entsog

european network
of transmission system operators
for gas

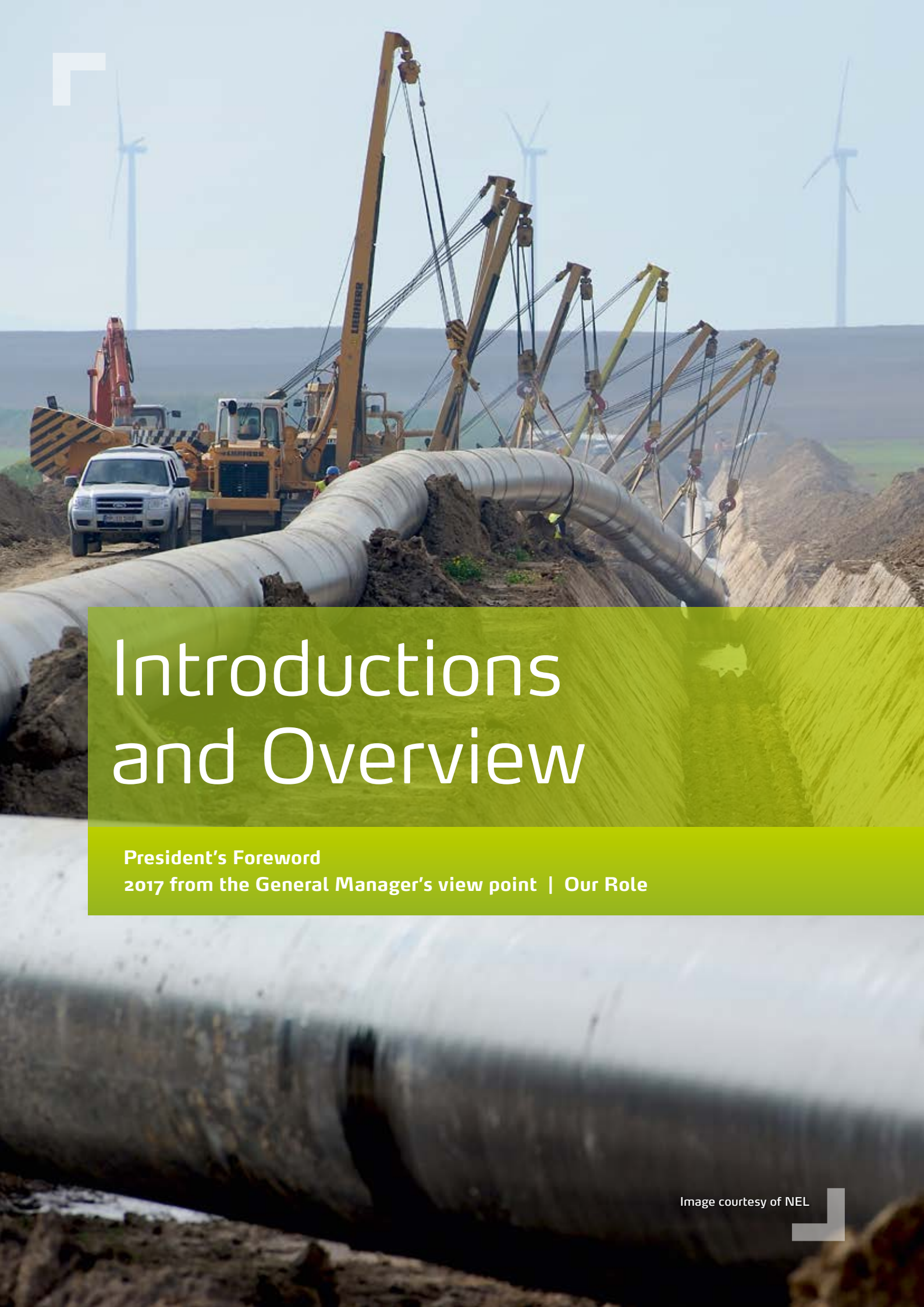
ANNUAL REPORT **2017**

Securing Europe's energy future

implementing the internal market for gas

ENTSOG – A FAIR PARTNER TO ALL!

