

12.3

CATEGORY Smart electricity grids

CLUSTER n/a: n/a

COUNTRIES CONCERNED

Hungary(HU) Slovakia(SK)

PROMOTERS

Východoslovenská distribučná, a.s. (SK) ELMŰ Hálózati Kft. (HU) ÉMÁSZ Hálózati Kft. (HU) Západoslovenská distribučná, a.s. (SK) Slovenska electrizacna prenosova sustava a.s. (SEPS) (SK) E.ON Észak-dunántúli Áramhálózati Zrt. (HU)

PCI WEBSITE(S) https://danubeingrid.eu/

LOCATION

Bratislava Region (SK), Trnava Region (SK), Nitra Region (SK), Trenčín Region (SK), Prešov Region (SK), Košice Region (SK), Western Transdanubia (HU), Central Transdanubia (HU), Central Hungary (HU), Northern Hungary (HU)

COMMISSIONING DATE 12/2029

Danube InGrid (HU, SK), to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia

Smart electricity grids deployment



Source: PLATTS, GISCO, European Commission

Technical description

Danube InGrid aims to to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia.

The Project adopts smart grid technologies and fosters the roll-out of modern energy infrastructure at national and on cross-border areas of SK and HU, to efficiently support the increase demand of consumers, prosumers and distributed renewable energy sources.

The project, inter alia, involves:

• Construction and modernization of the grid infrastructure, such as one 400/110 kV substations at the HV level and three 110/22 kV substations at the distribution level in Slovakia and sixteen 132/22 kV and two 132/10 kV substation in Hungary. It also includes multiple secondary substations equipped with smart elements, more than 132 km of distribution and transmission lines,

• Update and development of management systems such as SCADA, GIS and creation of meteo-cross-border data exchange platform (with more than 147 meteorological stations), digital customer interface platforms (approx. 7), ICT solutions for asset management, easier failure location and remote grid control, and for digitalization of grid processes, and also for cybersecurity,

• Smart devices on High Voltage and Medium Voltage lines leading to its digitalization and automation - Installation of smart devices, such as 140 VRDT (voltage regulation distribution transformers) i.e. on-load tap-changing transformers), more than



12.3

Danube InGrid (HU, SK), to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia

Smart electricity grids deployment

2,000 voltage and current metering devices with communication function in MV/LV transformer stations, digital protective relays, bay control units, shunt reactors, digital substation feeders, reclosers, remotely controllable and automatic more than 1,400 switching elements and fault indicators, HV sensors etc. leading to the digitalization of the HV and MV grid.

• Optical fibre network (more than 1000 km) on High Voltage and Medium Voltage levels to increase the level of communication between TSO and DSO and to integrate smart devices, new market players and renewables into the dispatching centers creating a two ways communication system.

• Battery energy storage system in remote areas to support the voltage stability.

• HV and MV shunt reactors for power flow management between TSO and DSO to optimize the power flows in 400 kV and 110 kV grids in Central Europe.



12.3

CATEGORY Smart electricity grids

CLUSTER n/a: n/a

COUNTRIES CONCERNED

Hungary(HU) Slovakia(SK)

PROMOTERS

Východoslovenská distribučná, a.s. (SK) ELMŰ Hálózati Kft. (HU) ÉMÁSZ Hálózati Kft. (HU) Západoslovenská distribučná, a.s. (SK) Slovenska electrizacna prenosova sustava a.s. (SEPS) (SK) E.ON Észak-dunántúli Áramhálózati Zrt. (HU)

PCI WEBSITE(S)

https://danubeingrid.eu/

LOCATION

Bratislava Region (SK), Trnava Region (SK), Nitra Region (SK), Trenčín Region (SK), Prešov Region (SK), Košice Region (SK), Western Transdanubia (HU), Central Transdanubia (HU), Central Hungary (HU), Northern Hungary (HU)

COMMISSIONING DATE 12/2029

Danube InGrid (HU, SK), to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia

Smart electricity grids deployment

Benefits and contribution to objectives referred to in TEN-E Article 1

The project will contribute to climate change mitigation by enabling cost-efficient integration and active control of the behaviour and actions of all users connected to it, including generators, consumers and prosumers, contributing significantly to sustainability through the integration of renewable energy into the grid. The project will also enable grid operators to digitally monitor the actions of the users connected to their networks and improve their operations, with a view to transmitting and distributing electricity in a sustainable, cost-efficient and secure way.

