Recommendation on bundling gas transmission capacity at interconnection points in the Energy Community

Review of Methodologies for the Calculation and Offering of Bundled Capacities

February 2026

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INTRODUCTION

1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Energy Community Treaty. As an institution of the Energy Community[1], ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and makes recommendations in the case of cross-border disputes between regulators. ECRB is the independent regional voice of energy regulators in the Energy Community. ECRB's mission builds on three pillars: providing coordinated regulatory positions to energy policy debates, harmonizing regulatory rules across borders and sharing regulatory knowledge and experience. [2]

2. Background

The Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems, as adopted for the Energy Community by Permanent High Level Group Decision 2018/06PHLG-EnC ('CAM NC')[3] requires that transmission system operators (TSOs) operating the two sides of a cross-border interconnection point ('IP') cooperate and jointly offer bundled capacity products at IPs. CAM NC requires TSOs to maximize offering bundled capacity where possible. The bundled products shall be offered based on harmonized procedures, coordinated technical-capacity calculation methods and common auction calendars in order to ensure transparency and non-discrimination, strengthen regional market integration, and facilitate the efficient use of the existing gas transmission infrastructure.

While EnC CAM NC currently applicable in the Energy Community refers to the IPs defined by Annex I to Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks[4] as interconnection points between adjacent entry-exit systems, irrespective of whether they are physical or virtual, *between two or more Contracting Parties*, Regulation (EU) 2024/1789 on the internal markets for renewable gas, natural gas and hydrogen[5] ('Regulation 2024/1789') requires that the network codes and guidelines are applied to all interconnection points within the Union and *entry points from and exit points to third countries* from 5 August 2026. This means that the provisions of Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems, as applicable in the European Union ('CAM NC'[6]) requires joint offering of bundled capacity

[1] www.energy-community.org The Energy Community comprises the EU and Albania, Bosnia and Herzegovina, North Macedonia, Georgia, Kosovo*, Moldova, Montenegro, Serbia and Ukraine. Armenia, Türkiye and Norway are Observer Countries. Throughout this document the symbol * refers to the following statement: This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Advisory Opinion on the Kosovo declaration of independence.
[2] For more information on ECRB visit https://www.energy-community.org/aboutus/institutions/ECRB.html
[3] https://www.energy-community.org/dam/jcr:7b8650ec-0a84-4c8c-bf9d-22f57dd38b60/Regulation_2017_459_CAM.pdf
[4] https://www.energy-community.org/dam/jcr:abfe131d-089f-41d8-bdf8-b2e1e32788e6/EnC%20LF%205.0%20715_2009_ref2.pdf
[5] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401789
[6] In this report, the abbreviation 'CAM NC' applies for both the Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems, as applicable in the European Union, and the one applicable in the

products at IPs with the Contracting Parties as well. The national regulatory authorities of the EU ('EU NRAs') may submit a request to the Commission for a derogation from the application of the network codes and guidelines at entry points from and exit points to third countries until 5 February 2026. For the derogations submitted, ACER shall provide a reasoned opinion to the Commission within three months.

Against this background, this report investigates the status of implementation of the EnC CAM NC provisions related to capacity bundling at IPs with the neighboring Contracting Parties and the EU member States, from the side of the Contracting Parties. The report also aims to identify the main challenges for bundling capacities at IPs and recommend improvements needed for successful cross-border capacity allocation.

3. Scope and methodology

The present report covers the IPs of the following Contracting Parties: Moldova, North Macedonia, Serbia and Ukraine and refers to the IPs between adjacent entry-exit transmission systems of the Contracting Parties and EU Member States. Additionally, the IPs of two EU Member States- Croatia and Austria, are also included in the report.

Data and analysis displayed in this report are based on information provided by the regulatory authorities of the analyzed markets and refer to 2025.

This report was prepared by the ECRB Gas Working Group, within the Task Force Implementation of CAM Network Code led by Ms. Elena Indries (ANRE, Moldova). The active participation and input of the Energy Community Regulatory Authorities, E-Control (Austria) and HERA (Croatia) were vital to the successful completion of this work.

Contracting Parties, as most of the provisions on capacity bundling (Chapter IV) are the same. When the provisions differ, it will be explicitly stated in the report.