Contents



Introductions and Overview

President's Foreword
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Image courtesy of NEL

President's Foreword

In April 2017 the Tariff Network Code came into force – a significant achievement for ENTSOG and at least for now the last Gas Network Code developed by ENTSOG and its Members.

This signalled a progression of the organisation's role of defining the rules for integrating the EU gas market, for monitoring the implementation and effects of the network codes and for active involvement in the further development of the codes, as required.

In 2017, the organisation took steady steps to participate in the design of the future role of gas and gas infrastructure. It is my belief that future gas market design should consider the proper integration of all elements of the energy system, including gas and electricity. In that respect, last year saw continued and enhanced cooperation between ENTSOG and ENTSO-E.

For the first time, the ENTSOs worked together to develop the draft Ten-Year Network Development Plan (TYNDP) 2018 Joint Scenario Report, which was issued for public consultation in October 2017. This occurred as a follow up on joint work undertaken in 2016 on a consistent and interlinked model building on combined expertise and modelling capabilities. These common set of ambitious, technically robust and equally realistic scenarios also relied on input received from dozens of stakeholders from the industry, NGOs, National Regulatory Authorities and Member States.

The ENTSOs cooperated on their Winter Outlooks, which allowed the ENTSO-E Winter Outlook to reflect the ability of the power system to cope with gas security-of-supply situations that may affect gas-based electricity production.

A robust European energy system should have sustainability, security and affordability as key considerations. The ENTSOG TYNDP 2017 outlined the high level of resilience of European gas infrastructure, well equipped to support Europe in achieving its energy and climate ambitions. Integration with the electricity, heat and transport will support the energy transition and contribute to the decarbonisation of the European energy system.

An integrated energy system is, I believe, a realistic goal, but one of the main challenges to achieve this is the barrier between EU ambitions, the range of technological capabilities from a national TSO perspective as well as the regulatory organisational framework for this, including the possibilities for the TSOs to play an active role. This is especially pertinent for the integration of more renewable or emission neutral gases, such as bio methane, hydrogen and the development of the necessary technological and commercial models, e. g. for power-to-gas.

At ENTSOG we are looking forward to our involvement in future discussions on sector integration and the important role of gas and gas infrastructure in the European energy mix – across the various sectors, the value chain, and country borders.

It is my belief that future gas market design should consider the proper integration of all elements of the energy system, including gas and electricity.

STEPHAN KAMPHUES
President, ENTSOG

2017 from the General Manager's view point

In 2017, the ENTSOG team and specialists from its members worked hard to publish the last network code foreseen for the time being – the Tariff Network Code. ENTSOG will continue to monitor the implementation of all network codes, and will going forward focus on network code amendments and functioning. Issues raised via the Functionality Process, for example, will allow us to consider potential changes and improvements. In the context of future change, ENTSOG's work must continue to include evaluation of the evolving role of gas infrastructure usage and gas market design within the overall European energy system.

The first edition of the Tariff NC Implementation Document (TAR IDoc) was published and ready for use before the NC came into force in April. This document, along with the second edition published in September, offers a set of examples and possible solutions for the implementation of the TAR NC throughout the EU.

Another significant task was completed by ENTSOG in April last year – the amendment of Network Code on Capacity Allocation Mechanism (CAM NC), which included new rules for incremental capacity. The report for first market demand assessment for incremental capacity, constituting the start of the incremental capacity process, was published by ENTSOG in July. The amended CAM NC also required ENTSOG to draft and publish a template for General Terms and Conditions of bundled capacity products of existing transport contracts for gas. Work on this continued throughout 2017.

Work on the assessment of implementation monitoring and effect monitoring commenced for TAR NC and continued for all other NCs last year.

It was also a busy year for ENTSOG in terms of investment planning, infrastructure assessment and scenario development for the EU energy system. Highlights from 2017 in this regard included the publication of the finalised Ten-Year Network Development Plan (TYNDP) 2017 and the publication of the draft 2nd Cost Benefit Analysis (CBA) methodology.

