

Draft Regional PCI lists - electricity and gas project & Draft thematic area - smart grids

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Electricity projects

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

NSOG electricity transmission projects

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Interconnection between La Martyre (FR) and Great Island or Knockraha (IE) [currently known as "Celtic Interconnector"]	
One or more hubs in the North Sea with interconnectors to bordering North Sea countries (DK, DE, NL) [currently known as "North Sea Wind Power Hub"]	
<i>Interconnection between Barnabos (FR) and Lovedean (UK) [currently known as "AQUIND"]</i>	<i>France expressed reservations on the 3 interconnection projects with the UK (Aquind, FAB, Gridlink), on the grounds that (1) it is premature to include these projects in view of the future rules for projects of mutual interest with third countries in the revised TEN-E; (2) the cost/benefit analysis does not take enough into account the consequences of Brexit (decoupling from internal market; uncertainties on future capacity allocation mechanism with UK); (3) the methodology used to assess the criterion of a 500MW cross border capacity increase is not sufficiently robust, thus causing uncertainty on whether it is fulfilled for these projects.</i>
<i>Interconnection between Manuel (FR) and the vicinity of Exeter (UK) [currently known as "FAB"]</i>	
<i>Interconnection between the vicinity of Warande (Gravelines, FR) and the vicinity of Kingsnorth (UK) [currently known as "Gridlink"]</i>	

NSOG electricity storage projects

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Green Hydrogen Hub Compressed Air Storage (DK)	
<i>Compressed Air Storage in Zuidwending – extension (NL)</i>	<i>NL expressed reservation on this CAES project for spatial planning reasons, potential conflicting uses (targeted salt caverns will be needed for other technologies e.g. H2 storage) and because it is not clear for now how this technology will be incorporated in the NL energy system.</i>

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

NSI West electricity transmission projects

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Interconnection between Fontefria (ES) and Vila Nova de Famalicão (PT) (by Ponte de Lima) and the associated internal lines in ES and PT	
Cluster of internal lines in Portugal including the following projects : <ul style="list-style-type: none"> - Internal line between Pedralva and Sobrado - Internal line between Vieira do Minho, and Feira, including an onshore substation in Ribeira de Pena 	
Interconnection between Navarra (ES) and Landes (FR) [currently known as "Pyrenean crossing 1"]	
Interconnection between Aragón region (ES) and Marsillon (FR) [currently known as "Pyrenean crossing 2"]	
Interconnection between Gatica (ES) and Cubnezais (FR) [currently known as "Biscay Gulf"]	
Interconnection between Lonny (FR) and Gramme (BE)	
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"]	
Internal line between Osterath and Philippsburg (DE) to increase capacity at Western borders [currently known as "Ultranet"]	
Internal line in Germany between Brunsbüttel/Wilster to Großgartach/Grafenrheinfeld to increase capacity at Northern and Southern borders [currently known as "Suedlink"]	
Internal line in Germany from Emden-East to Osterath to increase capacity from Northern Germany to the Rhineland.	
Internal lines in Germany between Heide/West to Polsum and from Wilhelmshaven to Uentrop to increase capacity from Northern Germany to the Ruhr-Area	
Interconnection between Sicily (IT) and Tunisia node (TU) [currently known as "ELMED"]	
Interconnection between mainland Italy - Corsica (FR) and Sardinia (IT) [currently known as "SACOI 3"]	

<i>Interconnection between Thusis/Sils (CH) and Verderio Inferiore (IT) [currently known as "Greenconnector"]</i>	<i>Italy expressed its support for the project and requested the reassessment of the project over summer time – promoter and ENTSO-E requested to deliver the updated information.</i>
<i>Interconnection between ES – FR – UK [currently known as "Britib"]</i>	<i>Spain, France expressed their reservation on the project on their territory. In case of France the same reasons were expressed as for the other FR-UK projects in the NSOG RG.</i>

NSI West electricity storage

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Pumped Hydroelectric Energy storage -CUA (ES)	Spain expressed its scrutiny reservation on the following 3 projects: CUA, Girones/Raimats and Mont-Negre/Zaragoza reasoning the very early stage of development of all these projects.
Pumped Hydroelectric Energy Storage Monte-Negre, Zaragoza (ES)	
Pumped Hydroelectric Energy Storage Girones & Raimats (ES)	
Pumped Hydroelectric Energy Storage Navaleo (ES)	
Purifying – Pumped Hydroelectric Energy Storage “Velilla del Río Carrión” (P-PHES VELILLA , ES)	
Silvermines Hydroelectric Power Station (IE)	
Pumped Hydroelectric Energy Storage Riedl (DE)	
Kaunertal Storage Project (AT)	
<i>MAREX Organic Power Energy Storage (IE)</i>	<i>IE expressed its reservation on this project on the following grounds: 1) remote location of the project which may significantly hinder its integration in the grid; 2) concerns on technologies used and 3) concerns on the promoter’s capability to develop such project.</i>

