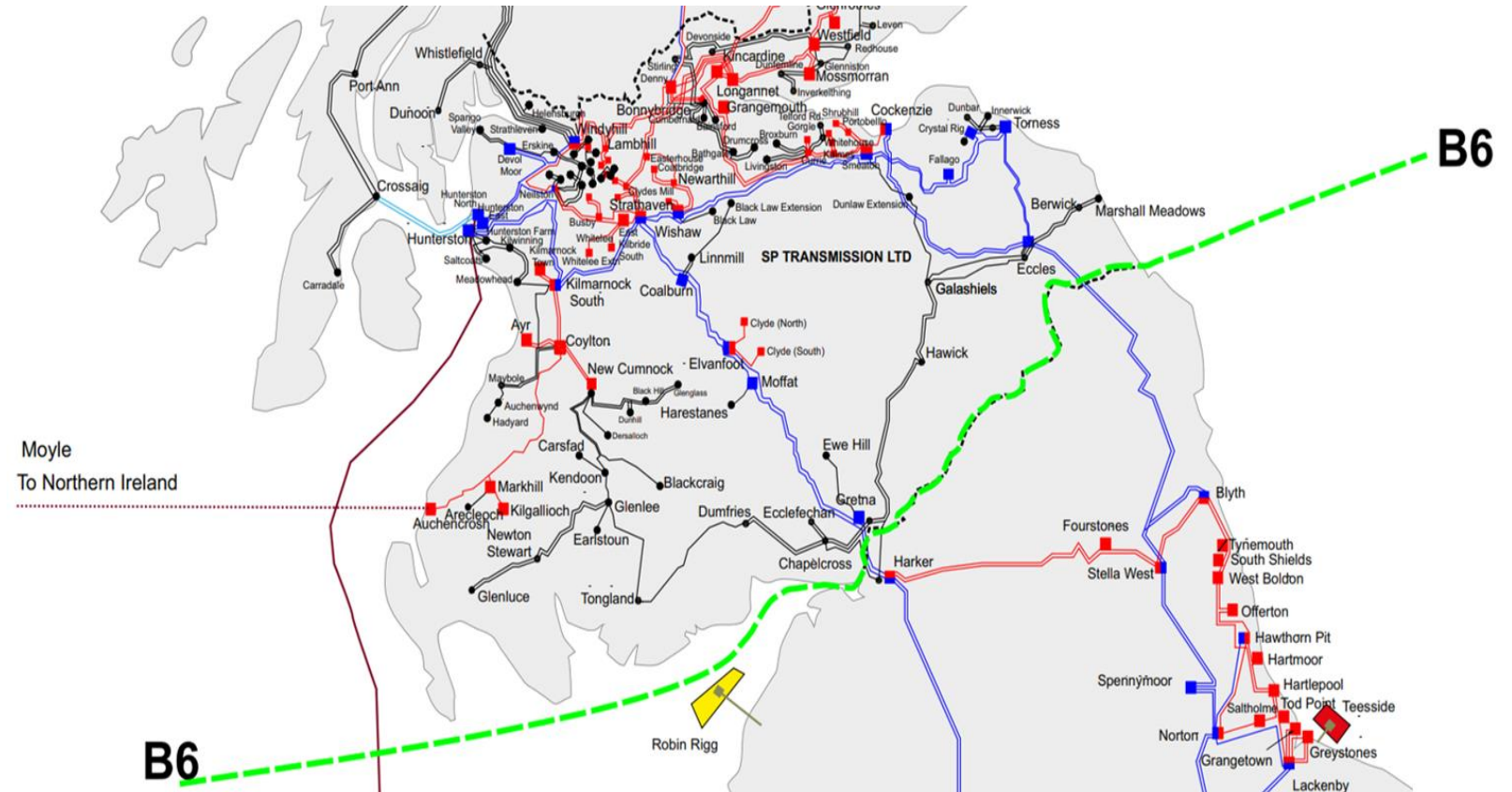
This document outlines the next steps in the development of the Constraint Management Pathfinder (CMP) following the RFI that we carried out at the start of 2020 and our decision to proceed to tender in September.

It covers the design of the service and an outline of the procurement process.

If you would like to submit any comment or question on the CMP, you can send them in to [box.networkdevelopment.roadmap@nationalgrideso.com](mailto:box.networkdevelopment.roadmap@nationalgrideso.com)

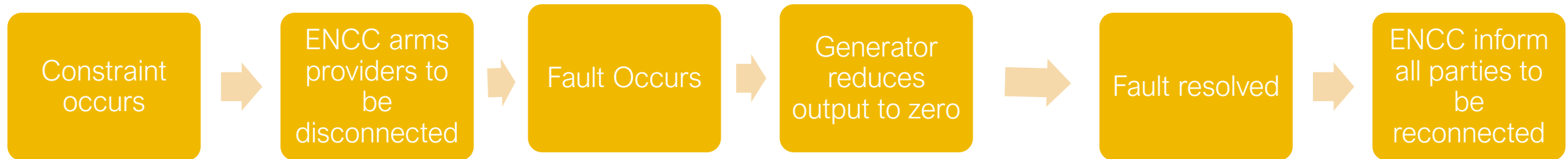
# Operability requirement

- The [Future Energy Scenarios](#) outlines that by 2050, there could be 40GW of generation from wind power and based on the [Electricity Ten Year Statement](#), this will lead to significant constraint costs if no action is taken.
- One of the key areas of constraints currently on the system is the Anglo-Scottish boundary (B6) which is limited by a stability constraint, though there are other areas across GB where there are also constraints.
- For the Constraints Management Pathfinder (CMP), the service we are considering is a post fault fast-acting service that allows generation on the system pre-fault, but post-fault resolves the constraint in protection timescales.



