Technical information on Projects of Common Interest

accompanying the Commission Delegated Regulation C(2022) 564 final of 19.11.2021 amending Regulation (EU) 347/2013 of the European Parliament and of the Council on guidelines for trans-European energy infrastructure as regards the Union list of projects of common interest

1. Priority Corridor Northern Seas offshore grid ('NSOG')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
1.6	1.6 France — Ireland interconnection between La Martyre (FR) and Great Island or Knockraha (IE) [currently known as "Celtic Interconnector"]	1.6 Brittany La Martyre substation (FR) to East Cork Knockraha substation (IE)	1.6 EirGrid plc (IE) RTE - Réseau de Transport d'Electricité (FR)	1.6 A new 320-500kV HVDC (VSC) subsea connection of approximately 581 km and with a capacity of around 700 MW between Ireland and France (offshore).	1.6 Permitting	1.6 31/12/2026
1.19	1.19 One or more hubs in the North Sea with interconnectors to bordering North Sea countries (Denmark, Germany, Netherlands) [currently known as "North Sea Wind Power Hub"]	1.19 Denmark, Germany, Netherlands	1.19 TenneT (NL) TenneT (DE) Energinet (DK)	1.19 A large scale European electricity system for offshore wind is proposed to be developed in the North Sea. It includes a construction of one or more hubs at a suitable location in the North Sea with interconnectors to bordering North Sea countries. The whole system may function as a hub for transport of wind energy, an interconnection hub to the connected countries, a working hub for offshore wind developers and a location for possible power-to-gas solutions. This project is a first building block in the hub-and-spoke concept (NSWPH) connecting up to 12 GW future offshore wind parks to the systems of Denmark, the Netherlands and Germany after 2035. An integral part of the NSWPH is to assess the perspectives of coupling large-scale wind power production with the gas system through power-to-gas (PtG) technology. The total length is 2258 km.	1.19 Under consideration	1.19 2035
1.21	1.21 Green Hydrogen Hub Compressed Air Storage (DK)	1.21 Denmark	1.21 Corre Energy	1.21 The project will deploy advanced hydrogen-fuelled compressed air energy storage (CAES) technology using air storage caverns in salt deposits, to provide a 100% renewable, highly flexible and cost-effective bulk storage solution	1.21 Under consideration	1.21 2026

				that can be rolled out across Europe to facilitate increased integration of variable RES. The project will facilitate increased integration of variable RES by providing system services to the TSO and balancing services to variable RES. As a substantial customer for green hydrogen, the project will also act as a key catalyst in the transition to the hydrogen economy in Denmark and across Europe.		

2. Priority Corridor North-South electricity interconnections in Western Europe ('NSI West Electricity')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
2.4	2.4 Interconnection between Codrongianos (IT), Lucciana (Corsica, FR) and Suvereto (IT) [currently known as "SACOI 3"]	2.4 Codrongianos (IT); Lucciana (Corsica, FR); Suvereto (IT)	2.4 Terna S.p.A. - Rete Elettrica Nazionale (IT) EDF (FR)	2.4 The project will replace the existing link (SACOI 2) close to the end of its lifetime. The project consists in a revamping of the HVDC link (OHLs, underground cables and marine cables) for a total length of about 400 km (about 50% in Italy and 50% in Corsica), and new 200kV DC/AC converter stations in Corsica, Tuscany and Sardinia replacing the existing ones. The main link between Italy mainland and Sardinia will have a rated power of 400 MW, while the Corsican system will be allowed to withdraw 100 MW in Lucciana during normal operating conditions. The new HVDC converter stations will ensure an improvement in technological performance and an increase of the transmission capacity among the three areas involved.	2.4 Permitting	2.4 12/2026
2.7	2.7 Interconnection between Aquitaine (FR) and the Basque country (ES) [currently known as "Biscay Gulf" project]	2.7 Nouvelle Aquitaine (FR) to the Basque Country (ES)	2.7 RTE - Réseau de Transport d'Electricité (FR) REE - Red Eléctrica de España S.A.U. (ES)	2.7 New 400 kV HVDC subsea cable interconnection of approximately 370 km with a capacity of 2x1000 MW between Nouvelle Aquitaine and the Basque country, via the the Biscay Gulf (offshore).	2.7 Permitting	2.7 12/2027
2.9	2.9 Internal line between Osterath and Philippsburg (DE) to increase capacity at Western borders [currently known as "Ultranet"]	2.9 Osterath to Philippsburg (DE)	2.9 Amprion GmbH (DE) TransnetBW GmbH (DE)	2.9 New 380kV HVDC lines (OHL) with a length of 40 km and 300 km of existing routes with new technology and with a total capacity of 2 GW from Osterath to Philippsburg to integrate new wind generation especially from North/Baltic Sea towards Central-South for consumption and storage (onshore).	2.9 Planned but not yet in permitting	2.9 12/2027
2.10	2.10 Internal line between Brunsbüttel/Wilster and Großgartach/ Bergrheinfeld-West (DE) to increase capacity at northern and southern borders [currently known as "Suedlink"]	2.10 Brunsbüttel (DE) to Großgartach (DE); Wilster (DE) to area Bergrheinfeld-West (DE)	2.10 TransnetBW GmbH (DE) TenneT (DE)	2.10 New HVDC underground connector with a total capacity of 4 GW, with one line having a length according to the suggested corridor route of approx. 700 km and the other of 550 km, to integrate RES, especially offshore wind generation, from Northern Germany (areas of Brunsbüttel/Wilster) to Bavaria /Baden-Württemberg (areas of Großgartach/Grafenrheinfeld) to load centres in	2.10 Permitting	2.10 2028

				southern parts of Germany for consumption and storage (onshore).		
2.14	2.14 Interconnection between Thusis/Sils (CH) and Verderio (IT) [currently known as "Greenconnector"]	2.14 Verderio, near Milano (IT) to Thusis, Graubünden Canton (CH)	2.14 Greenconnector (CH, IT)	2.14 A +/- 400 kV HVDC cable interconnector of 165 km, 45 km in Switzerland and 120 km in Italy (of which 47 km under Como lake) and with a capacity of 1000 MW (1200 MW continuous overload) between Verderio Inferiore, near Milano (IT) to Bonaduz, Graubünden Canton (CH) (onshore). Great part of the cables route will exploit a section of an existing oil pipeline, no longer in service since January 1997 and that crosses the Italian and Swiss border at Splügenpass and is running close by the two grid interconnection points of the Greenconnector project (Bonaduz in Graubünden and Verderio, Lecco).	2.14 Permitting	2.14 12/2026
2.16	Cluster of internal lines (PT, ES) including the following PCIs: 2.16.1 Internal line between Pedralva and Sobrado (PT), formerly designated Pedralva and Alfena (PT)	2.16.1 North Portugal near Spanish border; Pedralva (PT) – Sobrado (PT)	2.16.1 REN - Rede Eléctrica Nacional S.A. (PT)	2.16.1 New 400 kV AC double circuit (OHL) Pedralva – Sobrado of about 67 km (formerly designated Alfena, initially with only one circuit installed), with a capacity of 1630/1860 MVA per circuit correspondent to summer/winter (onshore).	2.16.1 Planned but not yet in permitting	2.16.1 12/2029
	2.16.3 Internal line between Vieira do Minho, Ribeira de Pena and Feira (PT), formerly designated Frades B, Ribeira de Pena and Feira (PT)	2.16.3 North Portugal near Spanish border; V. Minho (by Ribeira de Pena) - Feira; including Ribeira de Pena (PT) Substation	2.16.3 REN - Rede Eléctrica Nacional S.A. (PT)	2.16.3 New 400 kV AC double circuit (OHL) of about 131 km Vieira do Minho – Ribeira de Pena – Feira, along with the new substation of R. Pena. Capacity is 2x (1630/1860 MVA) (summer/winter) between Vieira do Minho and R. Pena, and 2080/2370 MVA (summer/winter) along R. Pena – Feira (onshore).	2.16.3 Under construction Note: R. Pena substation and section Vieira do Minho – Ribeira de Pena have been commissioned in 2021.	2.16.3 12/2022
2.17	2.17 Portugal — Spain interconnection between Bearіz — Fontefría (ES), Fontefria (ES) — Ponte de Lima (PT) (formerly Vila Fria / Viana do Castelo) and Ponte de Lima — Vila Nova de Famalicão (PT) (formerly Vila do Conde) (PT), including substations in Bearіz (ES), Fontefría (ES) and Ponte de Lima (PT)	2.17 Portugal — Spain interconnection between Bearіz — Fontefría (ES); Fontefria (ES) — Ponte de Lima (PT)	2.17 REE - Red Eléctrica de España S.A.U. (ES) REN - Rede Eléctrica Nacional S.A. (PT)	2.17 New 400 kV AC double circuit (OHL) of about 169 km (117 km in Portugal and 52 km in Spain) between Bearіz (ES) - Fontefría (ES) - Ponte de Lima (PT) – Vila Nova de Famalicão (PT), with only one circuit being installed on the Fontefría – Vila Nova de Famalicão section (on shore) 1499/1706 MVA (summer/winter). New 400 kV substations Fontefría, Bearіz and Ponte de Lima.	2.17 Permitting Note: Section Ponte de Lima (PT)-Vila Nova de Famalicão (PT) has been commissioned in 2021	2.17 06/2024
2.18	2.18 Capacity increase of hydro-pumped electricity storage in Kaunertal, Tyrol (AT)	2.18 Tyrol - Kaunertal (AT) Inntal - Ötztaler Alps.	2.18 TIWAG-Tiroler Wasserkraft AG (AT)	2.18 2.18 This PCI covers the extension of the existing Hydro storage power plant “Kraftwerk Kaunertal”, referred to as the Pumped Hydro	2.18 Permitting	2.18 02/2034