ANALYSIS

1. Legal background

According to Article 19 (1) of CAM NC, adjacent TSOs shall jointly offer bundled capacity products according to the following principles:

1. on both sides of an IP all firm capacity shall be offered as bundled capacity, in so far as there is available firm or incremental capacity on both sides of the IP;
2. TSOs shall offer capacity for the relevant standard capacity product on a booking platform in accordance with the applicable allocation procedure, as set out in CAM NC;
3. the bundled capacity to be offered by the TSOs concerned at an interconnection point shall be contracted through a single allocation procedure;
4. network users shall comply with applicable terms and conditions of the transport contract(s) of the TSOs concerned as from the time the transport capacity is contracted;
5. where there is more available firm capacity on one side of an IP than on the other side for any period considered, TSO with the most available firm capacity in accordance with the auction calendar.
6. any unbundled capacity allocated in accordance with paragraph 5 may be used and nominated as such. It may also be traded on the secondary market;
7. adjacent TSOs shall establish a joint nomination procedure for bundled capacity, providing network users with the means to nominate the flows of their bundled capacity via a single nomination;
8. capacity originally allocated as bundled capacity can only be resold as bundled capacity on the secondary market;
9. where two or more IPs connect the same two adjacent entry-exit systems, the adjacent TSOs concerned shall offer the available capacities at the interconnection points at one virtual IP. In case more than two TSOs are involved because more than one TSO markets capacity in one or both entry-exit systems, the virtual IP shall include all of these TSOs, to the extent possible.

Furthermore, the TSOs must ensure that also the associated procedural and operational requirements are fulfilled, including:

1. harmonized capacity product definitions and auction timelines;
2. coordinated technical capacity calculation methodologies;
3. use of common or interoperable booking platforms, and
4. provision of capacity conversion services to allow network users holding unbundled contracts to transition to the bundled regime.

Successful implementation of these obligations is therefore essential to ensuring the efficient functioning of regional gas flows, enhancing security of supply, and enabling the broader integration of Energy Community markets with the EU's internal gas market.

2. Status of implementation

EU Member States already aligned their gas infrastructure and market mechanisms with the EU's capacity allocation rules, including bundling capacities at interconnection points. Capacity is typically auctioned through joint platforms such as PRISMA or RBP. The implementation of bundled products significantly increased the integration of natural gas markets of the EU.

The Contracting Parties aligned their national legislation related to capacity allocation with the EU acquis and made significant progress in implementing the CAM NC. According to 2024 ECRB Gas Wholesale Market Monitoring Report[7] , in the Contracting Parties, capacity allocation rules were aligned with CAM NC in Ukraine, Moldova and Serbia. However, although the legal background is set, the capacity was not offered as bundled at IPs, as required by Article 19 of CAM NC. This is mainly due to the absence of the relevant reciprocal obligation on the IPs between EU Members States and the Contracting Parties.

Table 1Interconnection Points of the Contracting Parties

Contracting Party	IP / EU Country			IP / Non – EU Country		
Moldova	1. IP Ungheni	RBP	Romania	1. Oleksiivka 2. Grebenyky 3. Kaushany	RBP	1. Ukraine 2. Ukraine 3. Ukraine
Serbia	1. IP Kireevo/ Zaychar 2. IP Kiskundorzma 2	RBP	Bulgaria Hungary			
	1. IP Kiskundorzma 1 2. IP Kalotina	No capacity booking platform in use	Hungary Bulgaria	1. Zvornik	No capacity booking platform in use	Bosnia and Hercegovina
Ukraine	1. IP GCP Gaz - System 2. IP Budince 3. IP Uzhgorod /Velke Kapusany 4. VIP Bereg 5. IP Isaccea 1 /Orlovka	GSA RBP RBP RBP	Poland Slovakia Slovakia Hungary Romania	1. Oleksiivka, 2. Grebenyky, 3. Kaushany 4. VIP Moldova	RBP	1. Moldova 2. Moldova 3. Moldova 4. Moldova
North Macedonia	6. IP Kyustendil (BG) / Zhidilovo (MK)	No capacity booking	Bulgaria			

[7] https://www.energy-community.org/dam/jcr:1f85539b-c9ff-4f5c-8a56-aa01638a47bf/ECRB%20Gas%20Wholesale%20MMR.pdf

		platform in use				

The table above shows that all Contracting Parties allocate IP capacities either bilaterally or by using the Regional Booking Platform (RBP), except for the IP between Poland and Ukraine - GCP Gaz – System, where GSA capacity booking platform of the Polish TSO is used.