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

NSI East electricity transmission projects

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Internal line within Poland between Baczyzna and Plewiska [currently known as "GerPol Power Bridge I"]	
Internal line within Austria between Westtirol and Zell/Ziller	
Internal line within Austria between Lienz and Obersielach	
Internal line within Austria between St. Peter and Tauern	
Interconnector between Isar/Altheim/Ottenhofen (DE) - St.Peter (AT)	
Internal line within Czechia, between Prestice, Kocin and Mirovka [currently known as "CZ Southwest-east corridor"]	
Internal line within Czechia between Vernerov, Vitkov and Prestice [currently known as "CZ Northwest-South corridor"]	
Interconnector between Serbia and Romania [currently known as "Mid Continental East corridor"]	
Internal line in Germany between Wolmirstedt and Isar to increase internal North-South transmission capacity [currently known as "SuedOstLink"]	
Interconnector between Greece, Cyprus and Israel [currently known as "EuroAsia Interconnector"]	

NSI East electricity storage projects

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Hydro-pumped storage in Yadenitsa, Bulgaria –	
Hydro-pumped storage in Amfilochia, Greece	

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

BEMIP electricity transmission projects

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Internal line in Sweden between Ekhyddan and Nybro/Hemsjö	
Internal line in Poland between Stanisławów and Ostrołęka	
Interconnector between Finland and Sweden [currently known as "Third interconnection Finland – Sweden"] including internal line between Kemnmaa and Pyhänselkä (FI)	
Interconnection between Latvia and Sweden via Gotland [currently known as "LaSGo Link"]	
Integration and synchronisation of the Baltic States' electricity system with the European networks	

BEMIP electricity storage projects

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Hydro-pumped storage in Estonia	

Gas projects

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

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
Connection of Malta to the European Gas Network via a new subsea pipeline	
<i>Adaptation from low to high calorific gas in France and Belgium</i>	<i>France expressed its reservation on this project as no more in need of PCI status.</i>

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

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
<p>Cluster of infrastructure development and enhancement enabling the Balkan Gas Hub including the following projects:</p> <ul style="list-style-type: none"> - Interconnection Greece – Bulgaria [currently known as "IGB"] between Komotini (EL) – Stara Zagora (BG); compressor station at Kipi (EL) - Rehabilitation, modernization and expansion of the Bulgarian transmission system - Gas interconnection Bulgaria – Serbia [currently known as "IBS"] 	
<p>Cluster of projects to increase storage capacity in South-East Europe, including:</p> <ul style="list-style-type: none"> - Chiren underground gas storage expansion (Bulgaria) - South Kavala underground gas storage facility and metering and regulating station (Greece) - And one of the following projects in Romania: <ul style="list-style-type: none"> o Bilciuresti underground gas storage o Depomures underground gas storage 	
<p>BRUA pipeline corridor Phase 2 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; Black Sea shore; Podișor (RO) pipeline for taking over the Black sea gas; and the Romanian-Hungarian reverse flow: 2nd stage compressor station at Csanádpalota (HU)</p>	
<p>Development and enhancement of transmission capacity of Slovakia – Hungary interconnection</p>	
<p>Interconnection Croatia-Slovenia</p>	
<p>LNG terminal in Gdansk, Poland</p>	

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

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
LNG import terminal in Cyprus	
<p>Cluster of infrastructure projects to bring new gas from the East Mediterranean gas reserves including:</p> <ul style="list-style-type: none"> - Pipeline from the East Mediterranean gas reserves to Greece mainland via Cyprus and Crete [currently known as "EastMed Pipeline"], with metering and regulating station at Megalopoli, Greece - Offshore gas pipeline connecting Greece and Italy [currently known as "Poseidon Pipeline"] - 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] 	<p>Regarding the Poseidon pipeline, Italy and Greece asked for the following statement to be reflected in the meeting minutes of the upcoming high-level decision-making body: "for the transport of gas from Greece to Italy, the Member States concerned are considering the offshore section of the Poseidon pipeline as well as other existing alternative infrastructure not included in this PCI list."</p>

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

Project name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
<p>Cluster infrastructure upgrade in the Eastern Baltic Sea region including the following projects:</p> <ul style="list-style-type: none"> - Enhancement of Latvia – Lithuania interconnection - Enhancement of Inčukalns Underground Gas Storage (LV) 	
Poland–Denmark North Sea interconnection [currently known as "Baltic Pipe"]	