LAST UPDATE March 2025 Note: In line with the provisions of the TEN-E Regulation, the content of this document relies on information provided by the promoter(s) of the Project of Common Interest and CINEA does not guarantee its accuracy. The European Commission and CINEA accept no responsibility or liability whatsoever with regard to the information contained therein.



12.3

CATEGORY Smart electricity grids

CLUSTER n/a: n/a

COUNTRIES CONCERNED

Hungary(HU) Slovakia(SK)

PROMOTERS

Východoslovenská distribučná, a.s. (SK) ELMŰ Hálózati Kft. (HU) ÉMÁSZ Hálózati Kft. (HU) Západoslovenská distribučná, a.s. (SK) Slovenska electrizacna prenosova sustava a.s. (SEPS) (SK) E.ON Észak-dunántúli Áramhálózati Zrt. (HU)

PCI WEBSITE(S)

https://danubeingrid.eu/

LOCATION

Bratislava Region (SK), Trnava Region (SK), Nitra Region (SK), Trenčín Region (SK), Prešov Region (SK), Košice Region (SK), Western Transdanubia (HU), Central Transdanubia (HU), Central Hungary (HU), Northern Hungary (HU)

COMMISSIONING DATE 12/2029

Danube InGrid (HU, SK), to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia

Smart electricity grids deployment

1. Implementation status

Under construction

2. Timeline of the implementation plan (*)

2.1 Estimated timeline for the completion of feasibility and design studies for the project

Project stage	Start date	End date
Feasibility study	06/2020	12/2029
FEED study	06/2020	12/2029

2.2 Estimated timeline for obtaining the approval by the national regulatory authority and the Final Investment Decision

Project stage	Date of request	Date of decision
Approval by the NRA	12/05/2020	31/08/2028
CBCA (if applicable)	NOT_APPLICABLE	NOT_APPLICABLE
Exemption (if applicable)	NOT_APPLICABLE	NOT_APPLICABLE

2.3. Estimated permit granting schedule¹

Date of request	Date of decision
05/2020	2020

This schedule should be in line with the permit granting schedule required by Article 10 4(b) of the TEN-E Regulation, where applicable. According to this Article, a permit granting schedule has to be drawn up by the competent authority in close cooperation with the project promoter and other authorities concerned.

2.4. Estimated timeline for construction and commissioning

Activities	Start date	End date
Construction	06/2020	12/2029

Commissioning date 12/2029

(*) Please note that all dates in this document refer to the latest dates of each implementation stage for the entire PCI/PMI, considering all infrastructures included in the project. The implementation status reflects the least advanced status of all PCI/PMI infrastructures.

LAST UPDATE March 2025 Note: In line with the provisions of the TEN-E Regulation, the content of this document relies on information provided by the promoter(s) of the Project of Common Interest and CINEA does not guarantee its accuracy. The European Commission and CINEA accept no responsibility or liability whatsoever with regard to the information contained therein.



12.3

CATEGORY Smart electricity grids

CLUSTER n/a: n/a

COUNTRIES CONCERNED

Hungary(HU) Slovakia(SK)

PROMOTERS

Východoslovenská distribučná, a.s. (SK) ELMŰ Hálózati Kft. (HU) ÉMÁSZ Hálózati Kft. (HU) Západoslovenská distribučná, a.s. (SK) Slovenska electrizacna prenosova sustava a.s. (SEPS) (SK) E.ON Észak-dunántúli Áramhálózati Zrt. (HU)

PCI WEBSITE(S)

https://danubeingrid.eu/

LOCATION

Bratislava Region (SK), Trnava Region (SK), Nitra Region (SK), Trenčín Region (SK), Prešov Region (SK), Košice Region (SK), Western Transdanubia (HU), Central Transdanubia (HU), Central Hungary (HU), Northern Hungary (HU)

COMMISSIONING DATE 12/2029

Danube InGrid (HU, SK), to efficiently integrate the behaviour and actions of all market users connected to the electricity networks in Hungary and Slovakia

Smart electricity grids deployment

PCI costs and EU funding

PCI costs 477,700,000 EUR

CEF Actions contributing to this PCI

Action	Awarded amount	Link to Action Fiche
10.7-0008-SKHU-W-M-20	101,931,000 EUR	https://ec.europa.eu/assets/cin ea/project_fiches/cef/cef_ener gy/10.7-0008-SKHU-W-M- 20.pdf

Other sources of EU funding

Programme	Awarded amount	Link to Action Fiche
-----------	----------------	----------------------