TYNDP 2017 confirmed that the current gas infrastructure is highly interconnected across most of Europe, and the necessary projects have been identified in those areas where there are persistent long-term investment needs.

Regional cooperation was highly evident between ENTSOG's members. The third editions of the Gas Regional Investment Plans (GRIPs), developed jointly with TYNDP 2017, coordinated activities between neighbouring TSOs and provided support for further infrastructure development wherever necessary. Essentially, the GRIPs serve as a link between TYNDP and national plans.

Security of supply, which was a prevalent theme in ENTSOG's and its members' work in 2017, also reflected the benefits of enhanced regional cooperation. There was further development of the Regional Coordination (ReCo) System for Gas to meet the requirements of the revised Security of Supply Regulation which was adopted and published in October 2017. Already in November 2017 ENTSOG published the first edition of the Union-wide Security of Supply Simulation report, including 17 different supply interruption scenarios for Europe, allowing Member-State to address identified risks. During the cold spell in Europe in February 2017, the ReCo Teams East and North-West met to plan and exchange information. In December 2017, the ReCo Team East held two virtual meetings due to the unfortunate incident at the Baumgarten hub in Austria, causing disruption of the gas flows from Slovakia to Austria, and from Austria to Hungary, Italy, Slovenia and Croatia.

Strong regional cooperation between the Member States, and beyond the EU, will continue to provide a resilient gas market now and into the future.

As we look to the future, and the Commission's plans to update the gas regulation, ENTSOG aims to proactively participate in the further development of the legal framework, to optimise gas infrastructure usage within a flexible European energy system. I believe that innovation, and research and development in the gas industry should be prioritised, and that through collaborative work, for example ENTSOG's continued cooperation with ENTSO-E regarding TYNDP and scenarios for testing resilience and adequacy of the energy infrastructure. In parallel ENTSOG started in 2017 working on developing gas visionary scenarios including potential future developments of green gases and new gas usage and meeting the EU energy and climate goals. We expect to be able to show the first results during 2018.

ENTSOG aims to proactively participate in the further development of the legal framework, to optimise gas infrastructure usage within a flexible European energy system. I believe that innovation should be prioritised.

JAN INGWERSEN
General Manager, ENTSOG

Our Role

ENTSOG (European Network of Transmission System Operators for Gas) works to facilitate and enhance cooperation between Europe's gas transmission system operators (TSOs) and to support the development of a European gas transmission system in line with European Union's energy goals.

ENTSOG's tasks are mainly defined in Regulation (EC) No 715/2009. This includes developing network codes for market and system operation, elaborating the Ten-Year Network Development Plan (TYNDP), providing regular information on gas supply and demand for the European market and delivering common operational tools to ensure network security and reliability.

ENTSOG operates the Transparency Platform, where TSOs provide technical and commercial data on the gas transmission systems and their interconnections. Having all TSOs' data available on one central platform and website facilitates transparent data sharing across Europe and allows for comparisons and quantitative analyses.

Having developed the gas network codes and initially concentrating on monitoring their implementation, ENTSOG will going forward have a stronger focus on the further development of the legislation, for example, using the Functionality Process to consider potential changes and improvements.

NETWORK CODES AND BEYOND

ENTSOG has developed network codes (NC) containing rules on how to further integrate the EU gas market as well as for system operation and development. These NCs deal with subjects ranging from capacity allocation to network interconnections. The NC development process begins when the European Commission (EC) submits a request for a Framework Guideline to the Agency for the Cooperation of Energy Regulators (ACER). Next, ENTSOG transforms the ACER Framework Guideline into a network code while conducting extensive public consultations.

Once approved through the European comitology procedure, a network code becomes legally binding for all Member States. Now that all NCs have been developed, ENTSOG will continue to provide support during all processes associated with the implementation activities.

