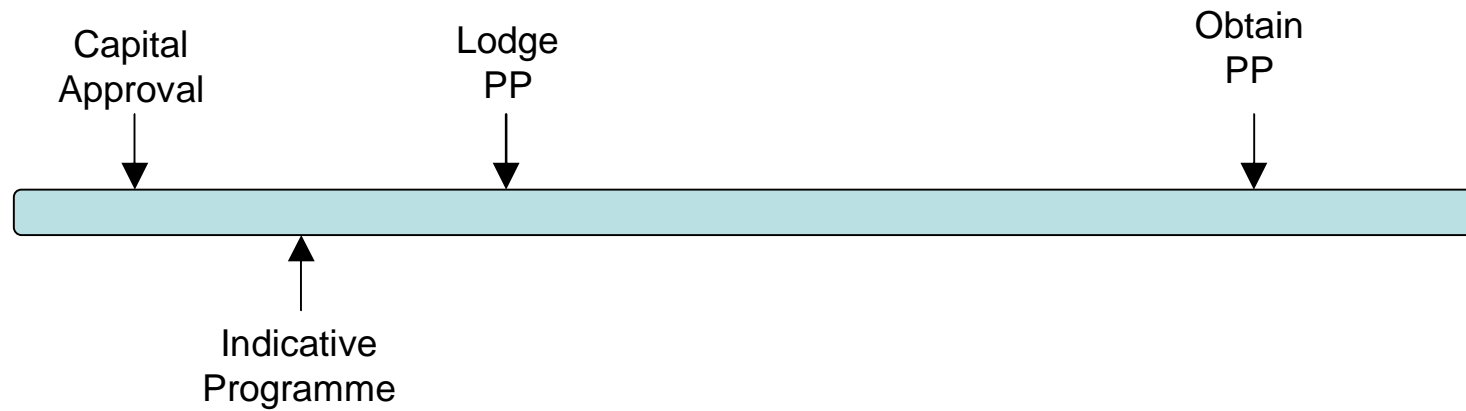


# Building Transmission Customer Connections

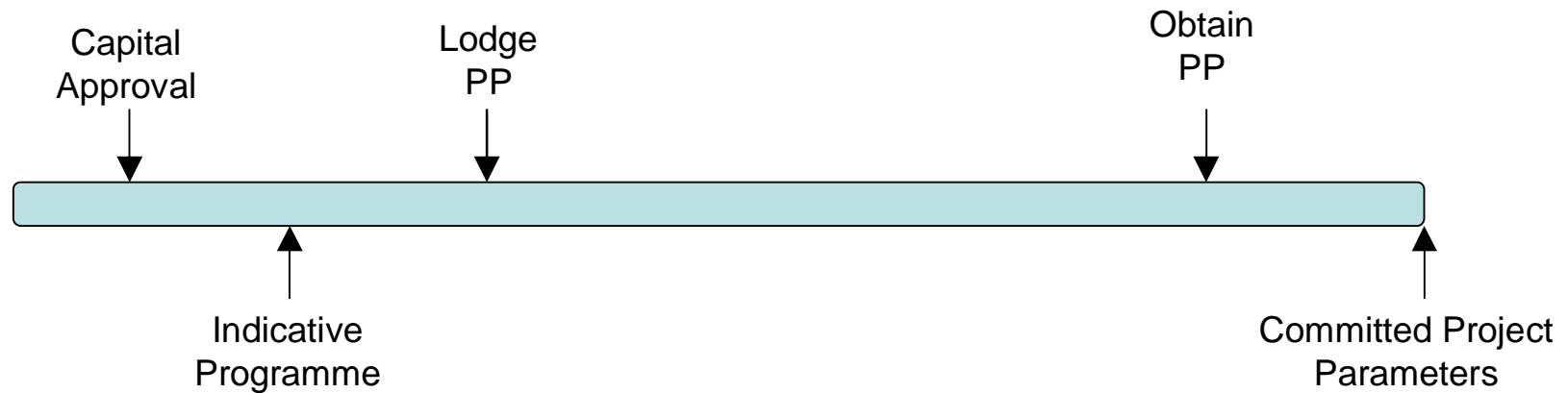
Conor Healy  
Manager, Transmission & Distribution Programmes,  
ESB Networks

# Project Handover



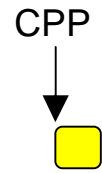
- Indicative Programme (IP):
  - EirGrid Identify milestones :
    - When PP will be applied for / duration of planning period.
    - When expect CPP to issue.
    - Indicative energisation date.
  - ESN use this to :
    - Identify of long lead-time materials.
    - Identify resource requirements.