Mismatched capacities (more firm capacity available on one side of the IP than on the side of the adjacent TSO) were identified at the IPs between Serbia and Bulgaria.

Table 2 Mismatched capacities at Serbian IPs

IP name	Available firm capacity kWh/day	TSO	Country
Kireevo/Zaychar BG-RS - exit	407,436,000	Bulgatrasngaz	Bulgaria
Kireevo/Zaychar BG-RS - entry	366,731,712	Gastrans	Serbia
Kalotina/Dimitrovgrad BG-RS - exit	53,052,575	Bulgatrasngaz	Bulgaria
Kalotina/Dimitrovgrad BG-RS - entry	26,163,248	Transportgas	Serbia

3. Challenges

The table below shows the specific challenges in aligning with EU requirements for bundled capacity allocation identified by the TSOs of the Contracting Parties.

Table 3 Challenges for offering bundled capacity, as identified by the CP TSOs

Serbia:	In case of bundled capacities, the users from Serbia would need to have appropriate license on both sides of the border (in both Bulgaria and Hungary), to be able to book bundled capacity. This represents a restrictive measure for non-EU network users, putting users in unequal position.
Moldova	At the Ungheni IP (Romania), interested parties must meet the legal requirements in both Romania and Moldova in order to obtain system user status (e.g., holding a license, having access to the IT platform, where applicable, and having a balancing agreement in place). Booking entities must be registered under the same legal entity in both Romania and Moldova. In Moldova, a local LLC is required to obtain a license and in Romania, licenses are not granted to non-EU companies unless they establish a local company. These conditions limit the number of users eligible to participate in the booking of bundled capacity at the Ungheni IP. In the 2023–2024 gas year, out of the total capacity allocated at the Ungheni IP in the Romania–Moldova direction, only 14.75% of the capacity was allocated to users active on both sides of the IP. This low level of utilization indicates limited participation by users with the operational and legal capability to access both natural gas transmission systems simultaneously.

	Under these conditions, the implementation of bundled capacity at the Ungheni IP risks restricting access for system users, negatively affecting market opening and the level of competition in the transmission capacity allocation process. The offering of bundled capacity at interconnection points between Ukraine and the Republic of Moldova also envisages that market participants hold valid transmission contracts with both adjacent TSOs. Based on the analysis of data for the 2023–2024 gas year, favorable conditions (mostly capacity is reserved by the same pairs) were identified for offering bundled capacity at the interconnection points between the Republic of Moldova and Ukraine (Alexeevka, Căuşeni, and Grebeniki IPs), but given that the Ukrainian TSO offers available firm capacity in volumetric units and the tariff is set in EUR/1,000 m³, at present the capacities at the interconnection point (IP) cannot be bundled.
Ukraine	To participate in bundled capacity auctions, any shipper must have transmission contracts with two adjacent TSOs. For shippers that are residents of Ukraine concluding a transmission contract with an EU TSO to access its VTP is currently impossible in practice, because the access to the VTP typically requires obtaining a license, which cannot be issued to companies not registered in the EU MS. This situation does not enable transferring natural gas between a shipper-EU resident and a shipper-non-EU resident at the EU Member State VTP and at the IP between Ukraine and EU-Member State. Similar restrictions exist in Ukraine, where an EU-resident shipper can conclude a transmission contract with the Ukrainian TSO, but only for the purpose of gas transit through the interconnection points or to gas storage facilities ("transit" or storage under "customs warehouse" regime – CWS). Access to Ukraine's VTP requires clearance under the "import" regime, where payment of customs duties and charges, including VAT, is necessary. Therefore, if bundled capacity allocation is introduced at interconnections with EU MS, transfer of gas between seller and buyer cannot be realized at the interconnection point, and the gas taken at the entry IP may be nominated by a shipper-EU resident only to an exit point to storage/ IP under the "transit" or "customs warehouse" regime. Besides establishing a company in EU Member States for the purpose of importing gas into Ukraine when the importer books bundled capacity at the IP with EU Member States would increase import costs: shipper-non-resident for Ukraine cannot receive a 20% VAT refund and gas transfer between a shipper-EU resident and a shipper-resident of Ukraine within the gas storages of Ukraine requires additional payments for storage services. One of the possible solutions for implementing bundled capacity product can be the permission to sell purchased bundled capacity as unbundled capacity, which is not in line with paragraph 8 of article 19 of CAM NC.
North Macedonia	Long-term capacity agreement