				Storage Versetz which is a part of the bigger "Kaunertal Extension Project". It includes a pumping capacity of 400 MWmax (4x Francis Type), with an associated turbining capacity of 440 MWmax. This provides a storage capacity of 64 GWh related to the power station Versetz with an expected net annual generation of 1060 GWh.		
2.23	2.23 Internal lines at the Belgian north border between Zandvliet and Lillo-Liefkenshoek (BE), and between Liefkenshoek and Mercator, including a substation in Lillo (BE) [currently known as "BRABO II + III"]	2.23 In Northern Belgium close to the border with the Netherlands, in the district of Antwerp	2.23 Elia Transmission Belgium (BE)	2.23 BRABO II + III: realization of a new 380 kV corridor between Zandvliet and Mercator of about 36 km consisting of a double-circuit overhead line, including a new substation 380kV at Lillo. The overhead lines will have a transport capacity of 1900 MVA each.	2.23 Under construction	2.23 12/2025
2.27	2.27.1 Interconnection between Aragón (ES)and Atlantic Pyrenees (FR) [currently known as "Pyrenean crossing 2"]	2.27.1 Aragón (ES) to Marsillon in Atlantic Pyrenees (FR)	2.27.1 REE - Red Eléctrica de España S.A.U. (ES) RTE - Réseau de Transport d'Electricité (FR)	2.27.1 This project consist of a new HVDC interconnection of 2x1000 MW between France and Spain located in the Central part of the Pyrenees between Aragón region (Spain) and Marsillon (France). Internal AC reinforcements in Spain complement the cross border section, in order to connect the new converter station to the existing network.	2.27.1 Planned but not yet in permitting	2.27.1 03/2030
	2.27.2 Interconnection between Navarra (ES) and Landes (FR) [currently known as "Pyrenean crossing 1"]	2.27.2 Navarra (ES) and Landes (FR)	2.27.2 RTE - Réseau de Transport d'Electricité (FR) REE - Red Eléctrica de España S.A.U. (ES)	2.27.2 This Project consist of a new HVDC interconnection between France and Spain in the Western part of the Pyrenees between Pamplona area (Spain) and Cantegrit (France). The project is considered as an HVDC project of 2x1000 MW. Internal reinforcements complement the cross border section.	2.27.2 Planned but not yet in permitting	2.27.2 09/2029
2.28	2.28.2 Hydro-pumped electricity storage Navaleo (ES)	2.28.2 Torre del Bierzo – León (ES)	2.28.2 CDR TREMOR S.L. (ES)	2.28.2 P-PHES NAVALEO is pure pumped storage with an installed capàcity of 552 MW. (3 x 184 MW) and total rated flow of 90 m3/s in generating mode and capacity of 548 MW and flow of 70 m3/s in pumping mode, with an annual generation capacity between 700 - 1000 Gwh. The project consists in two reservoirs with a volume of 2,23 Mio m3. Normal static head is 710 m. The cycle efficiency is up to 79%. The pumped storage is integrated in a puryfing cycle of waterflowing trough abandoned mines that are currently being directly discharged to the rivers, and will be located in the economically depresed region of Castilla y León with unemployment rates of 20% -30%. The Hybrid	2.28.2 Permitting	2.28.2 31/12/2026

				purification –generation –storage process was awarded a patent by the WIPO with the highest ratings to all claims for its novelty, inventiveness and industrial applicability.		
	2.28.5 Purifying - Pumped Hydroelectric Energy Storage Velilla del Río Carrión (ES)	2.28.5 Velilla del Rio Carrión León (ES)	2.28.5 CDR CARRIÓN, S.L. (ES)	2.28.5 Closed-loop pumped-storagewith an installed capacity of 376 MW ingenerating mode and 379MW in pumping mode, an energy storage capacity of 2.8 GWhand a cycle efficiency of up to 79%. The pumped storage is integrated in a puryfing cycle of waterflowing trough abandoned mines that are currently being directly discharged to the rivers, and will be located in the economically depresed regionof Castillay León with unemployment rates of 20% -30%. The Hybrid purification –generation –storage process was awarded a patent by the WIPO with the highest ratings to all claims for its novelty, inventiveness and industrial applicability.	2.28.5 Permitting	2.28.5 02/01/2026
2.29	2.29 Hydroelectric Power Station Silvermines (IE)	2.29 Silvermines (IE)	2.29 Siga Hydro Limited (IE)	2.29 Silvermines Hydroelectric Power Station (hydro pumped storage) will provide 1.8 GWh of storage with 360 MW export capacity and 360 MW of pumping load. The scheme is located close to the transmission system on a former open-cast mining site and consists of upper and lower reservoirs with capacities of approximately 2.6 Mm3 and a head height of 300 m. The project will have 3 x 120 MW synchronous motor/generators and associated turbines.	2.29 Planned but not yet in permitting	2.29 12/2028
2.30	2.30 Hydro-pumped electricity storage Riedl (DE)	2.30 Gottsdorf (DE)	2.30 Donaukraftwerk Jochenstein AG (AT)	2.30 Hydro pumped storage in Riedl will provide 3.5 GWh of storage with pumping capacity of 300 MW and generating capacity of 300 MW. A pumped storage is planned upstream from Jochenstein hydro power plant at the Danube. Drawdown and return of water will be ensured via Danube and a storage lake to be created southwest of Gottsdorf village, approx. 350 m above the live storage of Jochenstein. The upstream water conduit is designed as an inclined shaft. The power shaft will be located in the best possible situation given the encountered geological conditions. The downstream water conduit joins the intake/outlet structure on the Danube underground.	2.30 Permitting	2.30 2029

2.31	Cluster of internal lines in Germany including the following PCIs: 2.31.1 Internal line between Emden-East to Osterath to increase capacity from Northern Germany to the Rhineland [currently known as "A-North"]	2.31.1 Emden-East to Osterath (Northern Germany to Rhineland) (DE)	2.31.1 AMPRION	2.31.1 The project consists of two new HVDC cable from Emden-East to Osterath. The HVDC has a transfer capacity of 2 GW. The project is a grid expansion project for low-loss transmission of high power over long distances from Northern Germany to the Rhineland. Northern Germany is characterized by a large number of regenerative onshore and offshore energy sources which exceed the demand of Northern German loads. The Rhineland, however, is a high-production region with large conventional generation capacity that has to be substituted by renewable generation capacity due to the German coal phase-out.	2.31.1 Permitting	2.31.1 2027
	2.31.2 Internal lines between Heide/West to Polsum to increase capacity from Northern Germany to the Ruhr-Area [currently known as "Korridor B"]	2.31.2 Heide/West to Polsum (Northern Germany to Ruhr-Area) (DE)	2.31.2 AMPRION	2.31.2 The poject consists of a new HVDC cable from Heide/West to Polsum. The HVDC has a transfer capacity of 2 GW. The project is a grid expansion project for low-loss transmission of high power over long distances from Northern Germany to the Ruhr-Area. Northern Germany is characterized by a large number of regenerative onshore and offshore energy sources which exceed the demand of Northern German loads. The Ruhr-Area, however, is a high-production region with large conventional generation capacity that has to be substituted by renewable generation capacity due to the German coal phase-out.	2.31.2 Planned but not yet in permitting	2.31.2 2031
	2.31.3 Internal lines between Wilhelmshaven to Uentrop to increase capacity from Northern Germany to the Ruhr-Area [currently known as "Korridor B"]	2.31.3 Wilhelmshaven to Uentrop (Northern Germany to Ruhr-Area) (DE)	2.31.3 AMPRION	2.31.3 The poject consists of a new HVDC cable from Wilhelmshaven to Hamm. The HVDC has a transfer capacity of 2 GW. The project is a grid expansion project for low-loss transmission of high power over long distances from Northern Germany to the Ruhr-Area. Northern Germany is characterized by a large number of regenerative onshore and offshore energy sources which exceed the demand of Northern German loads. The Ruhr-Area, however, is a high-production region with large conventional generation capacity that has to be substituted by renewable generation capacity due to the German coal phase-out.	2.31.3 Planned but not yet in permitting	2.31.3 2031
2.32	2.32 Interconnection between Lonny (FR)	2.32 Line between Lonny (FR)	2.32 RTE	2.32 The project aims at further market	2.32 Under consideration	2.32 31/12/2030

	and Gramme (BE)	and Gramme (BE)	ELIA	integration within the long-term perspective of the energy transition and subsequent need to develop interconnection capacity on the French-Belgium border whilst alleviating Lonny-Achene-Gramme axis as bottleneck. The reinforcement strategy consists of maximizing the potential of the 400kV interconnector Lonny-Achene-Gramme through the use of cost efficient technologies such as PSTs and HTLS as well as the possibility to rebuild Lonny-Achene-Gramme as a 2-circuit solution. The bilateral study will determine the appropriate implementation option and phasing of this implementation (for example: first install a PST, then upgrade the line capacity), taking into account: 1) the optimization of flows between the 400kV interconnectors Avelin-Avelgem-Horta & Lonny-Achene-Gramme 2) that by 2025 Lonny-Achene-Gramme is a structural bottleneck due to the planned nuclear phase out in Belgium, and as such a first implementation step (for example PST) is needed and 3) gain in efficiency in developing a structure with 2 circuits versus current structure with 1 circuit on Lonny-Achene-Gramme. With this project RTE and Elia investigate the possibilities to further develop interconnection capacity on the FR-BE border, in line with the signals provided by the 2030 interconnection target criteria as well as the identification of needs upon 2030 & 2040 scenario's, illustrating that higher power flows will emerge from future production mixes with more RES. This project fits within the strategy to develop cost efficient upgrades of the existing AC interconnectors in the CWE area.		
2.33	2.33 Interconnection between Sicily (IT) and Tunisia node (TU) [currently known as "ELMED"]	2.33 Sicily (IT) to Mlaaba (Menzel Temime -Tunisia)(TU)	2.33 Société tunisienne de l'électricité et du gaz (TN) Terna S.p.A. - Rete Elettrica Nazionale (IT)	2.33 ELMED is a new 600 MW interconnection between Tunisia and Sicily via HVDC submarine cable. The total length of the link is about 200 km - 250 km equally shared between Italy and Tunisia.	2.33 Permitting	2.33 12/2027

3. Priority Corridor North-South electricity interconnections in Central Eastern and South Eastern Europe ('NSI East Electricity')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
3.1	Cluster Austria - Germany including the following PCIs: 3.1.1 Interconnection between St. Peter (AT) and Isar (DE)	3.1.1 St. Peter (AT) to Isar/Altheim/ Ottenhofen (DE)	3.1.1 TenneT (DE) Austrian Power Grid AG (AT)	3.1.1 380 kV AC OHL between Isar and St. Peter with a total capacity of 4,100 MVA, including 110 km of new line in DE (including Pirach), new 380 kV switchgears in Altheim, Simbach, Pirach and St. Peter and one new 380/220 kV transformer in the substations Altheim and St. Peter. The connections Altheim-St. Peter and Simbach-St. Peter are expected to be completed in 05/2023.	3.1.1 Permitting	3.1.1 12/2024
	3.1.2 Internal line between St. Peter and Tauern (AT)	3.1.2 St. Peter (AT) to Tauern (AT)	3.1.2 Austrian Power Grid AG (AT)	3.1.2 Completion of the 380 kV AC line (OHL) with a length of approximately 128 km and a capacity of approximately 2 x 2400 MVA between St.Peter and Tauern (as an important part of the 380 kV Ring) and namely: the upgrade of the existing 380 kV line between St.Peter and Salzburg from 220 kV operation to 380 kV operation and the constructiong of a new internal double circuit 380 kV line connecting Salzburg and Tauern, replacing the existing 220-kV-line on an optimized route (onshore). Moreover, the construction of the new substation Wagenham and Pongau and the integration of the existing substations Salzburg and Kaprun is planned.	3.1.2 Under construction	3.1.2 2025
	3.1.4 Internal line between Westtirol and Zell-Ziller (AT)	3.1.4 Westtirol(AT) to Zell-Ziller (AT)	3.1.4 Austrian Power Grid AG (AT)	3.1.4 This project comprises an upgrade of the existing 220 kV line Westtirol (AT) - Zell-Ziller (AT) and the construction of an additional 220/380kV transformer. Line length: 105 km.	3.1.4 Planned but not yet in permitting	3.1.4 2027
3.10	Cluster Israel — Cyprus — Greece [currently known as "EUROASIA Interconnector"] including the following PCIs: 3.10.1 Interconnection between Hadera (IL) and Kofinou (CY)	3.10.1 Hadera (IL) - Kofinou (CY)	3.10.1 EuroAsia Interconnector Ltd (CY)	3.10.1 The project forms part of the Cluster 3.10 which consists of a 500 kV DC underwater electric cable and any essential equipment and/or installation for interconnecting the Cypriot and the Israeli transmission networks (offshore). The project will have a capacity of 1000 MW and a total length of around 1208 km (310 km between CY and IL). Converter stations will be of the Voltage Source Converter (VSC) and will allow for reverse transmission of electricity. The instalation depth of the cable in	3.10.1 Permitting	3.10.1 06/2025

