



GRID CONNECTION PROCESS

High-Voltage Direct Current Grid Connection (HVDC)

Connection of high-voltage direct current systems and DC-connected facilities in the transmission grid

*Please note that this is a translation of the original Danish text.
In case of inconsistencies, the Danish version applies.*

GRID CONNECTION OF FACILITIES

Clarification: distribution grid or transmission grid (expected duration: 3-6 months).

NEW FACILITY

- The facility owner contacts the local grid operator for a clarification of the point of connection.

SCREENING

- The grid operator and Energinet make screening analyses to determine if the facility is to be connected in the distribution or transmission grid.

TRANSMISSION / DISTRIBUTION

- The grid operator and Energinet determine a point of connection in either the distribution or transmission grid.

FACILITY CONNECTION DECIDED

- The grid operator informs the facility owner about the decision made on voltage level connection

OUTLINE: GRID CONNECTION

See the full process in the next pages

In outline, a connection to the transmission grid requires three authorisations in the EU regulation [Grid connection of high-voltage direct current systems and direct current-connected power park modules \(HVDC\)](#)

Energisation operational notification (EON)

Authorisation to energise the facility internally and to energise any auxiliary supplies via the grid connection point.

Interim operational notification (ION)

Authorisation to operate HVDC systems via the grid connection point for a maximum of 24 months. Used during the test period to demonstrate compliance with applicable technical requirements.

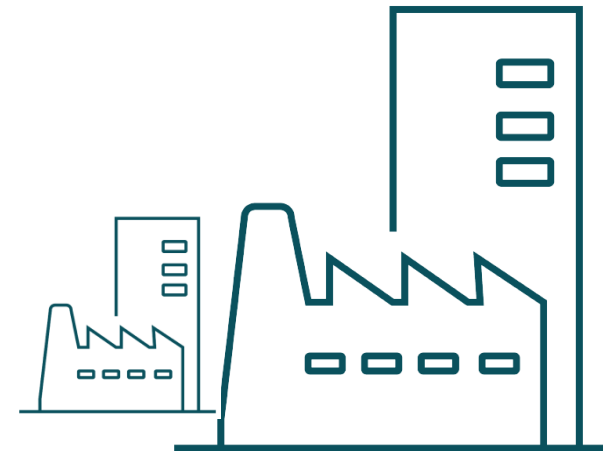
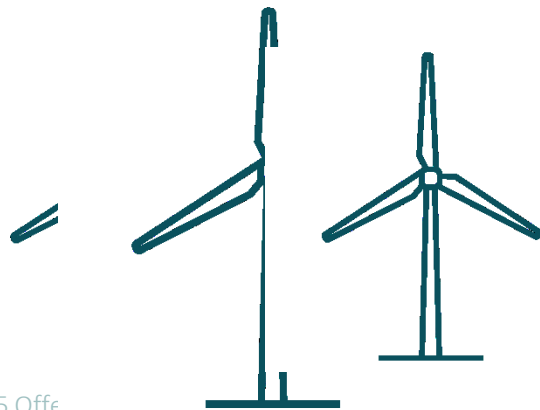
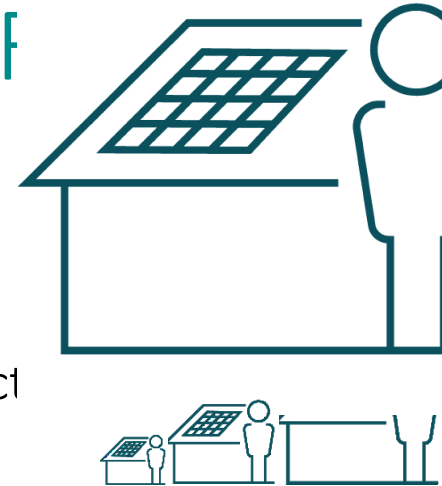
Final operational notification (FON)

Permission to operate HVDC systems via the grid connection.

GRID CONNECTION IN THE TRANSMISSION GR

Clarification of technical issues (expected duration: 6-24 months).

- The facility owner contacts Energinet for answers to any general technical questions.
- If Energinet must make calculations/analyses in order to answer, we will set up a project. The facility owner pays for the hours spent on calculations/analyses.
- The facility owner provides the necessary guarantee.
- If the connection requires changes in the grid, Energinet will set up a project and have the basis for this project approved.