TSOs of the Contracting Parties were asked when they plan to implement the provisions on bundled capacity products at IPs and the following answers were provided:

Table 4 CP TSOs' plans for offering bundled capacity products

Moldova	It is envisaged that the Transmission System Operator will initiate and conduct discussions with the relevant neighboring TSOs and will continue the implementation of bundled capacity products once the Ukrainian Transmission System Operator offers capacity expressed in energy units.

	Furthermore, at the interconnection points with the Romanian Transmission System Operator, bundled capacity could be offered; however, this would limit access for system users, given that they are required to hold transmission contracts with both TSOs, to be licensed, and to be duly registered in the respective countries.
Serbia	Transportgas has already held discussions with Gas Promet Pale regarding the provision of joint (bundled) capacity products, and implementation is expected for the next gas year. Furthermore, we anticipate initiating similar discussions with other neighboring TSOs in due course, with the objective of offering bundled capacity products at interconnection points in the near future, in line with regulatory developments and system readiness.
Ukraine	The full implementation requires that the NEURC approve tariffs expressed in energy units or approve a universal GCV to be applied for conversion purposes, considering that adjacent TSOs set their tariffs in energy units, conduct public consultations with market participants, reaching agreements with adjacent TSOs. Ukraine is ready to take all necessary measures to comply with the requirements of Regulation 459 on the introduction of bundled capacity by August 2026 with EU members (the timeframe corresponding to the deadline set by Article 70 of Regulation (EU) 2024/1789 for the implementation of network codes at interconnection points with third countries). But the practical implementation of the requirements of paragraph 8 of Article 19 of Regulation 459, which prohibits selling purchased bundled capacity as unbundled capacity, should be postponed until Ukraine becomes an EU Member State.

4. Methodologies for the calculation of bundled capacities

The calculation of bundled capacities is a critical element of the CAM NC. TSOs must apply harmonized methodologies for capacity calculation, ensuring consistency in capacity offerings.

The capacity conversion model allows for a non-discriminatory, free-of charge conversion service for annual, quarterly or monthly firm capacity products. Conversion is beneficial for those network users who hold unbundled capacity at one side of an IP. The network users can acquire bundled capacities in auctions, which means they would purchase both entry and exit capacity in a single capacity bundle. The conversion will prevent network users with unbundled capacity to pay entry or exit capacity charges twice.

Article 21(3) of CAM NC requires the following: Transmission system operators shall offer network users holding mismatched unbundled capacity at one side of an interconnection point a free-of-charge capacity conversion service. Such a capacity conversion service shall apply to annual, quarterly or monthly capacity products for bundled firm capacity at that interconnection point which the network user had to acquire because insufficient unbundled capacity on the other side of the interconnection point was offered by an adjacent transmission system operator. This service shall be offered on a non-discriminatory basis and shall prevent additional charges from being applied to network users for capacity they already hold. In particular, payments for the part of the contracted bundled capacity which network users already hold as mismatched unbundled capacity shall be limited to a possible auction premium. This service shall be based on the conversion model developed by ENTSOG.

Austrian model

In Austria, pursuant to Article 14(1)(4) of the Gas Act 2011, the market area manager is responsible for establishing a uniform calculation scheme for determining and reporting the capacities for the entry and exit points of the transmission network of the market area in accordance with Articles 34 and 35 of the Gas Act 2011. The calculation model requires the approval of the regulatory authority. Changes must be made at the request of the regulatory authority.

Pursuant to Article 34 Gas Act 2011, the market area manager, in cooperation with the TSOs and the distribution area manager, must determine a joint forecast for the capacity requirements and the load on the networks of the market area for the next ten years, based on different load flow scenarios for the capacity requirements and the load on the networks in the market area for the next ten years, whereby the forecast must be updated every two years and consulted with ENTSO (Gas) and the network access rights holders (TYNDP).