				some areas between IL and CY is expected to reach 2200 m m.		
	3.10.2 Interconnection between Kofinou (CY) and Korakia, Crete (EL)	3.10.2 Kofinou (CY) - Korakia (EL)	3.10.2 EuroAsia Interconnector Ltd (CY)	3.10.2 The project forms part of the Cluster 3.10 which consists of a 500 kV DC underwater electric cable and any essential equipment and/or installation for interconnecting the Cypriotand the Greek transmission networks (offshore). The project will have a capacity of 1000 MW and a total length of around 1208 km (898 km between CY and Crete). Converter stations will be of the Voltage Source Converter (VSC) and will allow for reverse transmission of electricity. The instalation depth of the cable in some areas between CY and EL is expected to reach 3000 m.	3.10.2 Permitting	3.10.2 12/2026
3.11	Cluster of internal lines in Czechia including the following PCIs:					
	3.11.1 Internal line between Vernerov and Vitkov (CZ)	3.11.1 Vernerov (CZ) to Vitkov (CZ)	3.11.1 ČEPS a.s. (CZ)	3.11.1 Building a new 400 kV substation at Vítkov with 400/110 kV transformer of rating power 350 MVA as an additional reinforcement to the existing 220 kV substation. Building a new 400 kV AC double circuit OHL of 83 km with a capacity of 2x1730 MVA between Vernerov and Vitkov (onshore).	3.11.1 Permitting	3.11.1 06/2024
	3.11.2 Internal line between Vitkov and Prestice (CZ)	3.11.2 Vitkov (CZ) to Prestice (CZ)	3.11.2 ČEPS a.s. (CZ)	3.11.2 Building of a new 400 kV AC double-circuit OHL of 87 km with capacity of 2x1730 MVA (onshore) between Vitkov and Prestice. The project includes the extension and upgrading of the existing substation Prestice 420 kV	3.11.2 Commissioned	3.11.2 30/09/2020
	3.11.3 Internal line between Prestice and Kocin (CZ)	3.11.3 Kocin (CZ) to Prestice (CZ)	3.11.3 ČEPS a.s. (CZ)	3.11.3 Extension and upgrade of the existing substation 400/110 kV at Kocin that will enable connection of 5 new OHL (onshore). Reinforcement of existing 400 kV AC OHL of 116.8 km between Prestice and Kocin from single-circuit with a capacity of 1360 MVA to double-circuit OHL with a capacity of 2x1730 MVA (onshore). In this project the existing 420 kV Kocin substation will have to be extended and upgraded to enable the connection not only of the second-circuit but also other new OHL foreseen to be connected into this substation 420 kV. As a prerequisite to enable the realization of the project, better utilization and optimization of the corridors with other adjacents existing 400 kV overheadlines in the respective area, the project will have to include partial construction of the new double-circuit	3.11.3 Permitting	3.11.3 12/2028

				400 kV OHL Chrast – Prestice and Kocin-Dasny.		
	3.11.4 Internal line between Kocin and Mirovka (CZ)	3.11.4 Kocin (CZ) to Mirovka (CZ); V413 (CZ) looping to Mirovka	3.11.4 ČEPS a.s. (CZ)	3.11.4 Building a new OHL AC 400 kV which connects two existing 420 kV substations (Kocin and Mirovka) with double-circuit OHL having 120.5 km length and a capacity of 2X1730 MVA (onshore). This PCI also includes extension and upgrade of existing substation 420 kV Mirovka to enable the connection of the new 400 kV AC OHL of about 26.5 km with a capacity of 2x1730 MVA between the existing 400 kV OHL V413 (Reporyje-Prosenice) and 420 kV substation Mirovka (onshore).	3.11.4 Permitting	3.11.4 10/2027
3.12	3.12 Internal line in Germany between Wolmirstedt and Isar to increase internal North-South transmission capacity [currently known as SuedOstLink]	3.12 Wolmirstedt (DE) to Isar, Bavaria (DE)	3.12 50Hertz Transmission (DE) TenneT (DE)	3.12 New 525 kV DC cable (HVDC) of about 540 km in Germany (min. 2000 MW) from North-East Germany (Area of Wolmirstedt) to the South of Bavaria (area of Isar). New HVDC connection with a capacity of 2 GW from North-East Germany (Area of Wolmirstedt, with high installed capacities of RES), to the South of Bavaria (area of Isar with high consumption and connections to storage capabilities). Further investigations for capacity extension are ongoing (see TYNDP project 130). There was a change in technical layout due to German law: project promoters are obliged to build this connection as underground cable. Current planning investigates the execution of a 540 km HVDC underground cable system (525 kV).	3.12 Permitting	3.12 12/2025
3.14	Internal reinforcements in Poland [part of the cluster currently known as "GerPol Power Bridge"] including the following PCIs:					
	3.14.2 Internal line between Krajnik and Baczyna (PL)	3.14.2 Krajnik (PL) to Baczyna (PL)	3.14.2 PSE S.A. (PL)	3.14.2 Construction of new 400 kV AC double circuit OHL of about 90 km with thermal capacity of 2x1870 MVA between Krajnik and Baczyna. One circuit temporarily working at 220 kV on the section between Krajnik and Gorzów. Construction of new 400 kV substation Baczyna which will be connected by splitting and extending of the existing line and upgrading limitations between Krajnik and Plewiska.	3.14.2 Under construction	3.14.2 12/2024
	3.14.3 Internal line between Mikułowa and Świebodzice (PL)	3.14.3 Mikułowa (PL) to Świebodzice (PL)	3.14.3 PSE S.A. (PL)	3.14.3 Construction of new 400 kV double circuit line of about 100 km with thermal capacity of 2x1870 MVA between Mikułowa and Świebodzice with one circuit temporarily working at 220 kV. The project provides additional capacity (NTC – Net Transfer	3.14.3 Planned but not yet in permitting	3.14.3 06/2024

				Capability) of 1500 MW in terms of import and 500 MW export.		
	3.14.4 Internal line between Baczyna and Plewiska (PL)	3.14.4 Baczyna (PL) to Plewiska (PL)	3.14.4 PSE S.A. (PL)	3.14.4 Construction of 2x400 kV line Baczyna-Plewiska. The project provides additional capacity (NTC – Net Transfer Capability) of 1500 MW in terms of import and 500 MW export; greater level of safety and reliability of operation of the transmission network in Poland due to enhanced control of power flow.	3.14.4 Under construction	3.14.4 12/2025
3.22	Cluster Romania — Serbia [currently known as "Mid Continental East Corridor"] including the following PCIs:					
	3.22.1 Interconnection between Resita (RO) and Pancevo (RS)	3.22.1 Resita (RO) to Pancevo (RS)	3.22.1 C.N.T.E.E. TRANSELECTRICA S.A. (RO) Elektromreža Srbije (RS)	3.22.1 Construction of a new 400 kV AC double circuit line (OHL) of about 131 km (63 km in Romania and 68 km in Serbia) and with a capacity of 2x1380 MVA between between the new 400 kV Resita and Pancevo substations (onshore).	3.22.1 Under construction	3.22.1 12/2025
	3.22.2 Internal line between Portile de Fier and Resita (RO)	3.22.2 Portile de Fier(RO) to Resita (RO)	3.22.2 C.N.T.E.E. TRANSELECTRICA S.A. (RO)	3.22.2 New 400 kV AC OHL of 116 km and with a capacity of 1380 MVA between existing substation 400 kV Portile de Fier and new 400 kV substation Resita, extension with one bay of 400 kV substation Portile de Fier, new 400 kV substation Resita, with 400/220 kV and 400/110 kV transformers, as development of the existing 220/110 kV substation.	3.22.2 Under construction	3.22.2 12/2025
	3.22.3 Internal line between Resita and Timisoara/Sacalaz (RO)	3.22.3 Resita (RO) to Timisoara/Sacalaz (RO)	3.22.3 C.N.T.E.E. TRANSELECTRICA S.A. (RO)	3.22.3 Upgrade of an existing 220 kV AC double circuit line (OHL) between Resita –Timisoara-Sacalazto 400 kV of which: new 400 kV AC double circuit line (OHL) Reşiţa-Icloda of about 58 km; new 400 kV AC single-circuit line (OHL) Icloda-Timişoara of about 16 km; new 400 kV AC single-circuit line (OHL) Icloda-Săcălaz of about 34 km. Moreover, the project includes the new 400 kV Timisoara substation (400/110 kV 2x250 MVA).	3.22.3 Permitting	3.22.3 12/2025
	3.22.4 Internal line between Arad and Timisoara/Sacalaz (RO)	3.22.4 Arad(RO) to Timisoara/Sacalaz (RO)	3.22.4 C.N.T.E.E. TRANSELECTRICA S.A. (RO)	3.22.4 Upgrade of the existing 220 k V AC double circuit line (OHL) Timisoara/Sacalaz-Arad to 400 kV on 78 km of which: 14 km of line will be built with single circuit between Sacalaz-C.Aradului-Racord Sacalaz, 11 km with single circuit from Timisoara to -Racord Sacalaz and the rest 42 km of the line will be double circuit from - Racord Sacalaz to Arad. The project includes the replacement of the existing 220 kV Sacalaz substation with new 400 kV substation (400/110kV 250 MVA).	3.22.4 Planned but not yet in permitting	3.22.4 12/2027

3.24	3.24 Hydro-pumped electricity storage in Amfilochia (EL)	3.24 Amfilochia (EL)	3.24 TERNA ENERGY S.A (EL)	3.24 Pumped Storage Complex with two independent upper reservoirs: Agios Georgios and Pyrgos, using as lower reservoir the artificial reservoir of Kastraki (owner Public Power Corporation). The equipment for energy production and energy pumping will be installed in two independent power houses, near Kastraki reservoir.	3.24 Permitting	3.24 12/2024
3.28	3.28 Internal line within Austria between Lienz and Obersielach	3.28 Lienz(AT) to Obersielach (AT)	3.28 Austrian Power Grid AG (AT)	3.28 The 380-kV-ring can be completed in Austria with the reinforcement of the Carinthia transmission grid. The advantages of a ring structure are only made possible by the project. Security of supply in Carinthia and Austria can be guaranteed in the long term. With the 380-kV-ring closure in the south, a redundant connection of the renewable energy feed-in centers in the east Austria (mainly wind and PV) and the load centers with the pumped storage power plants in the central Alpine region can be achieved. The project will also enable the development of additional transmission capacity to the neighboring countries.	3.28 Planned but not yet in Permitting	3.28 03/12/2030