# Project Handover



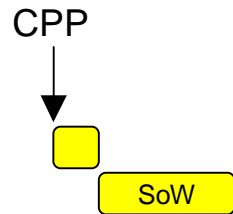
- Committed Project Parameters (CPP):
  - EirGrid provide :
    - Updated Indicative Programme.
    - Details of Planning Permission.
    - Details of landowners & consents.
    - Functional specification & design details.
  - This is EirGrid's commitment to ESN that the project is to go ahead as outlined in the CPP.

# Establish Project



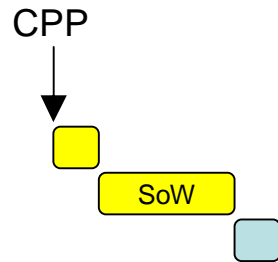
- Committed project is set up on ESB system

# Scope the Project



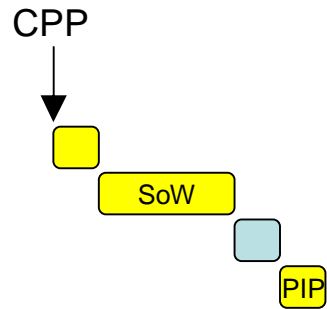
- Complete “Scope of Work”
  - This is a high-level design of the work that needs to be completed for the Project.
  - Established any additional work which the committed project drives.

# EirGrid Review Scope



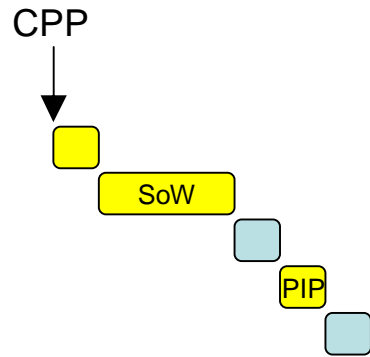
- Complete “Scope of Work”
  - This is a high-level design of the work that needs to be completed for the Project.
  - Established any additional work which the committed project drives.
- Review “Scope of Work”
  - Verification that the Scope of Work meets with EirGrid requirements and Functional Specification.

# Issue Project Implementation Plan



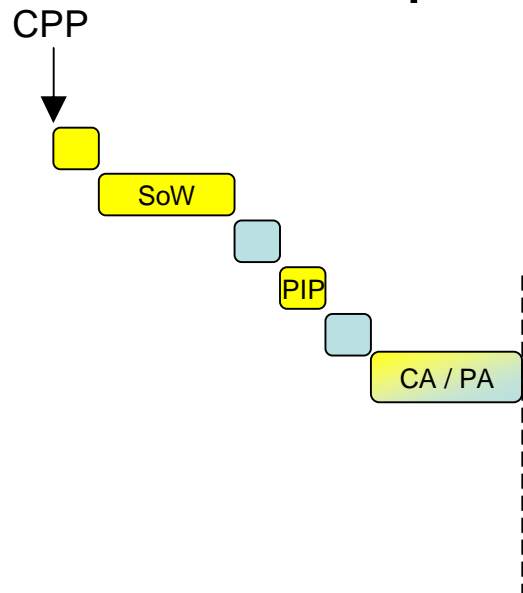
- Having agreed the SoW, ESNB can now develop a Project Implementation Plan.
  - Identifies order and duration of various tasks (design, construction, commissioning, etc.).
  - Identifies material procurement details.
  - Identifies Transmission outages required – estimated dates and duration.
  - Identifies estimated costs.