The approved model is quite detailed and the aim is to maximise the calculation of firm, freely allocable capacities and, as a subsequent priority, to maximise the calculation of firm capacities to cover capacity requirements and capacity rights in existing contracts. The model is intended to provide TSOs with capacity calculation using

- uniform calculation logic and premises,
- uniform consideration of the connection to adjacent transmission networks or the distribution area and
- a uniform process model for the entry/exit points of the transmission networks in the market area East.

It follows several principles:

1) Creation of the calculation model by the market area manager, calculation of capacities by the TSO.
2) Long-term marketable firm capacities.
3) Maximisation requirement.
4) Cooperation between all system roles.

The steps to be carried out within the calculation model are summarized below:

1) Parameterisation of the calculation model
2) Calculation of the theoretical freely allocable capacities per exit point
3) Transport segment analysis on the exit side
4) Calculation of the theoretical freely allocable capacities per feed-in point
5) Transport segment analysis on the feed-in side

Technical capacity is calculated once a year or in case of changes (investments). Available capacity is updated after each auction.

Croatian Model

Procedure of determining technical capacity of transmission system entries and transmission system exits

The technical capacity of Croatia's natural gas transmission system represents the maximum

firm capacity that the transmission system operator (Plinacro) can reliably offer to network users, in accordance with Regulation (EC) 715/2009. This capacity must uphold system integrity while meeting operational requirements. The methodology ensures alignment between system capabilities and market demand in Croatia and neighboring countries, especially given increased transit needs and new supply routes such as the LNG terminal on Krk.

Technical capacity determination is conducted at least annually—and more frequently when demand exceeds existing capacity—to ensure sufficient, secure, and reliable supply for domestic users and international transit flows. The procedure includes data collection, hydraulic modelling, scenario simulation, and interpretation of results.

Plinacro gathers and analyses key demand data from:

Distribution system exits: Peak daily consumption over the previous ten years and 10-year development plans from distribution system operators. The higher value ("higher figure rule") is used.
Directly connected end users: Annual ten-year projections of consumption and peak capacity needs, also compared using the higher figure rule.
Production field entries: Ten-year production forecasts from producers, adjusted for natural field decline and anticipated new entry points.
Interconnections: Capacity jointly defined with neighbouring transmission system operators under EU interoperability rules.

A detailed hydraulic model of the transmission network is built using SIMONE software. The model incorporates pipeline dimensions, roughness, elevations, valves, compressor stations, and new infrastructure expected to be operational within the planning horizon.

Scenario Development and Hydraulic Simulations

Characteristic "least favorable" scenarios are developed to test system limits, including:

1) Maximum-consumption winter scenarios, combining high domestic demand with transit needs.
2) Low-consumption scenarios, characterized by high inflows from imports, LNG, and storage, creating high flow velocities and pressure gradients.

Static simulations test whether the network can maintain required pressures and flows. Failure indicates insufficient capacity; success confirms feasibility.

The simulation results establish the technical capacities that can be safely offered to the market. These capacities must be achievable under all operating conditions. Once validated, they are entered into the SUKAP system and published for use in capacity booking and allocation procedures.

There are no mismatched capacities on the Croatia - Slovenia interconnection and Croatia - Hungary interconnection.
Technical capacity of interconnections is determined by bilateral cooperation with transmission system operators with which there is a joint interconnection, and it is determined in the joint

interconnection agreement, in accordance with the Commission Regulation (EU) 2015/703 dtd 30 April 2015 establishing a network code on interoperability and data exchange rules.

Methodology used to calculate technical / available capacity is described on Plinacro's web page[8].

Contracting Parties

Serbian TSO Gastrans applies Hydraulic calculation methodology for calculating available capacity at IPs. TSO Transportgas applies network simulation method and pressure margin method in SIMONE. The capacity is updated annually by Transportgas and has not been updated by Gastrans from the date of the start of commercial operation.

In Moldova and Ukraine, the technical capacity of interconnections is determined by bilateral cooperation with TSOs and it is determined in the joint interconnection agreement.