4. Priority Corridor Baltic Energy Market Interconnection Plan in electricity ('BEMIP Electricity')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
4.4	4.4.2 Internal line between Ekhyddan and Nybro/Hemsjö (SE)	4.4.2 Part 1: Ekhyddan (SE) to Nybro (SE); Part 2: Nybro (SE) to Hemsjö (SE)	4.4.2 Svenska Kraftnät (SE)	4.4.2 New 400 kV AC single circuit OHL of 90-100 km between Ekhyddan and Nybro and a new 400 kV AC single circuit OHL of 97 km between Nybro and Hemsjö with total capacity of 2200 MVA (onshore). Ekhyddan-Nybro-Hemsjö is a new single circuit 400kV OHL and key investment to accomplish full utilization of the NordBalts cable in the second phase between Lithuania and Sweden (project 60) at all times. The total route length from Ekhyddan to Hemsjö, will be 200 km: New 400 kV AC single circuit OHL of 90-100 km between Ekhyddan and Nybro and a new 400 kV AC single circuit OHL of 97 km between Nybro and Hemsjö with total capacity of 2200 MVA (onshore). The project does not increase the net transfer capacity on any border. However it supports the long term secure operation of HVDC interconnector Nordbalt which in turn contributes 700 MW between Sweden and Lithuania.	4.4.2 Permitting Permitting completed for Nybro-Hemsjö	4.4.2 03/2027 Nybro – Hemsjö - 03/2026
4.5	4.5.2 Internal line between Stanisławów and Ostrołęka (PL)	4.5.2 Stanisławów to Ostrołęka (PL)	4.5.2 PSE S.A. (PL)	4.5.2 Construction of new 400 kV AC double-circuit OHL line with a length of 108 km and capacity of 2x1870 MVA between Ostrołęka and Stanisławów. Temporarily, one circuit will use part of the existing 220 kV single-circuit line between Ostrołęka and Miłosna. In one circuit of 400 kV line, the Wyszków substation will be constructed. After the construction of 400 kV line, the 220 kV line will be disconnected. Extension of 400 kV Ostrołęka and Stanisławów substations for connection of new Ostrołęka - Stanisławów line.	4.5.2 Under construction	4.5.2 12/2023
4.6	4.6 Hydro-pumped storage in Estonia	4.6 Paldiski (EE)	4.6 Energiasalv Pakri OÜ (EE)	4.6 Estonian Hydro-pumped storage of 500 MW and storage capacity of 6 GWh in Paldiski. Technically feasible as the rock quality for the construction is good and there are no water restrictions for the upper reservoir. This storage	4.6 Permitting	4.6 12/2029

				project in Estonia is estimated to avoid 5,3 million tons of CO2 during its first 10 years of operation, enables saving in generation costs of 16 - 20 Meuro/year and is expected to reduce consumers' energy bills by 5.5MEUR/year. The project constitutes an important infrastructure investment helping shift Estonia's power generation from oil shale-based generation to RES-based generation (mainly wind).		
4.8	Integration and synchronisation of the Baltic States' electricity system with the European networks including the following PCIs:					
	4.8.1 Interconnection between Tartu (EE) and Valmiera (LV)	4.8.1 Tartu (EE) to Valmiera (LV)	4.8.1 Augstsprieguma tikls AS (LV) Elering AS (EE)	4.8.1 Reinforcement of existing 330 kV OHL between Tartu (EE) and Valmiera (LV) with a length of 133 km (48 km in LV and 85 km in EE) and a planned capacity of 1000 MVA.	4.8.1 Under construction	4.8.1 12/2023
	4.8.2 Internal line between Balti and Tartu (EE)	4.8.2 Balti to Tartu (EE)	4.8.2 Elering AS (EE)	4.8.2 Reinforcement of existing 330 kV OHL between Balti and Tartu (EE) with a planned capacity of 1143 MVA.	4.8.2 Under construction	4.8.2 12/2023
	4.8.3 Interconnection Tsirguliina (EE) and Valmiera (LV)	4.8.3 Tsirguliina (EE) to Valmiera (LV)	4.8.3 Elering AS (EE) Augstsprieguma tikls AS (LV)	4.8.3 Reinforcement of existing 330 kV OHL between Tsirguliina (EE) and Valmiera (LV) with a length of 62 km (49 km in LV and 13 km in EE) and a planned capacity of 1000 MVA.	4.8.3 Permitting	4.8.3 2024
	4.8.4 Internal line between Viru and Tsirguliina (EE)	4.8.4 Eesti (EE) and Tsirguliina (EE)	4.8.4 Elering AS (EE)	4.8.4 Reinforcement of existing 330 kV OHL between Eesti and Tsirguliina (EE) with a planned capacity of 1143 MVA (243 Km).	4.8.4 Permitting	4.8.4 2025
	4.8.7 Internal line between Paide and Sindi (EE)	4.8.7 Paide to Sindi (EE)	4.8.7 Elering AS (EE)	4.8.7 Internal reinforcement of Paide-Sindi 330kV overhead line. The operational procedure to overcome the overloading issues has been developed.	4.8.7 Under consideration	4.8.7 2028
	4.8.8 Internal line between Vilnius and Neris (LT)	4.8.8 Vilnius to Neris (LT)	4.8.8 LITGRID AB (LT)	4.8.8 New single circuit 330kV OHL (943 MVA, 80 km length).	4.8.8 Permitting	4.8.8 12/2025
	4.8.9 Further infrastructure aspects related to the implementation of the synchronisation of the Baltic States' system with the continental European network	4.8.9 Estonia (EE); Latvia (LV); Lithuania(LT)	4.8.9 Augstsprieguma tikls AS (LV) Elering AS (EE) LITGRID AB (LT)	4.8.9 This generic project shall implement the first phase of improvements in system control and stability required for synchronous operation with Continental Europe, : - development of Baltic AGC and frequency stability assessment systems with special protection schemes; -upgrades of SCADAs and other IT systems and their environment needed for real time	4.8.9 Under construction	4.8.9 2025

				operation and planning; - upgadesto HVDC connectors, etc. - construction of three synchronous condensers in Püssi (Estonia), Ventspils(Latvia) and Alytus (Lithuania), etc.		
	4.8.10 Interconnection between Lithuania and Poland [currently known as "Harmony Link"]	4.8.10 Darbėnai (LT) to Zarnowiec (PL)	4.8.10 LITGRID AB (LT) PSE S.A. (PL)	4.8.10 New HVDC subsea cable interconnection between Lithuania and Poland, known as Harmony Link, plans to connect Darbėnai (Lithuania) and Zarnowiec (Poland) substations, crossing Baltic Sea – territorial waters and EEZ of Poland and Lithuania, and EEZ of Sweden. The project consists of three following main parts: - construction of a converter station in Poland, - construction of a converter station in Lithuania and - HVDC cable. The expected nominal capacity of the Harmony Link will be700 MW and converters will be based on VSC technology.	4.8.10 Permitting	4.8.10 03/2026
	4.8.13 New 330 kV Mūša substation (LT)	4.8.13 Šiauliai district (LT)	4.8.13 LITGRID AB (LT)	4.8.13 New 330 kV Mūša substation (LT)	4.8.13 Permitting	4.8.13 12/2025
	4.8.14 Internal line between Bitėnai and KHAE (LT)	4.8.14 Bitėnai to Kruonis (Kruonis Pumped Storage Plant) (LT)	4.8.14 LITGRID AB (LT)	4.8.14 New 330 kV OHL Kruonio HAE. The project consists of three parts: - reconstruction of 330 kV Jurbarkas-Bitenai line, by adding a second circuit; - construction of a new bypass line between Jurbarkas and existing 330 kV line Kruonio HAE – Sovetsk; -upgrade of 330 kV Bitėnai substation to facilitate connection of the additional circuit..	4.8.14 Under construction	4.8.14 10/2025
	4.8.15 New 330 kV Darbėnai substation (LT)	4.8.15 Darbėnai (LT)	4.8.15 LITGRID AB (LT)	4.8.15 New 330 kV Darbėnai substation, necessary for the connection of the new 330 kV lines as well as new HVDC subsea cable known as Harmony Link.	4.8.15 Permitting	4.8.15 12/2025
	4.8.16 Internal line between Darbenai and Bitenai (LT)	4.8.16 Darbėnai to Bitėnai (LT)	4.8.16 LITGRID AB (LT)	4.8.16 New 330 kV OHL Darbėnai -Bitenai in Lithuania. The project consists of two parts: - reconstruction of existing 330 kV line Klaipėda-Grobina by adding a second circuit; - construction of 330 kV OHL Klaipėda-Bitėnai, including a bypass around the city of Klaipėda.	4.8.16 Under construction	4.8.16 07/2025
	4.8.18 Internal line between Dunowo and Żydowo Kierzkowo (PL)	4.8.18 Dunowo and Żydowo Kierzkowo(PL)	4.8.18 PSE S.A. (PL)	4.8.18 Dunowo-Zydowo Kierzkowo 400 kV line is necessary to ensure that after the	4.8.18 Permitting	4.8.18 12/2025

				commissioning of Harmony Link and offshore wind farms, full capabilities would be available on the Polish-Lithuanian subsea interconnector. This project includes: the reconstruction of Dunowo electrical station with installation of 400/110 kV transformers and the construction of new double-circuit 400 kV.		
	4.8.19 Internal line between Piła Krzewina and Żydowo Kierzkowo (PL)	4.8.19 Piła Krzewina and Żydowo Kierzkowo (PL)	4.8.19 PSE S.A. (PL)	4.8.19 Pila Krzewina-Zydowo Kierzkowo 400 kV line is interrelated with the project aiming to build Dunowo-Zydowo Kierzkowo line. This project includes: - the reconstruction and modernization of Piła Krzewina electrical station with installation of 400/110 kV transformers and reactive power compensation devices, and - the construction of new double-circuit 400 kV.	4.8.19 Planned but not yet in permitting	4.8.19 12/2027	
	4.8.20 Internal line between Krajnik and Morzyczyn (PL)	4.8.20 Krajnik-Morzyczyn	4.8.20 PSE S.A. (PL)	4.8.20 To allow effective energy flows in the North-Western part of Poland after the commissioning of Harmony Link, the modernization of “North Line” (between Krajnik and Gdańsk Błonia) is necessary. The first project of North Line is the modernization of Krajnik-Morzyczyn 400 kV line. The detailed scope of the project will be determined after the the development of the longitudinal profile of the line and after the analyzing the possibility to adapt the lines to higher load capacity (phase conductors at +80 C°).	4.8.20 Under construction	4.8.20 12/2025	
	4.8.21 Internal line between Morzyczyn-Dunowo-Słupsk-Żarnowiec (PL)	4.8.21 Morzyczyn-Dunowo-Słupsk-Żarnowiec (PL)	4.8.21 PSE S.A. (PL)	4.8.21 The modernisation of Morzyczyn-Dunowo-Slupsk-Zarnowiec 400 kV line represents the longest section of modernization of North Line. The detailed scope of the project will be determined after further analysis. Because of its length this project consists of three sections: - The modernization of Morzyczyn-Dunowo 400 kV, - The modernization of Dunowo-Słupsk 400 kV, - The modernization of Słupsk-Żarnowiec 400 kV.	4.8.21 Permitting Some investments are in permitting, others under construction	4.8.21 12/2025	
	4.8.22 Internal line between Żarnowiec-Gdańsk/Gdańsk Przyjaźń-Gdańsk Błonia (PL)	4.8.22 Żarnowiec-Gdańsk/Gdańsk Przyjaźń-Gdańsk Błonia (PL)	4.8.22 PSE S.A. (PL)	4.8.22 The modernisation of Zarnowiec-Gdansk/Gdansk Przyjazn-Gdansk Blonia 400 kV line is the last section of the modernization of	4.8.22 Planned but not yet in permitting	4.8.22 12/2025	