# Review Project Implementation Plan



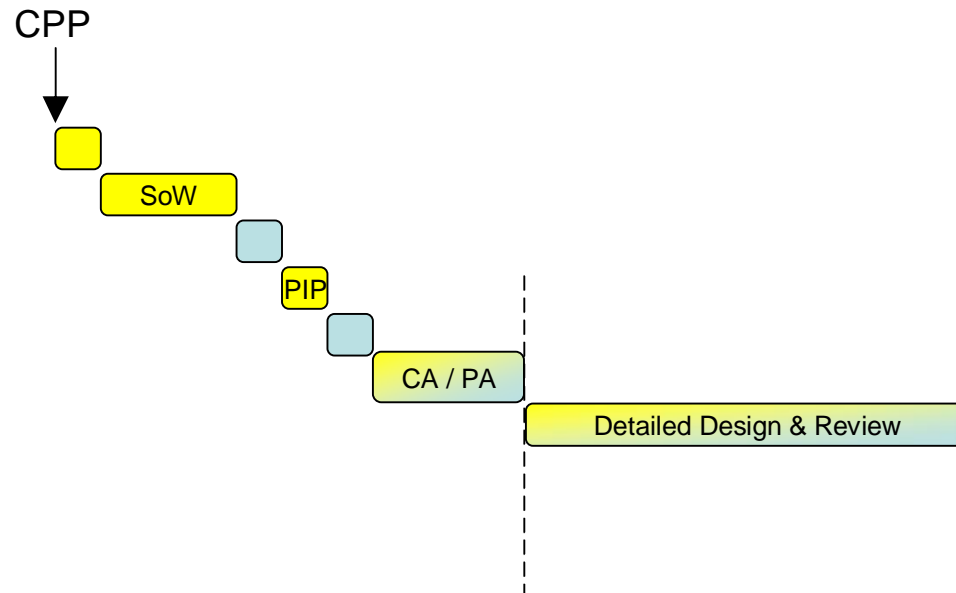
- Having agreed the SoW, ESNB can now develop a Project Implementation Plan.
  - Identifies order and duration of various tasks (design, construction, commissioning, etc.
  - Identifies Material procurement details.
  - Identifies Transmission outages required – estimated dates and duration.
  - Identifies estimated costs.
- EirGrid review the PIP.
  - Comment on outage availability

# ESB Capital Approval & Project Agreement



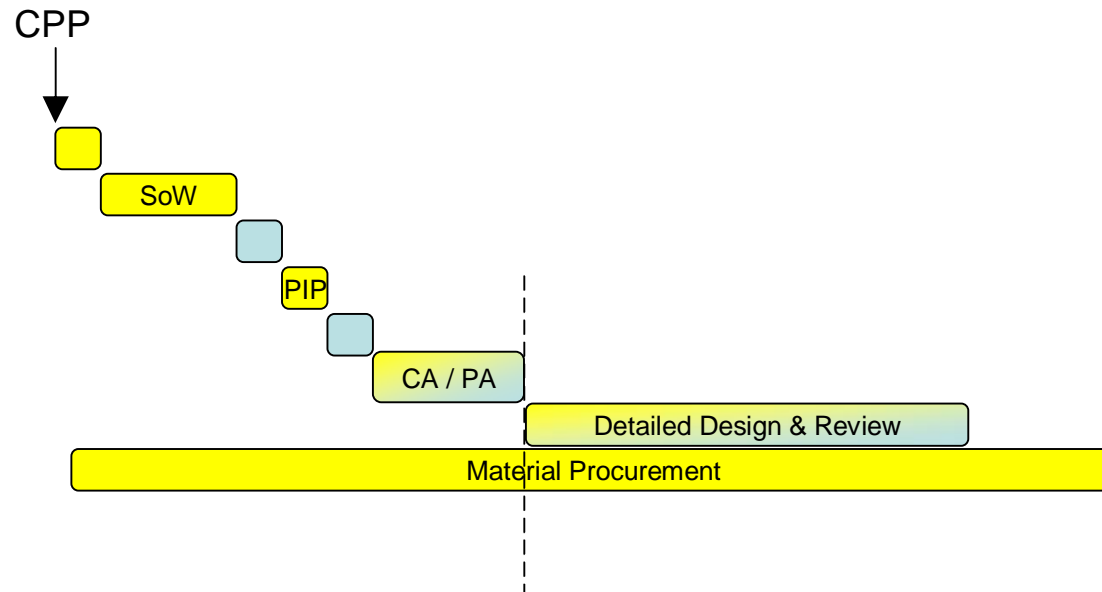
- Capital Approval is required in ESB.
- Project Agreement is now signed between ESN & EirGrid.
  - ESN can now order materials, commission Detailed Designs etc.