Priority Thematic Area

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

Project Name	Information on the MS reservation [expressed during the t-DMB 15 July meeting]
ACON (CZ, SK)	
CARMEN (HU, RO)	
Danube InGrid (HU, SK)	
Gabreta (CZ, DE)	
Green Switch (AT, HR, SI)	

Electricity and gas projects that failed to prove positive benefit - cost ratio

Electricity projects

Project name	Regional group	Comments
<i>Interconnection between Netherlands and the UK</i>	NSOG	<i>Cost-benefit ratio not sufficient. The Netherlands took note of the exclusion of the project from the list due to UK third country status, though wanted to bring forward that this could be a promising project in the context of the offshore strategy and noted that there are positive European SEW analyses about this project.</i>
<i>Interconnection between the Antwerp area (BE) and the vicinity of Kemsley (UK) [currently known as "Nautilus"]</i>	NSOG	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnection between Belgium and the UK [currently known as "Cronos"]</i>	NSOG	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnection between Germany and the UK [currently known as "Tarchon"]</i>	NSOG	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnection between Denmark and the UK [currently known as "Aminth"]</i>	NSOG	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnection between Germany and the UK [currently known as "NeuConnect"]</i>	NSOG	<i>Cost-benefit ratio not sufficient. Germany took note of the exclusion of the project from the list and expressed surprise with the assessment excluding Neuconnect given that it is on the fourth PCI list.</i>
<i>Offshore Hydro-pumped electricity storage facility in Belgium [currently known as "iLand"]</i>	NSOG	<i>Cost-benefit ratio not sufficient</i>
<i>Compressed Air Storage Zuidwending (NL)</i>	NSOG	<i>Cost-benefit ratio not sufficient. NL expressed reservation on this CAES project for spatial planning reasons, potential conflicting uses (targeted salt caverns will be needed for other technologies e.g. H2 storage) and because it is not clear for now how this technology will be incorporated in the NL energy system.</i>
<i>Interconnection between Aach (DE) and Bofferdange (LUX)</i>	NSI WEST	<i>Cost-benefit ratio not sufficient. Germany took note of the exclusion of the project from the list, but stressed that the assessment of the project suffers from the TYNDP data, not giving enough weight to</i>

		<i>this project's evident flexibility and system stability benefits. Luxembourg echoed Germany's comment.</i>
<i>Online Grid Controller "PSKW-Rio" Trier (DE)</i>	NSI WEST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnector between Italy-Slovenia</i>	NSI EAST	<i>Cost-benefit ratio not sufficient Italy took note of the exclusion of the project but expressed its disappointment.</i>
<i>Interconnector between Austria and Italy [currently known as "Wurmlach (AT) - Somplago (IT) interconnection"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnector between BG and EL [currently known as "CSE4"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnectors between Bulgaria and Romania [currently known as "Black Sea Corridor"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnector between Greece and Egypt [currently known as "Greece - Africa Power Interconnector -GAP Interconnector"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnector between Czechia and Slovakia [currently known as "4th 400kV CZ-SK interconnector"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnector between Greece and Egypt [currently known as "GREGY Interconnector"]</i>	NSI EAST	<i>Cost-benefit ratio not sufficient Greece expressed its support for the project and highlighted the political commitment between Greece and Egypt.</i>
<i>ELSEA – European Large Scale Energy Accumulation, Slovakia</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Ptolemaida Battery Energy Storage System, Greece</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>

Gas projects

Project name	Regional group	Comments + Information on the MS reservation [expressed during the t-DMB 15 July meeting]
<i>Sarmasel underground gas storage in Romania</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Interconnection Croatia-Slovenia-Austria</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>LNG terminal at Krk, Phase 2</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>2nd LNG terminal in Northern Greece (at Alexandroupolis)</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i> <i>Greece and Bulgaria expressed their support for the project due to its perceived regional benefits. Greece was critical of the fact that the Turkish route disruption scenario was not assessed in the TYNDP and that the assessment did not conclude on positive sustainability benefits of the project.</i>
<i>Slovenia-Hungary-Italy interconnection</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>North-South Gas Corridor in Eastern Poland</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Underground gas storage in Grubisno Polje, Croatia</i>	NSI EAST	<i>Cost-benefit ratio not sufficient</i>
<i>Azeri supply chain expansion projects, including the expansion of the South Caucasus Pipeline, TANAP and TAP</i>	SGC	<i>Cost-benefit ratio not sufficient</i> <i>Greece and Italy supported the TAP extension project due to expressed market interest and the possibility to transport H2 in the future.</i>
<i>Trans-Caspian Pipeline</i>	SGC	<i>Cost-benefit ratio not sufficient</i>
<i>Ionian Adriatic Pipeline (IAP)</i>	SGC	<i>Cost-benefit ratio not sufficient</i>