GRID CONNECTION IN THE TRANSMISSION GRID

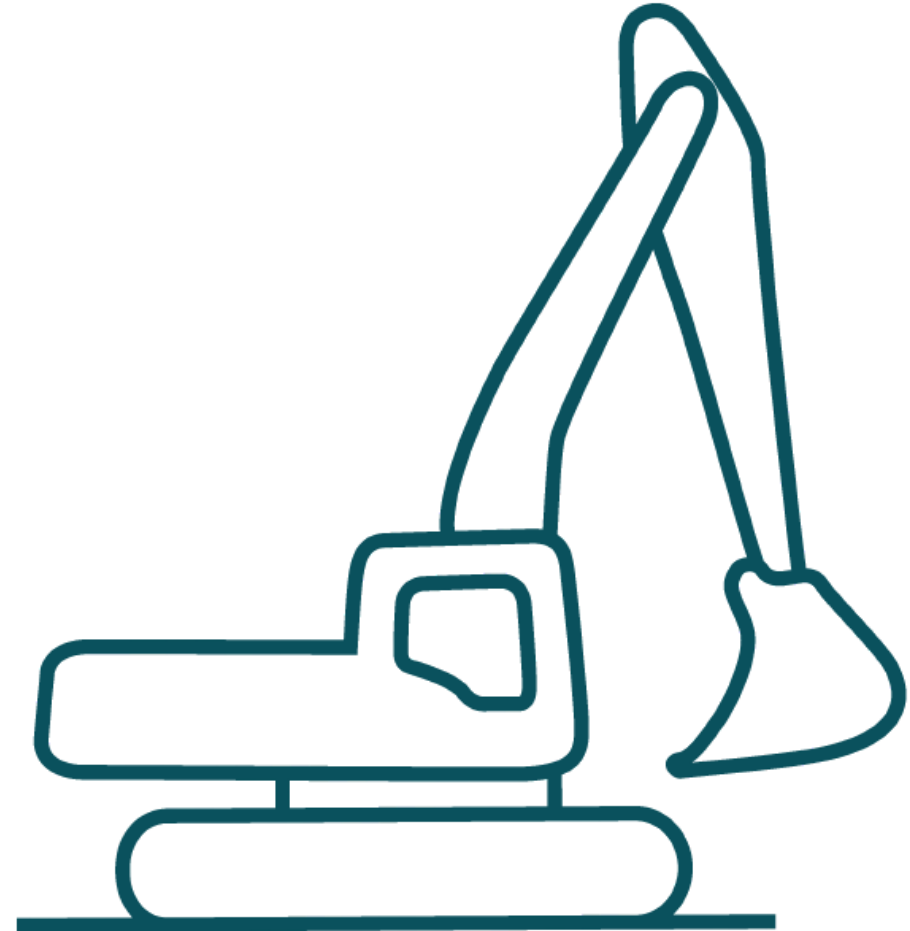
Project maturation – preliminary steps (expected duration: 6-18 months).

- The facility owner and Energinet enter into an agreement on project maturation (preliminary steps before the construction phase)
 - includes a time schedule for the project.
- Energinet makes the necessary calculations and analyses.
- The facility owner and Energinet enter into a grid connection agreement (covers the period from the construction phase until the actual grid connection).
 - includes terms and conditions for the construction of a connection substation, establishment of the point of connection and an interconnection agreement.
- For facilities, Energinet will register these in the master data register. The facility is given a GSRN number.
- The facility owner submits documentation of an agreement with a balance-responsible party.

THE CONSTRUCTION PHASE

(expected duration: 12-36 months).

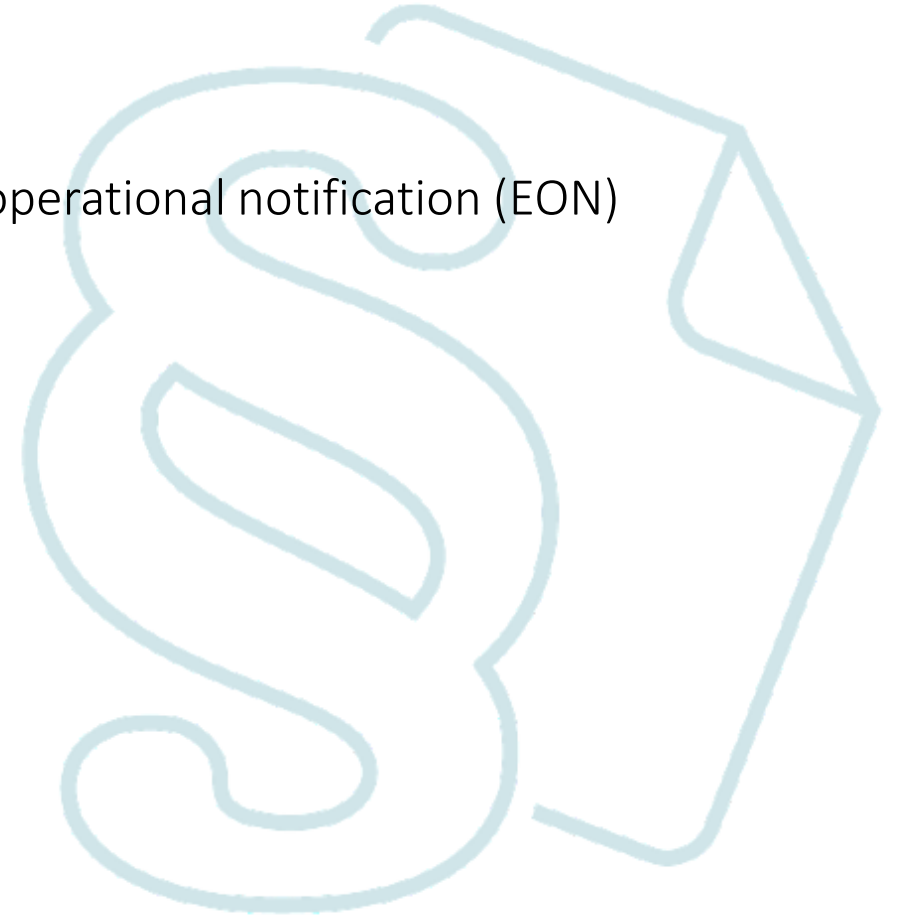
- The facility owner builds the facility.
- At the same time, Energinet makes any necessary c