The path to EU law and implementation

- **Guidelines on Congestion Management Procedures and on Transparency**
  Published as Annex I to Regulation (EU) No 715/2009. Most CMP-rules implemented by October 2013
- **CAM NC – Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems**
  ENTSOG's first NC – published on 14 October 2013 as Regulation (EU) No 984/2013, implemented by November 2015
- **CAM NC Amendment for Incremental capacity**
  Regulation (EU) 2017/459, the first amendment of the NC, entering into force on 6 April 2017. The first incremental capacity process commenced in April 2017.
- **BAL NC – Network Code on Gas Balancing of Transmission Networks**
  ENTSOG's second NC – published 26 March 2014 as Regulation (EU) No 312/2014, implemented by October 2016
- **INT NC – Network Code on Interoperability and Data Exchange Rules**
  Published on 30 April 2015 as Regulation (EU) No 703/2015, implemented by May 2016
- **TAR NC –Network Code on Harmonised Transmission Tariff Structures for Gas**
  ENTSOG's latest NC, published on 16 March 2017 as Regulation (EU) 2017/460. Full implementation expected by end of May 2019.

UNION/EUROPEAN-WIDE NETWORK DEVELOPMENT PLAN

The Ten-Year Network Development Plan (TYNDP) provides an overview of the European gas infrastructure and its future developments, and it maps the integrated gas network according to a range of development scenarios. The TYNDP also includes a European supply adequacy outlook and an assessment of the network resiliency. Gas Regional Investment Plans (GRIPs) led by TSOs with ENTSOG assistance complement the TYNDP by focusing on issues of particular regional importance.

OPERATIONAL TOOLS

Regulation (EC) 715/2009 also envisages the use of common network operation tools to ensure the transparency and coordination of network operations under normal and emergency conditions.

Following the requirement of Article 5 of Commission Regulation (EU) 2015/703 establishing a Network Code on Interoperability and Data Exchange Rules, ENTSOG developed an interconnection agreement template covering the default terms and conditions set out in Articles 6 to 10 of the Network Code.

PREPARING THE VISION FOR GAS INFRASTRUCTURE IN THE FUTURE

In 2017, there were a number of discussions on the potential future development of the EU energy industry and the role of gas within it. In terms of market design, ENTSOG contributed to the EC Quo Vadis study, to analyse if the current regulatory framework in the EU gas sector is efficient to maximise overall EU welfare or whether changes may be necessary, and if so, to provide recommendations. ENTSOG established the Gas Market Design Task Force, to consider the potential impact of any proposed changes in this respect. ENTSOG also engaged with CEER on their Future Role of Gas from a Regulatory Perspective study, which evaluates the potential future role of gas in a context of the COP21 decarbonisation targets.

ENTSOG also initiated developing a more visionary approach to European Scenarios, with the view in parallel to the TYNDP scenarios to go beyond the usual TYNDP frame, to encompass the full energy system and to look at longer term horizons.

Image courtesy of Infrastrutture Trasporto Gas

Membership and Structure

ENTSOG Members | Members Map | ENTSOG Deliverables 2017
ENTSOG Structure 2017 | Work Programme Status

Image courtesy of bayernets

ENTSOG Members

STATUS: END OF 2017

By the end of 2017 ENTSOG consisted of 45 members, two associated partners from 26 EU countries and five observers from non-EU countries.

MEMBERS (45)