[8] https://www.plinacro.hr/default.aspx?id=609

CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions

1. Capacity bundling at IPs is required to be implemented in the EU Member states and in the Energy Community Contracting Parties. This requirement is not optional. CAM defines bundled capacity as the default product at all IPs.
2. Contracting Parties have committed to aligning their energy markets with EU rules, including those regarding gas infrastructure and capacity allocation. However, capacity bundling at interconnection points is not yet fully implemented.
3. The implementation of capacity bundling faces challenges, including those related to the regulatory framework, licensing, taxation:
    - The existing licensing and legal asymmetries restrict access to bundled capacity for non-EU shippers. In Serbia, Moldova, and Ukraine, market participants must hold licenses or establish legal entities on both sides of the border to book bundled capacity. These requirements disproportionately disadvantage non-EU shippers and create unequal competitive conditions.
    - Bundled products cannot be used efficiently due to VTP access limitations. Ukrainian shippers cannot obtain the necessary licenses to access EU VTPs, while EU shippers can only access Ukraine's system under limited regimes (transit or customs warehouse). This prevents meaningful use of bundled capacity at EU–Ukraine IPs.
    - Market entry barriers reduce participation and capacity utilization. Moldova's experience at the Ungheni IP is similar to that of Ukraine's, with Moldovan entities not able to access the EU VTP (Romania), while EU shippers similarly needing a local entity and license in Moldova in order to access the VTP of Moldova. Only for transit this requirement is not needed.
    - Although Moldova and Ukraine have favorable conditions at several IPs, the absence of harmonized procedures, aligned nomination processes, and joint action plans delays the rollout of bundled products.
    - Customs and tax regimes hinder cross-border gas trading. (Import duties, VAT obligations, and the requirement for full customs clearance to access Ukrainian VTP).

2. Recommendations

1. Bundled capacity should become the default rule in the Energy Community by 2026, mirroring the already existing EU model.
2. The Contracting Parties should accelerate the full implementation of CAM NC and other network codes at all IPs to facilitate seamless cross-border interoperability and regional gas market integration by:
    - adopting harmonized capacity calculation methodologies;

- using common booking platforms;
- strengthening TSO–TSO operational cooperation;
- Improving transparency and promoting cross-border collaboration.
- Harmonization of the national licensing rules, exploring mutual recognition of licenses between adjacent EU and Energy Community CPs.
- TSOs at IPs between CPS, particularly Moldova–Ukraine IPS (Alexeevka, Căuşeni, Grebeniki)—should finalize a joint action plan for offering bundled products.
- Contracting Parties shall review their customs, VAT, and transmission contract rules that currently prevent cross-border shippers from accessing VTPs without triggering full import customs clearance or VAT obligations.

3. By February 2026, TSOs of the Contracting Parties should proactively coordinate with adjacent EU Member States to ensure that the derogations under Article 70 of Regulation (EU) 2024/1789 are reduced to minimum and aligned and justified, if implemented. Where no derogation is requested, TSOs shall prepare to fully implement the applicable network codes and guidelines at all IPs with the EU until August 2026.