ENERGISATION OPERATIONAL NOTIFICATION (EON)

(procedure time: 1-3 months).

- The facility owner contacts Energinet to get an energisation operational notification (EON)



INTERIM OPERATIONAL NOTIFICATION (ION)

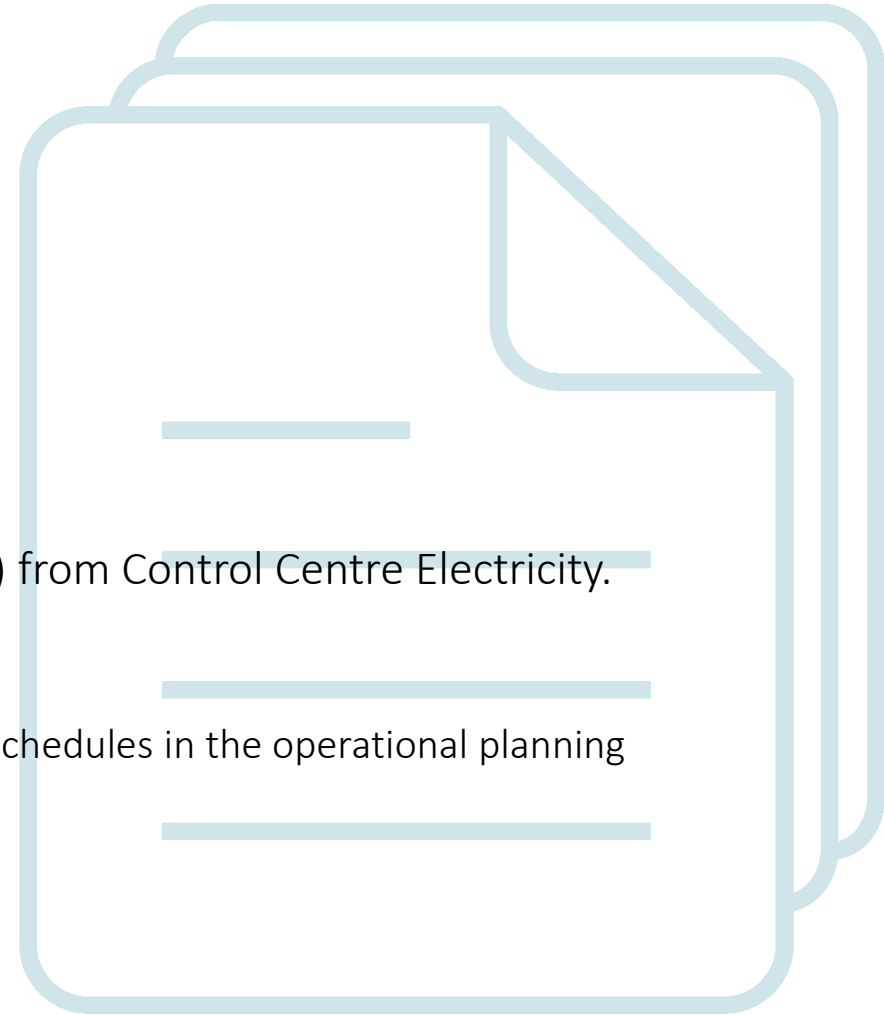
(procedure time: minimum 3 months)

- The facility owner contacts Energinet to get an interim operational notification.
- The facility owner submits documentation in accordance with requirements/provisions and regulations in the current rules, a draft test plan and technical data.
- Energinet reviews the documentation.
- Energinet and the facility owner perform various functionality tests.
- The facility owner contacts Energinet to get an interim operational notification.
- Energinet issues an **interim operational notification**, when test data has been approved.

TESTING

(expected duration: 3-12 months).

- Energinet reviews the quality of the draft.
 - The draft must comply with the final checklist (commissioning plan) from Control Centre Electricity.
 - The facility owner prepares a final test plan (when, who, what)
 - must, among other things, include tests of handling of notifications and schedules in the operational planning system, bids in the market and SCADA functions.



FINAL OPERATIONAL NOTIFICATION (FON)

(procedure time: minimum 3 months)

- The facility owner applies for a final operational notification.
- Energinet reviews test data.
- Energinet either approves test data or asks for a new test to be done.
- Energinet prepares a final operational notification when test data has been approved.
- Energinet issues final operational notification.