# CMP service outline

- The service will be procured annually with the first tender in Q1 of FY 2021/22. The first year tender will procure services for contract delivery from Q2 FY 2022/23 - Q1 FY2023/2024.
- Units must be connected to the transmission network in Scotland and can be located onshore or offshore.
- The initial requirement that we are looking to procure is for 800MW of transmission connected generation with the ability to be tripped off within 150ms when armed and tripped by a fault.
- In operational timescales, the ESO will forecast system flows and where a constraint on the B6 boundary is identified, contracted units will be armed to be ready to reduce their output post fault.
- The level of MW that is armed will be dependent on the prevailing level of constraint and other technical considerations.
- Following a fault, generation which is armed will be required to reduce generation after receiving by an intertrip signal from the Anglo-Scottish Intertripping Scheme
- Units will need to be able to do this within 150ms of the fault occurring.
- Following the fault, the ESO will reconnect units to the system as quickly and safely as possible.
- Payment for this service will include:
  - Arming payment (per MWh per settlement period) – for when the intertrip service is armed
  - Tripping fee – single payment when the fault occurs for all unit that had been armed and disconnected.



# CMP – next steps

## Expression of Interest

- Any party wishing to participate in the commercial tender must have passed assessment against the EOI criteria. The full criteria will be included when the EOI is launched.
- Participants not presently connected to the intertripping scheme will be able to participate in the EOI and tender. The ESO will use the responses to the EOI to engage with the relevant TOs to facilitate connection to the intertripping scheme following the tender event.
- At the EOI stage, interested participants will be asked to provide information about their connection. This could include the connected GSP, size of the unit, the ability to trip and satisfy the 150ms response time along with other parameters.
- The EOI phase is expected to commence in February 2021 and further information will be communicated closer to the time.

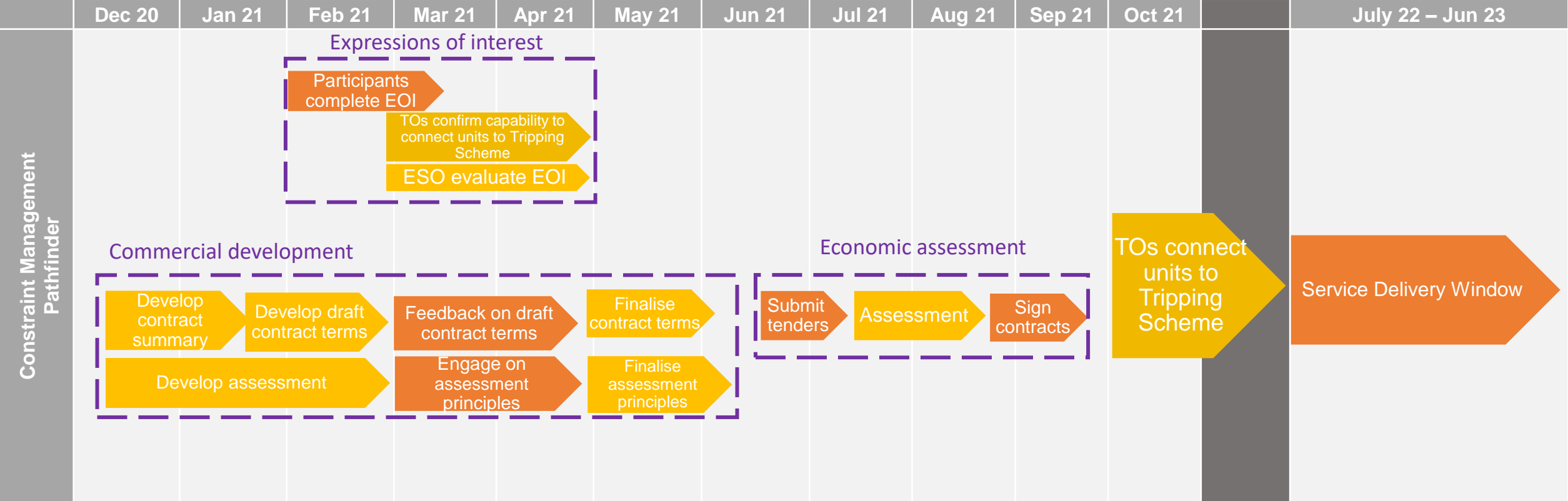
## Commercial Development

- Alongside the EOI, draft contract terms and a draft Assessment Methodology will be published to provide an overview of the terms that will be applied to the service and outline how tenders will be assessed.
- These will be consulted on ahead of being finalised prior to the tender.

## Commercial Tender

- Solutions which have successfully met the EOI criteria and are currently connected to the intertripping scheme, will be able to participate in the commercial tender.
- A tender proforma will be published for prospective providers to submit their commercial tender.
- Following the assessment period we will publish the results of the tender and sign contracts with successful parties.
- The tender is expected to be completed in Q2 FY 2021/22 with service delivery commencing in Q2 FY 2022/23 - Q1 FY2023/2024, though providers are able to begin delivery earlier and be paid if armed.
- Please note depending on the type of your connection and your generating assets, we may not be able to connect all participants. The feasibility will be determined during the EOI stage.

# CMP timeline overview





# Contact

If you have any comments or questions about the Constraint Management Pathfinder, please contact us at:

[box.networkdevelopment.roadmap@nationalgrideso.com](mailto:box.networkdevelopment.roadmap@nationalgrideso.com)