				North Line. The detailed scope of the project will be determined after further analysis.		
	4.8.23 Synchronous condensers providing inertia, voltage stability, frequency stability and short-circuit power in Lithuania, Latvia and Estonia	4.8.23 Located in 330 kV substations in Lithuania (Neris and Telšiai), Latvia (Liksna and Grobina), Estonia (Kisa and Viru)	4.8.23 Augstsprieguma tikls AS (LV) Elering AS (EE) LITGRID AB (LT)	4.8.23 Synchronous condensers providing inertia, voltage stability, frequency stability and short-circuit power.	4.8.23 Permitting	4.8.23 12/2025
4.10	Cluster Finland - Sweden [currently known as 'Aurora line, third interconnection Finland - Sweden'] including the following PCIs:					
	4.10.1 Interconnection between northern Finland and northern Sweden	4.10.1 Messsaure (SE) to Keminmaa municipality (Viitajärvi, FI)	4.10.1 Fingrid (FI) Svenska Kraftnät (SE)	4.10.1 Aurora line, the third AC 400 kV overhead line interconnector between Finland North and Sweden. The strengthening of the AC connection between Finland and Sweden is necessary due to market needs, security of supply in Finland, new wind power generation and larger conventional units.	4.10.1 Permitting	4.10.1 2025
	4.10.2 Internal line between Keminmaa municipality (Viitajärvi) and Pyhänselkä (FI)	4.10.2 Keminmaa municipality (Viitajärvi, FI) to Pyhänselkä (FI)	4.10.2 Fingrid (FI)	4.10.2 The project is 400 kV overhead line in North Finland. It is part of the Aurora line, the 3rd AC cross border project between Finland and Sweden. It will also allow for the integration of new RES generation at Bothnian bay.	4.10.2 Permitting	4.10.2 2024
4.11	4.11 Interconnection between Latvia and Sweden via Gotland [currently known as “LaSGo Link”]	4.11 Island of Gotland in Sweden and Grobina in Latvia	4.11 Transmission Investment	4.11 LaSGo Link is a new multi terminal HVDC VSC sub-sea interconnector project linking Sweden, the Island of Gotland and Latvia. The project consists of two sections: a 700MW internal grid reinforcement of ca. 125km between the Swedish mainland and the island of Gotland and a 500MW cross border connection of c. 195km between the island of Gotland and Grobina in Latvia.	4.11 Under consideration	4.11 01/01/2036

5. Priority Corridor North-South gas interconnections in Western Europe ('NSI West Gas')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
5.19	5.19 Connection of Malta to the European Gas network — pipeline interconnection with Italy at Gela	5.19 Gela (IT) - Delimara (MT)	5.19 Interconnect Malta Ltd	5.19 PCI 5.19 'Connection of Malta to the European Gas Network— pipeline interconnection with Italy at Gela' consisting on a gas pipeline interconnection between Malta (Delimara) and Italy (Gela, Sicily) with a capacity of 1.2 bcm/year, diameter of 22" (DN 560) and an approximate length of 159km (151 km offshore, 7km onshore in Sicily and 1km onshore in Malta). The pipeline is being designed for bi-directional flow but its primary aim is to enable gas flows from Italy to Malta. The project will end Malta's isolation from the European gas network and thus contribute to integration of the gas market and improved security of energy supply, given that presently the island depends on LNG supply through shipping. The project's design is currently being upgraded to transport blends of renewable gases/natural gas and pure hydrogen, once such green gases supplies become progressively available and feasible, as part of the future transition plan to a carbon neutral economy.	5.19 Permitting	5.19 11/2028

6. Priority Corridor North-South gas interconnections in Central Eastern and South Eastern Europe ('NSI East Gas')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
6.2	6.2.13 Development and enhancement of transmission capacity of Slovakia – Hungary interconnection	6.2.13 Szada-Balassagyarmat (HU), , Velké Zlievce (SK)	6.2.13 FGSZ Ltd. (HU), Eustream, a.s. (SK)	6.2.13 The objectives of the PCI are: - Enhancement of Exit transmission capacity with 102 GWh/d in HU->SK direction and enhancement of Entry transmission capacity with 26 GWh/d in SK->HU direction at Balassagyarmat with adding power on Szada compressor station. Enabler projects: A new pipeline between Kozármisleny-Kaposvár. A new compressor station at Dorog. A new compressor station at Adony. Equal level of transmission capacities of 153 GWh/d will be available in both directions at the SK-HU interconnection. Utilization maximization of the existing infrastructure in the north-south direction and east-west direction.	6.2.13 Planned but not yet in permitting	6.2.13 10/2027
6.8	Cluster of infrastructure development and enhancement enabling the Balkan Gas Hub, including the following PCIs: 6.8.1 Interconnection Greece – Bulgaria [currently known as "IGB"] between Komotini (EL) – Stara Zagora (BG); compressor station at Kipi (EL)	6.8.1 Komotini (EL) – Stara Zagora (BG); Kipi (EL); Komotini (EL)	6.8.1 ICGB AD (EL, BG) DESFA S.A. (EL)	6.8.1 Construction of a bi-directional gas interconnector between the high pressure natural gas systems of Greece and TAP and Bulgaria with a technical capacity of up to 3 BCM/year, capable to be increased to up to 5 BCM/year upon market request with the installation of a Compressor Station (CS) from ICGB. New onshore pipeline with a length of 182 km and a daily capacity of approximately 8.2 MCM/day at 3 BCM/year and 13.7 MCM/day at 5 BCM/year. a A compressor station in the area of Kipoi or Komotini will be needed to ensure the supply with gas of the IGB from the DESFA system.	6.8.1 Under construction	6.8.1 For IGB pipeline: 10/2022 For CS: Q4/2024
	6.8.2 Rehabilitation, modernization and expansion of the Bulgarian transmission system	6.8.2 Losenets , Ihtiman, Petrich, Strandja (BG); CS Losenets – Nedyalsko (BG);	6.8.2 Bulgartransgaz EAD (BG)	6.8.2 PCI 6.8.2 is a complex/multi-component project comprising various activities for the modernization, rehabilitation and expansion of	6.8.2 Under construction	6.8.2 06/2022

		sections of the North semi-ring of the network, Gorni Bogrov-Novi Iskar, CS Bogrov (BG)		the existing gas transmission infrastructure on the territory of Bulgaria. - Stage 1: Modernization of 4 compressor stations (CS) (CS Lozenets, CS Ihtiman, CS Petrich, CS Strandja) by integration of 6 gas-turbine compressor units (GTCU); Construction of gas pipeline CS Lozenets –Nedyalsko (20 km, 1000 mm); Carrying out inspections and implementation of systems for optimization of the management process of the network technical condition. - Stage 2: Second phase of the compressor stations' modernization by integration of 4 gas-turbine compressor units (GTCU) in 3 compressor stations (CS Lozenets, CS Ihtiman, CS Petrich); Large-scale rehabilitation involving replacement of sections of the Northern semi-ring of the gas transmission network of 81 km in total – the rehabilitation/sections' replacement will impact other regional projects (Interconnection Bulgaria-Serbia (IBS), Chiren expansion project), as well as the use of the Interconnection Bulgaria-Romania (IBR); Carrying out inspections. - Stage 3: Conditional infrastructure necessary after taking the final investment decision for realization of Stage 2 of the project Interconnection Bulgaria-Serbia (IBS), related to tthe increase of the interconnector capacity from 1.8 to 2.4 bcm/year. The infrastructure to be built includes: Construction of gas pipeline Gorni Bogrov - Novi Iskar of 19 km approximate length and diameter DN 700 and the construction of the CS Bogrov of 20 MW.		
	6.8.3 Gas interconnection Bulgaria — Serbia [currently known as "IBS"]	6.8.3 Novi Iskar (BG) - Nis (RS)	6.8.3 Srbijagas (RS) Bulgartransgaz EAD (BG)	6.8.3 The Gas Interconnection Bulgaria – Serbia (IBS) is envisaged as a reverse connection between the national gas transmission networks of Bulgaria and Serbia. The gas pipeline will have a length of 170 km (BG 62 km, RS 108 km) and a planned transmission capacity of 1.8 mcm/d, with reverse flow capability. The pipeline starts in the town of Novi Iskar (BG) and ends in the Bulgarian-Serbian border. The technological facilities include PF, VA, 2 AGRS and GMS Kalotina.	6.8.3 Permitting	6.8.3 06/2023
6.20	Cluster increase storage capacity in South-East Europe, including one or more of the					

	following PCIs: 6.20.2 Chiren UGS expansion (BG)	6.20.2 Chiren (BG)	6.20.2 Bulgartransgaz EAD (BG)	6.20.2 Expansion of the underground gas storage facility in depleted gas field in Chiren, Bulgaria, with the following technical characteristics: Projected working gas volume up to 1000 MCM (now 550 MCM). Projected daily injection and withdrawal capacity up to 8- 10 mcm/d (currently the maximum daily withdrawal capacity is 3.82 mcm/d, and the maximum daily injection capacity is 3.2 mcm/d). Cycling rate 1 times/year.	6.20.2 Permitting	6.20.2 12/2024
	6.20.3 South Kavala UGS facility and metering and regulating station (EL) and one of the following PCIs:	6.20.3 South Kavala (EL)	6.20.3 Hellenic Republic Asset Development Fund (HRADF) (EL), DESFA S.A. (EL)	6.20.3 South Kavala is an almost depleted, offshore gas field, producing gas since 1981, covering a 5 km² area and is sited 25 km south of Kavala city in Northern Greece. The project involves the conversion of the offshore depleted gas field into an Underground Gas Storage Facility. The PCI includes one metering station to connect to the Greek Transmission network and one CS in Kipi (to be relocated in the area of Komotini) developed from DESFA. The CS project aims at increasing the pressure of the gas entering from the Entry Point Kipi contributing to the injection/withdrawal flows to/from storage into/to the National Transmission network. Projected Working Gas Volume 530 MCM; Withdrawal capacity 9 MCM/day; Injection capacity 7.5 MCM/day; Cycling rate 2 times/year.	6.20.3 Under consideration	6.20.3 31/12/2026
	6.20.4 Depomures storage in Romania	6.20.4 Targu Mures (RO)	6.20.4 Engie Romania S.A. (RO)	6.20.4 The project consists in the revamping and expansion of an existing gas storage facility of 300 MCM situated in Targu Mures, Central Romania. The rationale of the project is threefold: (i) to increase operational independence by building its own compression unit and connection of the storage to high pressure gas transport network, (ii) to enhance regional and national security of supply by expanding the storage capacity from 300 MCM to 400 MCM in a first stage and to 600 MCM in a second stage and (iii) to increase flexibility of the storage particularly by increasing withdrawal capacity during peak demand periods by approx.	6.20.4 Advanced	6.20.4 12/2026