# Detailed Design



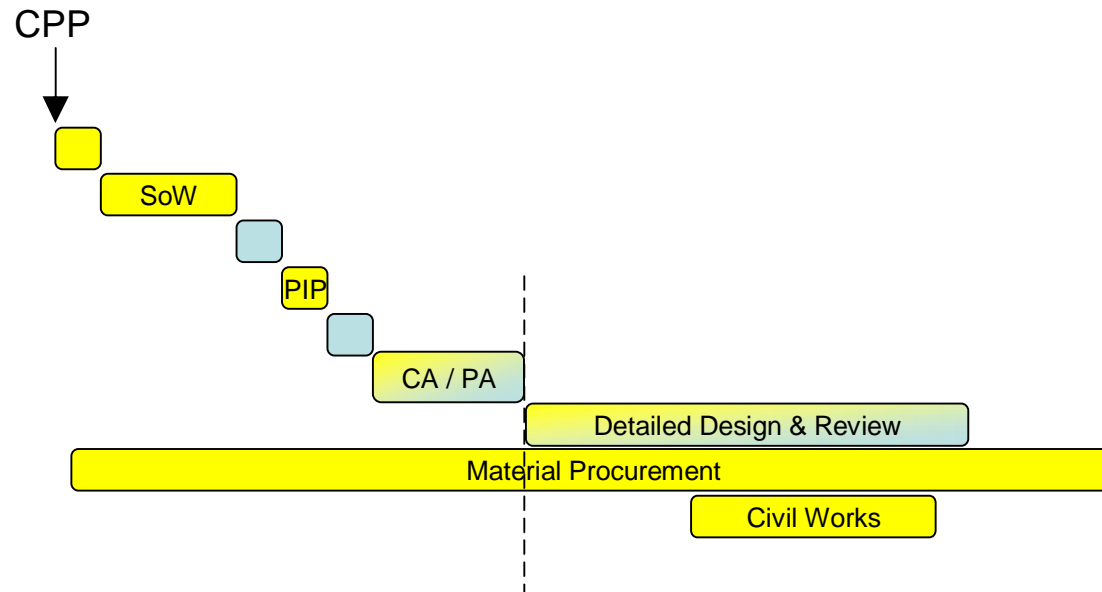
- Once Project Agreement is in place, detailed design commences.
  - Scope of Work already agreed.
  - Civil designs.
  - Line construction designs.
  - Cable construction designs.
  - Electrical Designs.
    - Primary Plant
    - Secondary systems

# Material Procurement



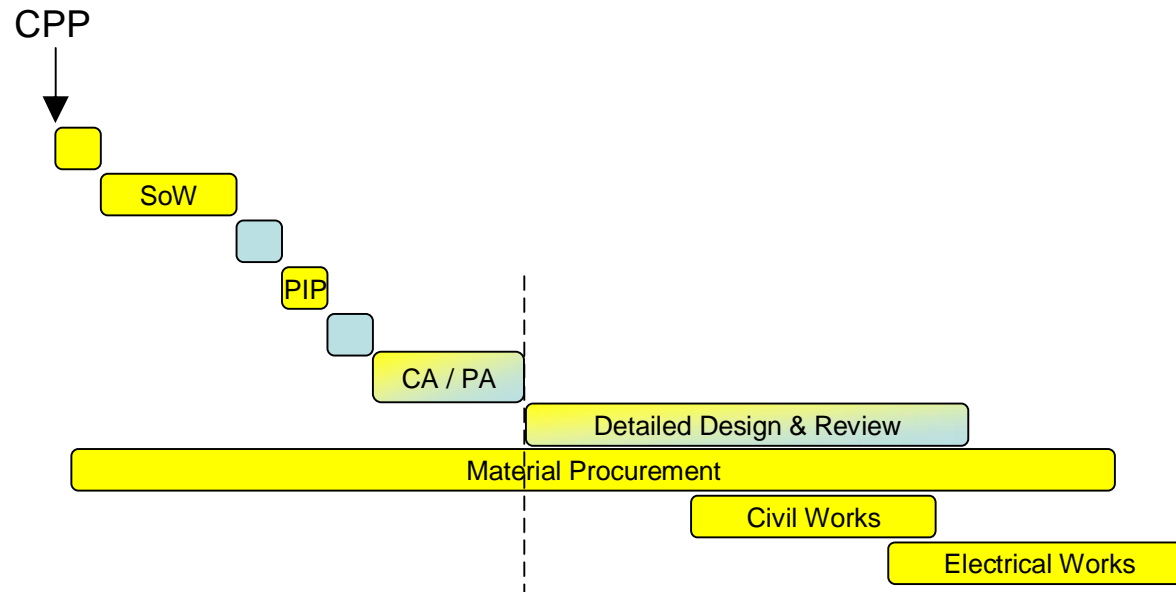
- Detailed design indicates materials required. These are procured using either :
  - Term contract purchases.
  - Individual Enquiries.
- For items with long lead-time (identified in IP), procurement can commence ahead of the full Project Agreement.