Austria	– Gas Connect Austria GmbH – TAG GmbH
Belgium	– Fluxys Belgium S.A.
Bulgaria	– Bulgartransgaz EAD
Croatia	– Plinacro
Czech Republic	– NET4GAS, s.r.o.
Denmark	– Energinet
Finland	– Gasum Oy
France	– GRTgaz – TIGF SA (renamed Teréga in 2018)
Germany	– Bayernets GmbH – Fluxys TENP GmbH – GASCADE Gastransport GmbH – Gastransport Nord GmbH – Gasunie Deutschland Transport Services GmbH – GRTgaz Deutschland GmbH – Jordgas Transport GmbH – NEL Gastransport GmbH – Nowega GmbH – Ontras Gastransport GmbH – Open Grid Europe GmbH – terranets bw GmbH – Thyssengas GmbH
Greece	– DESFA S.A.
Hungary	– FGSZ Natural Gas Transmission
Ireland	– Gas Networks Ireland
Italy	– Infrastrutture Trasporto Gas S.p.A. – Snam Rete Gas S.p.A. (renamed Snam SpA in 2018) – Società Gasdotti Italia S.p.A.
Lithuania	– AB Amber Grid
Luxembourg	– Creos Luxembourg S.A.
Netherlands	– BBL Company V.O.F. – Gasunie Transport Services B.V.
Poland	– Gas Transmission Operator GAZ-SYSTEM S.A.
Portugal	– REN – Gasodutos, S.A.
Romania	– Transgaz S.A.
Slovak Republic	– Eustream, a.s.
Slovenia	– Plinovodi d.o.o.
Spain	– Enagás S.A. – Reganosa S.A.
Sweden	– Swedegas AB
United Kingdom	– GNI (UK) – Interconnector (UK) Limited – National Grid Gas plc – Premier Transmission Limited

ASSOCIATED PARTNERS (2)

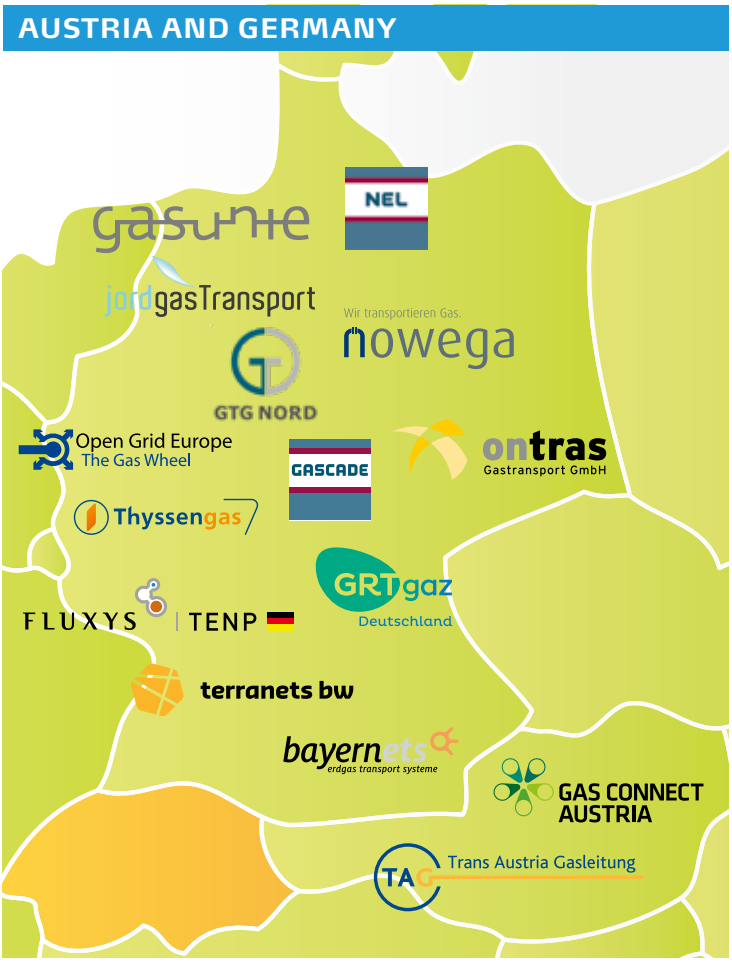
Estonia	– Elering Gaas AS
Latvia	– Conexus

OBSERVERS (5)

F.Y.R.O.M.	– GA-MA AD Skopje
Norway	– Gassco AS
Switzerland	– Swissgas AG
Ukraine	– PJSC UKRTRANSGAZ
Moldova	– Moldovatransgaz