				75% (up to 3.5 MCM) in a first stage and a further 43% (up to 5 MCM) after implementation of the second stage.		
	6.20.7 Bilciuresti underground gas storage	6.20.7 Bilciuresti (RO)	6.20.7 DEPOGAZ Ploiesti Subsidiary SRL	6.20.7 Bilciuresti daily withdrawal capacity increase is a project that aims to increase the daily delivery capacity of gas in Bilciurești UGS from 14 million cm/day up to 20 million m3/day (210 GWh/day). In order to ensure a high degree of operational safety and to enlarge the existent natural gas infrastructure, it is necessary on one hand, to develop new surface facilities that will take over the additional flow and on the other, to upgrade the other existing facilities. From a technical standpoint the project consists of drilling new wells, modernization of existing wells and of surface infrastructure according to European safety and control requirements, the expansion, modernization and optimization of separation units and of the fiscal metering unit. The project is implemented in phases, in order not to interfere with the gas storage activity and includes the following: TEG Dehydration unit for Group 145 Bilciurești (finalized in December 2021); Modernization of fiscal metering panel in Butimanu (under construction); Systematization of intake/ discharge (exhaust) manifolds, injection/withdrawal of gas (under construction); Drilling and completion of 4 new wells; Modernization of storage groups; Modernization of old wells; Butimanu – Bilciurești collector with a diameter of 24” and Modernization of the cooling system of M3 Butimanu module.	6.20.7 Partly under construction	6.20.7 04/07/2025 Project developed in stages
6.24	Capacity increase between Romania and Hungary ((currently known as "ROHU/BRUA ") ") to enable bidirectional capacity of of 4.4 bcm/a, and including new resources from the Black Sea. 6.24.4 ROHU(AT)/BRUA – 2nd phase, including: - Expansion of the transmission capacity in Romania from Recas to Horia towards Hungary up to 4.4 bcm/a and expansion of the compressor stations in Podisor, Bibesti and Jupa	6.24.4 Jupa, Bibești and Podișor (RO); Black Sea shore Podisor route (RO); Csanádpalota (RO/HU) Csanádpalota CS upgrade	6.24.4 FGSZ Ltd. (HU) SNTGN TRANSGAZ SA (RO)	6.24.4 The project consists of: - Városföld node modification: it will improve bidirectional transmission capacity at	6.24.4 Planned but not yet in permitting	6.24.4 10/2027

	- Black Sea shore — Podișor (RO) pipeline for taking over the Black sea gas - Romanian-Hungarian reverse flow: Hungarian section 2nd stage compressor station at Csanádpalota (HU)	Kiskundorozsma-Városföld pipeline (Enabler project)		Csanádpalota IP (RO/HU) up to 11.4 mcm/d. The project will enable up to 13.6 mcm/d bidirectional capacity at Balassagyarmat (HU/SK) together with 6.2.13 (2) project. - Enhancement of the gas transmission capacity in RO towards HU up to 4.4 bcm/y (phase 2) by the construction of a 50 km pipeline, DN800 Recas-Horia, expansion of the compressor stations Jupa, Bibesti and Podisor, with a total additional power of 13.8 MW and the upgrading of GMS Horia. -Construction of a pipeline of approx. 308.3 km. It is a telescopic pipeline consisting of 2 sections and it is designed to transport gas at a pressure of 63 bar. The two pipeline sections are the following: • Section I – Black Sea shore – Amzacea. Length: 32.4 km. Diameter: Ø 48" (DN1200); • Section II – Amzacea – Podisor. Length: 275.9 km. Diameter: Ø 40" (DN1000). - RO-HU reverse flow: HU section, 2nd stage Csanádpalota CS (HU) (2nd phase). One 4.5 MW additional power at Csanadpalota and Kiskundorozsma-Városföld Pipeline which will improve the bidirectional capacity of Csanádpalota IP (RO/HU) up to 11.4 mcm/d.		
6.26	Cluster Croatia — Slovenia at Rogatec including : - Interconnection Croatia - Slovenia (Lučko - Zabok - Rogatec) - Compressor Station Kidričevo, 2nd phase of upgrade (SI) - Upgrade of Rogatec interconnection	6.26.1 Lucko (HR), Zabok (HR), Rogatec (SI), Kidričevo (SI)	6.26.1 Plinacro d.o.o. (HR) Plinovodi d.o.o. (SI)	6.26.1 - Construction of a new pipeline of a capacity up to 5 bcm/y in both directions: Lučko - Zabok (HR), DN700 with 36 km length and Zabok - Rogatec (SI) DN700 with 34 km length. - Upgrade of CS for higher operational pressure in the existing M1/1 and M2/1 pipelines, higher flow and bidirectional operation. The project aims to assure additional necessary compressor power (30 MW) for the PCI 6.26 Cluster Croatia - Slovenia at Rogatec. - Adjustment to operating parameters of the transmission system of the Croatian TSO, increasing the transmission capacity and enabling bidirectional operation. The project consits of a pipeline with a length of 3.8 km and a diameter of DN800. The expected bidirectional	6.26.1 Croatian section: permitting finalised, ready for construction Slovenian section: Ready for permitting stage	6.26.1 01/2026

				incremental capacity brought by the project at IP Rogatec (SI/HR) is 162 GWh/d.		
6.27	6.27 LNG Gdansk (PL)	6.27 Gdańsk (PL)	6.27 GAZ-SYSTEM S.A. (PL)	6.27 The FSRU Polish Baltic Sea Coast project is the first floating terminal in Poland with a planned regasification capacity from approx 6.1 bcm/y. Terminal will consist of storage tanks with the capacity of approx. 170 tcm and other equipment to be used during the loading and reloading of LNG. The project includes also the following necessary development of internal system needed for extraction of gas towards customers in Poland and in the CEE region: - offshore pipeline connecting the FSRU unit with onshore infrastructure in Gdansk, - onshore pipelines Kolnik – Gustorzyn and Kolnik – Gdańsk, The project will offer its regasification capacities to the gas consumers in Poland and possibly to other countries in the Baltic Sea region and/or in Central-Eastern Europe. The implementation of the project has the potential to support the EU's efforts to reduce the sulfur content of marine fuels by ensuring LNG supplies for short and long-haul shipping (for bunkering service). The FSRU terminal also supports the development of alternative fuels infrastructure for both road and sea transport.	6.27 Permitting	6.27 2027

7. Priority Corridor Southern Gas Corridor ('SGC')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
7.3	PCI Cluster infrastructure to bring new gas from the East Mediterranean gas reserves including:					
	7.3.1 Pipeline from the East Mediterranean gas reserves to Greece mainland via Crete [currently known as "EastMed Pipeline"], with metering and regulating station at Megalopoli and dependent on it, the following PCIs:	7.3.1 Levantine Basin gas fields to Greece mainland via Crete (EL)	7.3.1 DESFA S.A. (EL) IGI Poseidon S.A. (EL, IT)	7.3.1 New onshore and offshore pipeline (excluding upstream pipeline section) of approximately 1870 km.The pipeline will have the initial capacity of 10 bcm/y (could go up to 20 bcm/y). The total power of the compressor stations to be installed will be around 225 MW.The Metering and Regulating station at Megalopoli, once carried out, will give the potential to connect the Greek gas transmission system with the EastMed pipeline.	7.3.1 Planned but not yet in permitting	7.3.1 12/2025
	7.3.3 Offshore gas pipeline connecting Greece and Italy [currently known as "Poseidon Pipeline"]	7.3.3 Thesprotia (EL) to Otranto (IT)	7.3.3 IGI Poseidon S.A. (EL, IT)	7.3.3 The Poseidon project aims to transport gas between Greece and Italy at an initial volume of 14 bcm/y (first phase) and up to 20 bcm/y on a second phase. PCI 7.3.3 is part of this project and includes: - compression station in Thesprotia (120 MW); - onshore pipeline between the compression station and the Greek landfall; - new offshore pipeline of approximately 216 km between the Greek and Italian landfalls; - onshore pipeline between the Italian landfall and the metering station in Otranto.	7.3.3 Permitting	7.3.3 12/2025
	7.3.4 Reinforcement of internal transmission capacities in Italy, including reinforcement of the South-North internal transmission capacities [currently known as "Adriatica Line"] and reinforcement of internal transmission capacities in Apulia region [Matagiola - Massafra pipeline]	7.3.4 Pipeline: Sulmona (IT) to Minerbio (IT) and Matagiola (IT) to Massafra (IT); Compressor station: Sulmona (IT)	7.3.4 Snam Rete Gas S.p.A. (IT)	7.3.4 The project consists in a new onshore pipeline of approx. 430 km and in a new compressor station of 33 MW that will create a new transmission capacity of approximately 24 MCM/day (264 GWh/day) to transport gas from new or existing entry points in the south of Italy. The projects also includes the Matagiola-Massafra pipeline stranthening the Italian gas transport backbone that will allow the increment of the maximum capacity of the Puglia Region entry points up to 74 MScm/d without increasing the overall capacity of the overall Italian system from the South.	7.3.4 Permitting The Matagiola-Massafra pipeline - Feasibility	7.3.4 06/2028
7.5						

	7.5 Development of gas infrastructure in Cyprus [currently known as "Cyprus Gas2EU"]	7.5 Vassiliko (CY)	7.5 Natural Gas Infrastructure - ETYFA Ltd (CY)	7.5 The CyprusGas2EU project aims to create an entry point for natural gas and end energy isolation of the island of Cyprus, enabling connection with the wider European gas market while providing security of energy supply at national and regional level and contributing to EU's energy diversification policy.The infrastructure to be developed comprises an LNG Floating Storage and Regasification Unit (FSRU), a jetty intended for the unit's safe mooring, a jetty borne natural gas pipeline and an onshore gas pipeline, a shoreside block valve facility, an onshore natural gas buffer solution and a pressure reduction and metering station. The planned LNG facility will have an LNG storage capacity of approximately 136,000 m3 and will aim to provide a send-out capacity of regasified natural gas of up to 220 T/hour (max yearly send out of approx. 2.44 bcm/year and a max daily average of approx. 76.17 GWh/day) initially and be able to cover additional capacity requirement in the future.	7.5 Under construction	7.5 07/2023