ANNEX

Table 5 Booking platforms of the EU IPs

No.	Adjacent EU MS	Adjacent TSOs	Interconnection points / VIPs	Booking Platform
1	PT – ES	REN Gasodutos (PT) – Enagás (ES)	VIP Ibérico (virtual IP integrating Badajoz–Campo Maior and Valença do Minho–Tuy).	PRISMA
2	ES – FR	Enagás (ES) – Teréga (FR)	VIP Pirineos (virtual IP combining Larrau and Irún/Biriatou	PRISMA
3	FR – BE	GRTgaz (FR) – Fluxys (BE)	VIP Virtualys (VIP between PEG and ZTP; replaces physical IPs like Taisnières / Alveringem).	PRISMA
4	FR – DE	GRTgaz (FR) – German TSOs in THE (Open Grid Europe, GASCADE, GRTgaz Deutschland)	Cluster of IPs such as Obergailbach, Medelsheim, marketed via a France–Germany VIP	PRISMA
5	BE – NL	Fluxys Belgium (BE) – Gasunie Transport Services – GTS (NL)	VIP BENE and VIP BENE-L (combining physical IPs Hilvarenbeek and Zandvliet-G).	PRISMA
6	BE – DE	Fluxys Belgium (BE) – German TSOs (Open Grid Europe, GASCADE, Thyssengas)	IPs Eynatten and Lichtenbusch, combined in a Belgium– Germany VIP	PRISMA
7	BE – LU	Fluxys Belgium (BE) – Creos Luxembourg (LU)	Physical IPs Bras / Pétange (now commercially integrated in the BeLux market zone	PRISMA
8	NL – DE	GTS (NL) – German TSOs (Gasunie Deutschland, GASCADE, Open Grid Europe, etc.)	VIPs connecting TTF–THE (e.g. Oude Statenzijl, Vlieghuis cluster)	PRISMA
9	DE – DK	Gasunie Deutschland (DE) – Energinet (DK)	Ellund (DE–DK IP);	PRISMA
10	DK – SE	Energinet (DK) – Nordion Energi / Swedegas (SE)	Dragør (DK–SE IP).	PRISMA
11	DE – PL	GASCADE, Ontras (DE) – GAZ-SYSTEM (PL)	Mallnow and Lasów.	PRISMA.
12	DE – CZ	German TSOs (GASCADE, OGE, Ontras) – Net4Gas(CZ)	IPs Brandov, Waidhaus, Hora Svaté Kateřiny (clustered in a DE–CZ VIP)	PRISMA
13	DE – AT	German TSOs in THE(bayernets, GRTgaz Deutschland, etc.) – GAS CONNECT Austria (AT)	IPs Oberkappel and Burghausen, grouped in a Germany–Austria VIP.	PRISMA
14	DE – LU	German TSOs (GASCADE / Creos Deutschland) – Creos Luxembourg (LU)	Remich IP, used for bundled NCG/ZTP capacity	
15	PL – CZ	GAZ-SYSTEM (PL) – Net4Gas (CZ)	Cieszyn IP	GSA

16	PL – SK	GAZ-SYSTEM (PL) – Eustream (SK)	PL–SK gas interconnector (Strachocina–Velké Kapušany region; commercial IP often named "PL–SK").	GSA
17	PL – LT	GAZ-SYSTEM (PL) – Amber Grid (LT)	Santaka (GIPL) IP.	PRISMA
18	LT – LV	Amber Grid (LT) – Conexus Baltic Grid (LV)	Kiemenai IP	GSA
19	CZ – SK	Net4Gas (CZ) – Eustream(SK)	Lanžhot interconnection	PRISMA
20	SK – AT	Eustream (SK) – GAS CONNECT Austria (AT)	IP Baumgarten / Marchegg entry/exit points at SK–AT border;	PRISMA
21	SK – HU	Eustream (SK) – FGSZ (HU)	IPs like Veľké Zlievce / Balassagyarmat within SK–HU VIP	(GSA / RBP).
22	AT – CZ	GAS CONNECT Austria (AT) – Net4Gas (CZ)	Reinthal (Reintal) AT–CZ IP (entry/exit between Austrian market area and Czech market).	PRISMA
23	AT – HU	GAS CONNECT Austria (AT) – FGSZ (HU)	Mosonmagyaróvár IP.	RBP
24	AT – SI	GAS CONNECT Austria / TAG (AT) – Plinovodi (SI)	Murfeld / Ceršak IP (Austria–Slovenia interconnector).	PRISMA
25	AT – IT	TAG / GAS CONNECT Austria (AT) – Snam Rete Gas (IT)	IP Tarvisio and IP Arnoldstein	PRISMA
26	SI – HR	Plinovodi (SI)– Plinacro (HR)	Rogatec IP	PRISMA
27	SI – IT	Plinovodi (SI) – Snam Rete Gas (IT)	Gorizia / Šempeter (SI–IT IP);	PRISMA
28	HR – HU	Plinacro (HR) – FGSZ (HU)	Drávaszerdahely IP – Plinacro	RBP
29	RO – HU	Transgaz (RO)– FGSZ (HU)	Csanádpalota IP	
30	RO – BG	Transgaz (RO) – Bulgartransgaz (BG)	Negru Vodă 1 / Kardam and Giurgiu / Ruse IPs	RBP
31	BG – GR	Bulgartransgaz (BG) – DESFA (GR) / ICGB (for IGB)	Kulata–Sidirokastro (legacy BG–GR IP) and Stara Zagora–Komotini (Komotini IP: TAP–IGB)	