Members Map

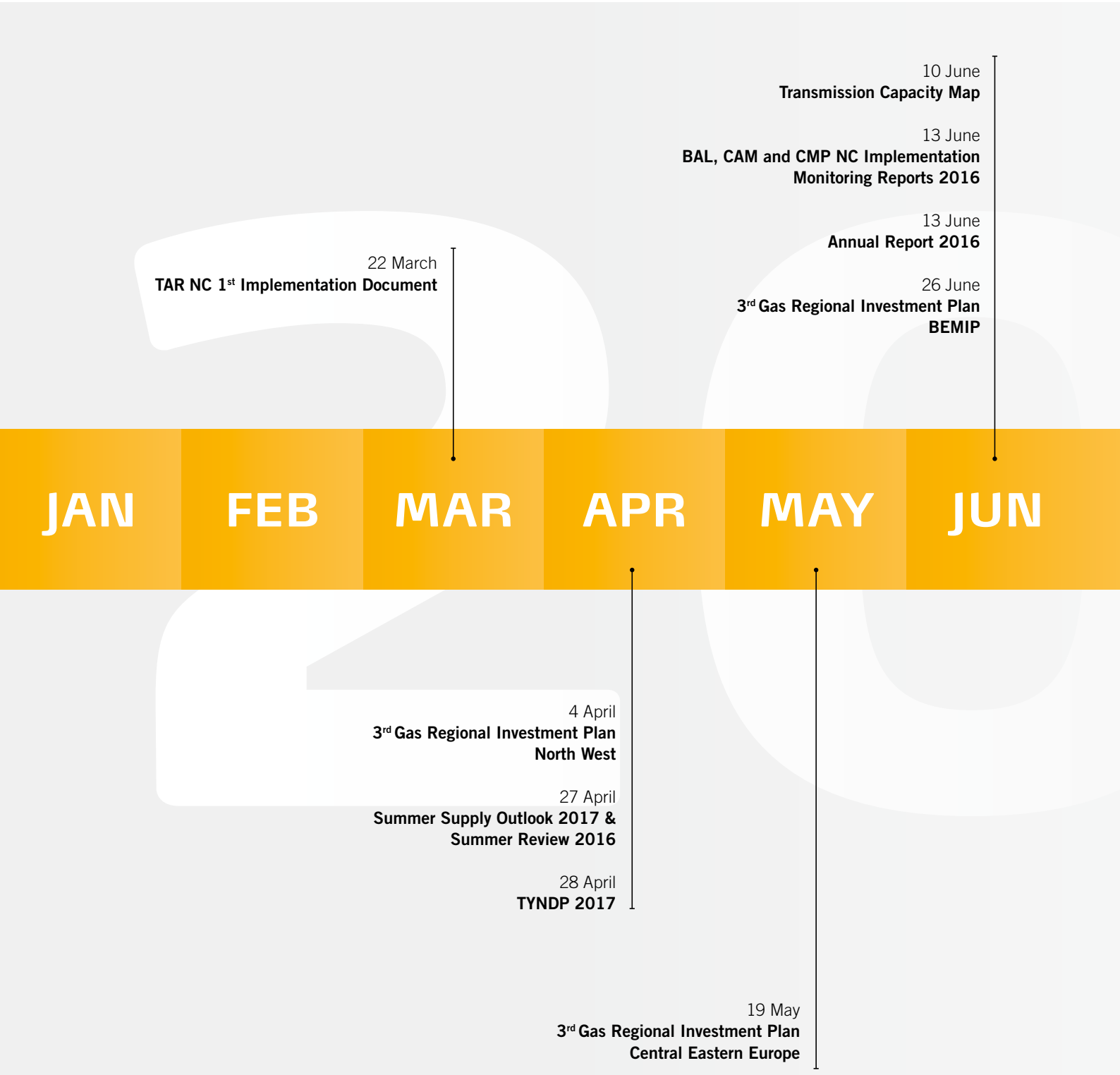
STATUS: END OF 2017



Since its foundation, ENTSOG member TSOs have provided wide coverage of the European gas market. In addition, according to ENTSOG's articles of association TSOs from EU countries currently derogated from the Third Energy Package, such as two of the Baltic States, are associated partners and are able to participate in its activities.