8. Priority Corridor Baltic Energy Market Interconnection Plan in gas ('BEMIP Gas')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
8.2	Cluster infrastructure upgrade in the Eastern Baltic Sea region including the following PCIs:					
	8.2.1 Enhancement of Latvia — Lithuania interconnection	8.2.1 Riga (LV) - lecava (LV) - Kiemenai (LT)	8.2.1 Amber Grid AB (LT) Conexus Baltic Grid (LV)	8.2.1 PCI 8.2.1 "Enhancement of Latvia-Lithuania interconnection" aims to increase the overall cross-border interconnection capacity between the gas systems of Latvia and Lithuania. It will integrate the gas and energy markets in the Baltic Sea region with the internal EU energy market which will contribute to the improvement of market competition and security of gas supply.The PCI will include a number of infrastructure elements. The project provides, on the Latvian side, the reconstruction of the existing pipelines in order to increase the maximal allowed pressure to 50 bar in gas transmission system, as well as, on the Lithuanian side, the upgrade of the existing gas metering station in Kiemenai and readjustment of piping in the territory of Panevezys compressor station. These infrastructure elements will allow removing possible bottlenecks and reaching a daily throughput capacity of up to 131 GWh/d (LT->LV) and up to 120 GWh/d (LV->LT)	8.2.1 Under construction	8.2.1 31/12/2023
	8.2.4 Enhancement of Inčukalns Underground Gas Storage (LV)	8.2.4 Inčukalns (LV)	8.2.4 Conexus Baltic Grid (LV)	8.2.4 "Enhancement of Inčukalns Underground Gas Storage (LV)" aims to upgrade and extend an existing aquifer gas storage facility in Latvia. The surface infrastructure works include the rehabilitation of the existing Gas Collection Point (GCP) and consist in the demolition and replacement of 30 technological lines and the installation of additional 3-5 technological lines. The current Maximum Operating Pressure (MOP) of the GCP amounts to 64 bar and is expected to reach 105 bar after the implementation of the rehabilitation works. The enhancement works of the existing 36 wells will increase the overall wells' productivity by 5% (from 8,145 mcm/day to approx. 8,600 mcm/day). The compression units' infrastructure works will cover the installation of one additional gas	8.2.4 Under construction	8.2.4 01/12/2025

				compression unit to increase the injection productivity (from the current 17 mcm/day with approx. additional 4-6 mcm/day), the installation of a compression extraction to allow the gas withdrawal capacity (from the current 0 mcm/day to 12-15 mcm/day) as well as the enhancement of the existing five reciprocating gas compression units to increase the productivity (from 12 mcm/day to approx. 12.5 mcm/day). The implementation of the project will significantly improve the operational efficiency of the (Underground Gas Storage) UGS facility. Overall the project will increase the gas injection UGS capacity, allow gas compression withdrawal as well as increase the overall wells' productivity.		
8.3	Cluster infrastructure including the following PCIs [currently known as "Baltic Pipe"]: 8.3.1 Reinforcement of Nybro — Poland/Denmark Interconnection	8.3.1 Egtved (DK) - Everdrup (DK)	8.3.1 GAZ-SYSTEM S.A. (PL) Energinet (DK)	8.3.1 PCI 8.3.1 "Reinforcement of Nybro - Poland/Denmark Interconnection" is part of the PCI cluster 8.3 (PCI 8.3.1 and 8.3.2) related to Baltic Pipe. PCI 8.3.1 relates to a number of infrastructure elements, which are part of Baltic Pipe, reinforcement of the Danish Transmission System for transporting approx. 10 bcm/year from Egtved to the Baltic Pipe entry/exit point in DK. The project includes: 200 km (estimated length) new onshore pipeline (DN 900-DN 1000) 4 km offshore crossing (estimated length) of Lillebælt (DN 900) and one compressor station in DK, i.e. Zealand CS (approx. 36 MW).	8.3.1 Under construction	8.3.1 31/12/2022
	8.3.2 Poland–Denmark interconnection	8.3.2 Everdrup (DK); Goleniów (PL); Odolanów (PL); Lwówek (PL)	8.3.2 GAZ-SYSTEM S.A. (PL) Energinet (DK)	8.3.2 8.3.2 "Poland–Denmark interconnection [currently known as "Baltic Pipe"]" is part of the PCI cluster 8.3 (PCI 8.3.1 and 8.3.2) related to Baltic Pipe. The PCI 8.3.2 relates to a number of key infrastructure elements, which are part of the Baltic Pipe project, namely: a new, bi-directional offshore gas pipeline connecting PL and DK through the Baltic Sea (estimated capacity of approx. 10 bcm/y;	8.3.2 Permitting	8.3.2 30/09/2022

				estimated length of approx. 260 -310 km), the receiving terminal (PL), the onshore pipelines connecting the offshore pipeline with the national grids in PL and DK, the DN 1000 Goleniow –Lwowek pipeline (PL) of approx 188 km, and three compressor stations in PL i.e. Goleniow CS , Odolanow CS and Gustorzyn CS. Baltic Pipe will make possible the import of up to 10 bcm/y of gas from Norway to Poland through Denmark and the transmission of 3 bcm/y of gas from Poland to Denmark.		

10. Priority Thematic Area Smart grids deployment ('Smart grids')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
10.4	10.4 ACON (Czechia, Slovakia) - The main goal of ACON (Again COnnected Networks) is to foster the integration of the Czech and the Slovak electricity markets	10.4 CZ and SK	10.4 Západoslovenská distribučná, a.s. (SK) EG.D a.s. (CZ)	10.4 The ACON project consists of several works towards modernization and efficiency improvement of the distribution grid, such as: Border areas and cross-border connections improvement with focus on improvement of existing distribution grid in the border areas of the Czech Republic and Slovakia, which will include operation change of interconnection 2x110 kV line at the High Voltage level, together with reconstruction and automation of Medium Voltage and Low Voltage feeders and construction of new 22 kV lines connecting Holíč (SK) and Hodonín (CZ) substations. Taking such steps will create technical backup to enable cross-border cooperation in case of emerged accidents or any other safety threatening operational situations. All these activities shall be concluded merely at DSO level. Construction and improvement of existing distribution grid backbone leading to increased reliability of electricity supply and more flexible connection of additional points of delivery. Deployment of technology improving the reliability of electricity supply, increasing added value of applied equipment. Applying advanced communication and diagnostic methods with the aim to increase the convenience of customers receiving energy services. Deployment of distribution grid communication (smart) elements including implementation of communication (smart) elements to existing distribution grid which will enable more efficient management of distribution system through remote access, data transmission regarding failures, information on system load and remote switching (deployment of optical cables on selected existing overhead lines and implementation of GPRS (LTE) and BPL communication technology).	10.4 Under construction	10.4 12/2024

				Implementation and integration of smart grids IT solutions supporting smart grids, which will allow DSOs to gather larger volumes of data as a major enabler for more accurate data analysis and more addressed decisions towards the requirements of distribution grid during the whole lifecycle of distribution assets (direct impact on distribution system management, process management, optimization of distribution system operation or distribution grid maintenance and renewal planning).		
10.7	10.7 Danube InGrid (Hungary, Slovakia) – the project enhances cross-border coordination of electricity network management, with focus on smartening data collection and exchange	10.7 Hungary (HU), Slovakia (SK)	10.7 Západoslovenská distribučná, a.s. (SK) Slovenska electrizacna prenosova sustava a.s. (SEPS) (SK) E.ON Észak-dunántúli Áramhálózati Zrt. (HU)	10.7 The project enhances cross-border coordination of electricity network management, with focus on smartening data collection and exchange. It contains smart grids applications related to security of supply, smartening of substations (sensors, information devices, applications), data exchange, data flow and smart metering. The cooperation at DSO level will primarily be based on data exchange and know-how sharing. The physical connection is at TSO level. A new smart 400/110 kV substation will be built in Slovakia which will improve the robustness and stability of the power grid in the area. Within the project, around 150 existing transformer stations at DSO level will be modernised, optical fibre network for MV grid management will be constructed, and a new 110/22 kV substation in Samorin (SK) will be built, as well as installation of smart metering devices.	10.7 Under construction	10.7 12/2025
10.10	10.10 CARMEN (HU, RO) improves distribution network operation efficiency and service quality and enables secure electricity flows from new renewable generation	10.10 RO and HU	10.10 Delgaz Grid S.A. (RO) Transelectrica (RO) MAVIR (HU)	10.10 The main objective of CARMEN (Carpathian Modernization of Energy Network) is to modernize the existing infrastructure to a Smart Grid, adapting to the current needs of the grid. The Project involves: “Smartification” of 193 km of HV Overhead Lines (HV-OHL) through modernization of the HV-OHL conductors with high-capacity wires and modernization of the HV isolators using silicone composite. “Smartification” of approx. 40 HV/MV and 99 MV/LV transformer stations in 6 counties in the North-East Region of Romania. Installation of 65 Longitudinal Differential Protection (LDP) in HV/MV	10.10 Planned but not yet in permitting	10.10 31/12/2028

				transformer stations of Delgaz and Transelectrica critical for transmission and distribution grid stability. Interconnection of HV/MV electrical stations by installing 387 km of optical fibre cable on 20 sections of HV-OHL for their integration in the Energy and distribution management systems and the Supervisory control and data acquisition system. Interconnection of MV/LV substations through Power line communication (PLC) and GPRS system. Development of IT smart grids backbone with deployment of SCADA and smart metering (SMR). Integration of the modernized transformer stations into the EMS/DMS SCADA.		
10.11	10.11 Gabreta (CZ, DE) enhances system optimisation by retrieving and exchanging information in real time, improving metering and monitoring of the grid and more flexibility and hosting capacity for renewable generation	10.11 DE and CZ	10.11 EG.D, a.s. (CZ) Bayernwerk Netz GmbH (DE)	10.11 GABRETA Smart Grids aims to accelerate the digitization of the distribution grid by fostering the cross-border cooperation between Germany (Bavaria) and the Czech Republic in the location of borderland Bohemian forest. The project involves: - Construction of a new MV cross-border interconnection, new smart substations as well as renewal of primary and secondary existing substations. Energy storage systems, transformer stations and HV and MV internal lines will be also constructed and modernized and a monitoring system implemented. - Improvement of the grid communication by installing smart elements such as power line communication, automatic meter reading, remote-control devices and development of an optical fibre network. Wavelength-Division Multiplexing, implementation of GPRS (LTE), BPL communication technology or 5G networks will be also implemented. - Development of the Smart grid IT system by implementing a data hub and data sharing platform, data storage system for advanced	10.11 Planned but not yet in permitting	10.11 31/12/2030

				metering management for storage purposes. Overhead line monitoring and grid control systems and intelligent algorithms for grid steering automation (OT Analytics and SAM) will be also developed.		
10.12	10.12 Green Switch (AT, HR, SI) optimises the utilisation of existing infrastructure and efficiently integrates new technologies to increase hosting capacity, efficient integration of new loads and improve quality and security of supply	10.12 SI, HR, AT	10.12 ELES, d.o.o. (SI) Elektro Ljubljana d.d. (SI) GEN-I, trgovanje in prodaja električne energije, d.o.o. (SI) ELEKTRO GORENJSKA, podjetje za distribucijo električne energije, d.d. (SI) Elektro Celje, podjetje za distribucijo električne energije, d.d. (SI) Hrvatski operator prijenosnog sustava d.o.o. (HR) HEP Operator distribucijskog sustava d.o.o. (HEP-ODS) (HR) Hrvatska elektroprivreda d.d. (HEP d.d.) (HR) KNG-Kärnten Netz GmbH (AT)	10.12 GREENSWITCH aims to optimize the use of the existing grid infrastructure and allow the integration of new technologies and advanced functionalities in the transmission and distribution networks in SI, HR and AT. The project involves: Implementation of new technologies in the HV cross-border and internal infrastructure of SI and HR, to optimize the network operability, such as high temperature line control technologies and the extension of the existing dynamic thermal rate system. Modernization/construction of hundreds of fully automated primary and secondary substations and their correspondent secondary equipment, as well as the installation of reclosers and MV loops in the distribution grid of SI, HR and AT. The construction of a cross-border connection between AU and SI at the distribution level is also foreseen, as well as two battery storage facilities in SI and HR. Improvement of the ICT system architecture and HV/MV infrastructure, aiming to develop power control and advance distribution management systems, integrate new functionalities for voltage control, standardize the communication with the distribution control centres and support local flexibility. Development of cross-sector integration of mobility and heating system in SI, such as Heavy duty hyper charging stations and heat recuperation for district heating.	10.12 Planned but not yet in permitting	10.12