# Civil Works



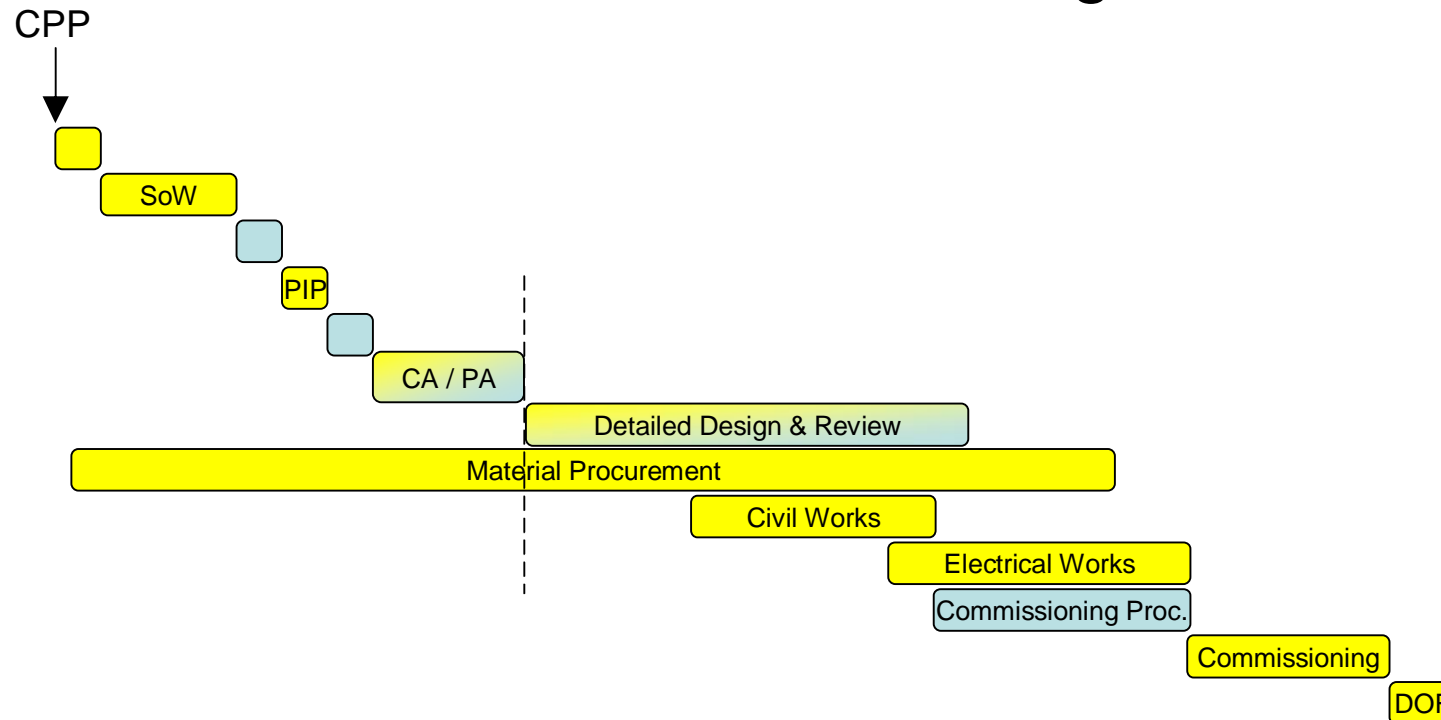
- This element of the job includes.
  - Civil tender & evaluation.
  - Mobilisation of civil contractor.
  - Completion of civil works.