Since 2011, TSOs from Third Party countries (candidates for EU accession, members of the Energy Community or EFTA) interested in following development of the network codes were also admitted to the association as observers.

ENTSOG Deliverables 2017



13 November
System Development Map 2016/2017 pubished

21 November
Union-wide SoS simulation report

19 September
3rd Gas Regional Investment Plan Southern Corridor

28 September
TAR NC 2nd Implementation Document

JUL AUG SEP OCT NOV DEC

11 July
3rd Gas Regional Investment Plan South-North Corridor

18 July
Transmission Capacity Map 2017

24 July
Draft 2nd CBA methodology

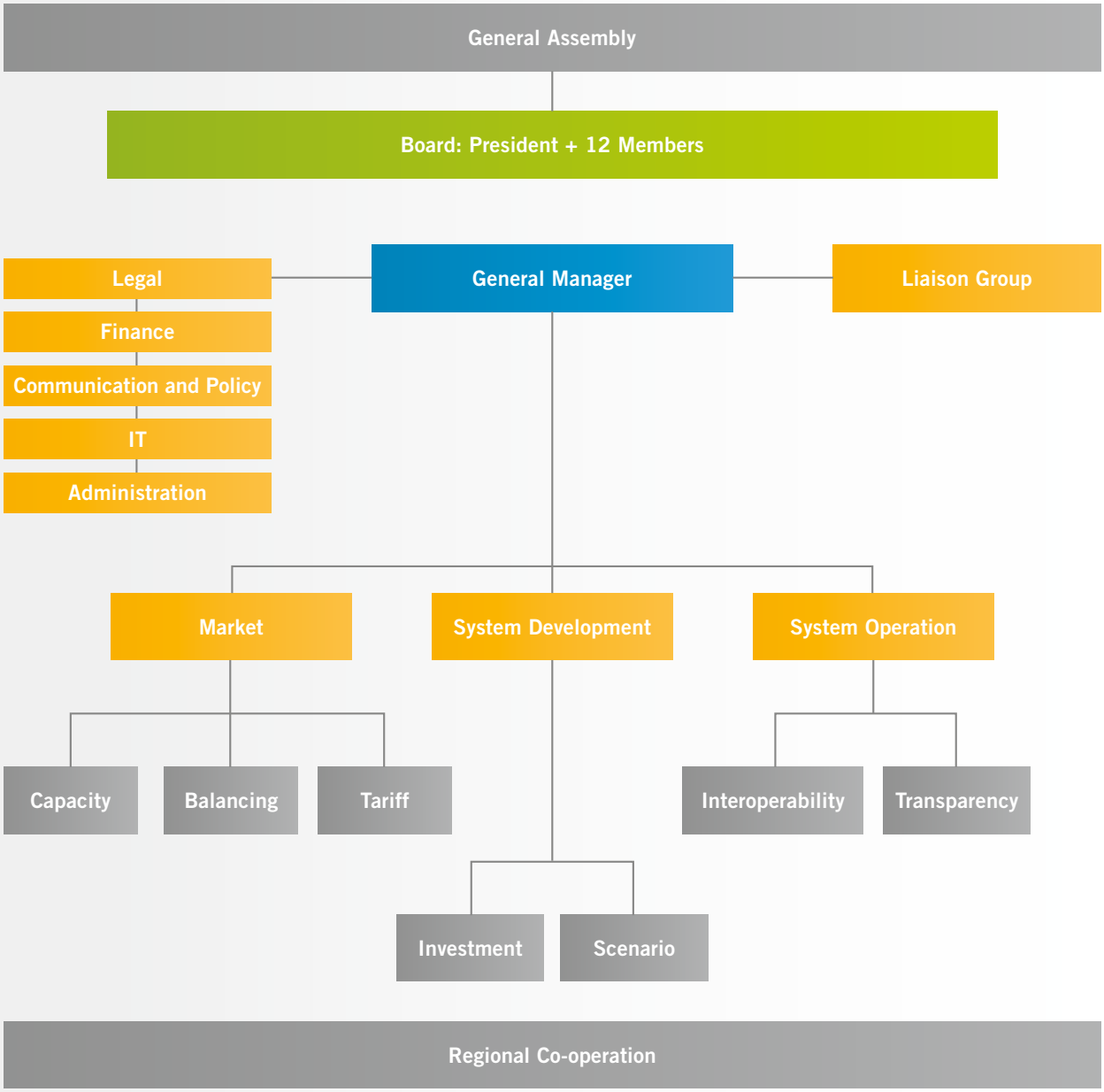
24 July
ENTSOG's Capacity Conversion Model