12. Priority Cross-border carbon dioxide network ('Carbon Dioxide')

No	Definition in Delegated Act	Details on location	Promoter(s)	Type / technology employed	Implementation status	Date of commissioning
12.3	12.3 CO2 TransPorts: infrastructure forlarge-scale capture, transport and storage of CO2 from Rotterdam, Antwerp and North Sea Port	12.3 Rotterdam (NL), Antwerp (BE) North Sea Port (BE/NL)	12.3 Havenbedrijf Rotterdam N.V (NL) North Sea Port (BE/NL) Havenbedrijf Antwerpen NV van publiek recht (BE)	12.3 CO2TransPorts is comprised of multiple pipelines proposed to be developed in three distinct project phases. Part 1 – Rotterdam: The onshore transport pipeline has a diameter of 1080 mm (42 inch) up to the compressor and a maximum length of 33 kilometres. The pipeline will operate under an operating pressure between 15 and 40 bar. This is the operational pressure in the system up to the compressor, ensuring the CO2 is in gaseous state. Depending on the operational pressure, the capacity of the pipeline is between 4-10 Mt per year. The 20 MW compressor station will operate at a suction pressure of about 30 bar (at maximum). The supplied CO2 is then exclusively in gas phase. The compressor station brings the CO2 for the offshore transport pipeline to pressures of approximately 85 bar (and a maximum of 120 bar). The offshore transport pipeline has a length of approximately 25 km and a diameter of up to 600 mm. The operational pressure in the offshore transport pipeline will be at a maximum of 120 bar. The pipeline consists of a carbon steel pipe and is insulated to minimize the heat loss. Parts 2-3: Antwerp/Ghent The construction of local backbones in the Antwerp and Ghent Clusters to transport CO2 to the storage sites is being investigated.	12.3 Part 1: in permitting Parts 2-3: planned but not yet in permitting	12.3 Part 1: 2024 Parts 2-3: 2026
12.4	12.4 Northern lights project – a commercial CO2 cross-border transport connection project between several European capture initiatives (United Kingdom, Ireland, Belgium, the Netherlands, France, Sweden) and transport the captured CO2 by ship to a storage site on the Norwegian continental shelf	12.4 Øygarden (NO) Brevik (NO) Klementsrud (NO) Lysekil (SE) Gothenburg (SE) Stockholm (SE) Porvoo (FI) Le Havre (FR) Dunkirk (FR) Antwerp (BE) Ghent (BE)	12.4 Northern Lights JV DA (NO) AirLiquide Industries Belgium (BE) AirLiquide Industries France (FR) ArcelorMittal Belgium (BE) ArcelorMittal	12.4 Commercial CO2 transport connection project between several European capture initiatives and the storage site on the Norwegian Continental Shelf, as well as providing alternative storage to other CCS projects. This PCI is located across Europe with promoters in Norway and several Member States (France, Belgium, Netherlands, Germany, Sweden, and Finland). The N-LiTES storage site is located offshore Norway, and the CO2 receiving terminal	12.4 Phase 1: Under construction Phase 2: planned but not yet in permitting	12.4 Phase 1: 01/07/2024 Phase 2: 2026

		Rotterdam (NL) Eemshaven (NL) Bremen (DE) Hamburg (DE)	GmbH Hamburg (DE) ArcelorMittal GmbH Bremen (DE) ArcelorMittal France (FR) Equinor ASA (NO) Esso Raffinage SAS (FR) Fluxys Belgium SA/NV (BE) Havenbedrijf Antwerpen (Antwerp Port Authority) (BE) Neste Oyi (FI) Norcem AS (NO) Preem AB (SE) Shell Global Solutions International B.V. (NL) Stockholm Exergi AB (SE) Total S.E. (FR/BE) YARA France SAS (FR)	is at the Energy Park located in the Øygarden municipality, west of Bergen, Norway. The pipeline from the CO2 receiving terminal to the storage site is about 100 km long. The design of the pipeline includes tie-in options to allow for connection to future wells or pipelines. The shipping routes for CO2 from port-based facilities to the CO2 receiving terminal need to be defined. The final shipping logistics will be determined on a per-emitter or emitting cluster basis dependent on buffer storage capacity, capture rate, geographic location and overall shipping optimisation. The project is developed in two stages: • Phase 1: Capacity to transport, inject and store up to 1.5 Mtpa CO2, where ca. 800 ktpa reserved for the two capture projects in the Longship. Construction of both on- and offshore facilities commenced in 2021, and Phase 1 is planned to be operational in 2024. • Phase 2: This phase will allow for expansion of the CO2 receiving terminal to up to 5 Mtpa in line with the market development. Part of the Phase 1 infrastructure has already been designed at a 5 Mtpa capacity, this includes the offshore pipeline, and the umbilical to the offshore template.		
12.5	12.5 Athos project proposes an infrastructure to transport CO2 from industrial areas in the Netherlands and is open to receiving additional CO2 from others, such as Ireland and Germany Developing an open-access cross-border interoperable high-volume transportation structure is the idea.	12.5 Amsterdam, Ijmuiden (NL) and Ireland (IE)	12.5 N.V. Nederlandse Gasunie (NL)	12.5 Development of a large-scale, open-access cross border interoperable high-volume CO2 transportation infrastructure from mainland Europe and Ireland to CO2 storage locations in the Dutch section of the North-Sea to enable emission reduction for industrial CO2 emitters in the NZKG (and potentially from the Irish capture plants (located at the Aghada & Whitegate CCGTs and the Irving Oil refinery) and the Ruhr area of Germany. The project has the potential to transport 100 Mton CO2 cumulatively over the 20 year assessment period. The CCU component of the project means that the cumulative net reduction is even higher at 120 Mton CO2.	12.5 Under consideration	12.5 2030
12.7	12.7 Aramis – cross-border CO2 transport	12.7 Rotterdam (NL)	12.7 Aramis CCS	12.7 The Aramis project foresees to establish	12.7 In permitting	12.7 2027

	and storage project (intake from emitters in the hinterland of Rotterdam harbour area and storage to location on the Dutch continental shelf)		C.V.	connections with industrial clusters in Belgium (Antwerp and Ghent), Germany (Nordrhein Westfalen and Leuna), France (Dunkirk and Le Havre) considering the construction of liquefaction facilities and export terminals. The Aramis launching phase will focus on: • A new receiving shipping terminal (~3 Mtpa): liquid CO2 will be transported by coaster/barge from different industrial clusters located in the region to a new receiving terminal and temporary storage in an onshore hub located at the Maasvlakte near Rotterdam. • A compressor station (~2 Mtpa): Compressed (gas phase) CO2 volumes coming by onshore pipeline from Rotterdam and its hinterlands will be further compressed in a compressor station and combined with the above-mentioned liquid CO2 for transport through a new high-pressure, ambient temperature offshore trunkline to the receiving offshore platforms. • An offshore trunkline (150-200km): The Aramis Project envisages a new high-capacity trunkline (>20Mtpa) to transport the compressed and cryogenic CO2 from the receiving terminal and compressor station to the geological storage sites, located in the offshore K&L blocks. Further, an offshore tie-in to connect third-party infrastructure (Athos) from IJmuiden will be designed and developed. • An offshore interfield pipeline network: Once the CO2 reaches the central platforms in the K&L blocks it will be injected through wells that connect to the geological sinks located at 3-4km depth. The system can be expanded by distributing CO2 to other nearby facilities through a network of interfield pipelines (new and/or re-use of existing gas pipelines are being investigated) to cater to the expected increase in demand for geological storage.		
12.8	12.8 Dartagnan - CO2 export Multimodal HUB from Dunkirk and its hinterland (emitters from the industrial cluster in the area of Dunkirk, France with storage where available in the North Sea country territories)	12.8 Dunkirk (FR)	12.8 Air Liquide France Industrie (FR) ArcelorMittal France (FR) Grand Port Maritime de Dunkerque (FR) Chaux et Dolomies du Boulonnais (FR	12.8 Dunkirk CO2 multimodal Terminal – Enabling an interconnection road, railways, river boats, ship and pipeline -based European CO2 Transport and Storage Network to connect France to North Sea CCS hub and the Netherlands. Capacity planned from 3 Million Tons CO2 /y (phase 1 2025-2030) to 11.8 Million Tons CO2/y (2035-2050).	12.8 Under consideration	12.8 2028

			Verdalis France (FR)			
12.9	12.9 Poland – EU CCS Interconnector (emitters from the industrial cluster in the area around Gdansk, Poland with storage where available in the North Sea country territories)	12.9 Gdansk (PL)	12.9 Air Liquide Polska Sp. z o.o. (PL) Zarzad Morskiego Portu Gdansk S.A. (PL) Polski Koncern Naftowy ORLEN S.A. (PL) Lafarge Cement S.A. (PL) Sogestran Shipping (FR)	12.9 Open access multi-modal liquid CO2 (LCO2) import-export terminal in Port of Gdansk with related CO2 transport infrastructure from the facilities of emitters to European CO2 transport and storage network in the basin of North Sea with a use of transport via roads, railways, pipelines and ships. The project is scheduled to transport 2.7M Ton of CO2 per year between 2025-2030 period reaching 8.7M Ton of CO2 between 2030-2035 period. The CCS interconnector will consist primarily of the following infrastructures: a multi-modal Liquid CO2 Export Terminal in Gdansk, a CO2 collector backbone in the Port of Gdansk, to provide industries in the vicinity of the Port with effective access to the Terminal and a primary export infrastructures in the Gdansk hinterland to provide industries located in the hinterland of Poland to access the Terminal via railcars shuttle, trucks, inland waterways, or pipeline.	12.9 Under consideration	12.9 01/07/2026