# Electrical Fit-out



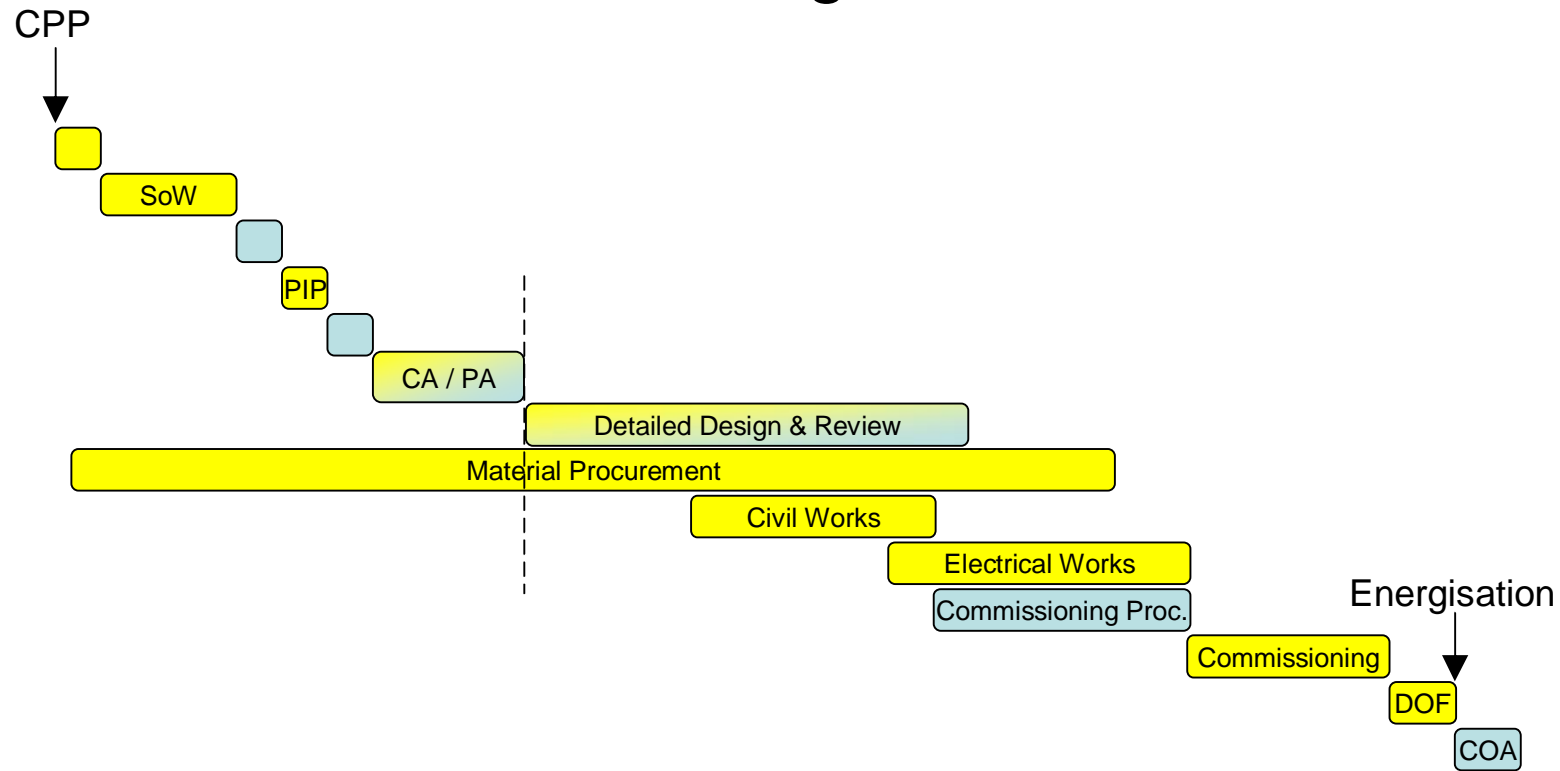
- Electrical Fit-out
  - Installation of primary plant
  - Connection of secondary systems:
    - Control
    - Protection
    - SCADA
    - Communications

# Commissioning



- Commissioning Procedures are issued by EirGrid.
- Commissioning tests completed.
- Declaration of Fitness issues to EirGrid

# Energisation



- On receipt of Declaration of Fitness, can energise per energising instruction.
- Cert. of Acceptance issued to ESNB.

# Summary

- A Transmission Customer Connection is a development of the Transmission system.
- I have identified the steps that need to be taken for a Transmission Development Project and the dependencies between ESN and EirGrid.
- Distribution development projects broadly follow the same sequence of steps.

End