31 July
Incremental Demand Assessment Reports of TSOs

2 October
Draft TYNDP 2018 Joint Scenario Report with ENTSO-E

17 October
Winter Supply Outlook 2017/18 & Winter Review 2016/17

ENTSOG Structure 2017



Work Programme Status

These tables provide an overview of the activities in ENTSOG's three main business areas. The commented tasks originate from the Annual Work Programme 2017.

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
MARKET				
Balancing				
Support ENTSOG members with the implementation of the BAL NC	Successful implementation of the 2017 BAL NC provisions by ENTSOG members	Ongoing throughout 2017	TSOs	On-going
Development of ENTSOG BAL NC Monitoring	Publish the Monitoring for BAL NC	Publication on ENTSOG website 13 June 2017	TSOs and ACER	Completed
Support the Functionality process and any balancing related issues that might come up	Provide assistance to the successful establishment and operation of the Functionality processs	N/A	N/A	No issues were raised in 2017
Follow-up to ACER reports – implementation monitoring, and other BAL related topics	Participate in the discussion related to the BAL NC and represent ENTSOG's position	Official ENTSOG response to ACER second monitoring report published 16 November 2017	TSOs	To be completed in 2018
Developing ENTSOG positions on balancing relevant issues including responses to public consultations	Participate in the discussion related to the BAL NC and represent ENTSOG's position	– Two joint ACER/ENTSOG workshops in May and November – Participation in three working groups to assist in the implementation of the NC	N/A	Completed
Tariff				
Support ENTSOG members with the implementation of the TAR NC after entry into force	Successful implementation of the 2017 TAR NC provisions by ENTSOG members	Ongoing throughout 2017	TSOs	On-going
Draft the IDoc and prepare a second edition as needed	Complete first and second editions of IDoc to assist with the implementation of TAR NC	First edition 22 March 2017 Second edition 15 September 2017	TSOs, stakeholders, ACER	Completed
Organise two TAR NC implementation workshops	Organise two workshops to assist with the implementation of TAR NC	29 March 2017 5 October 2017	TSOs, stakeholders, ACER	Completed
Start the TAR NC implementation and baseline effect monitoring report	Prepare for and start drafting first TAR NC monitoring report	Process was started mid-2017 Publication 31 March 2018	TSOs, ACER	On-going
Support the Functionality process and any tariff related issues that might come up	Provide assistance in the successful establishment and operation of the Functionality process	On-going throughout 2017	TSOs, stakeholders, ACER	On-going
Develop ENTSOG positions on tariff related issues and respond to consultations and queries from stakeholders	Develop sound ENTSOG positions on tariff related issues that can be presented to stakeholders and the wider market	On-going throughout 2017	TSOs, stakeholders, ACER	On-going

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
MARKET				
Capacity				
Support ENTSOG members with the implementation of the CAM NC	Successful implementation of the 2017 CAM NC provisions by ENTSOG members	Ongoing throughout 2017	TSOs	On-going
Development of CAM NC auction calendar 2018	Publish the auction calendar for 2018	Publication on 24 January 2018	TSOs	Completed
Development of ENTSOG CAM NC Monitoring 2016	Publish the Monitoring for CAM NC	Publication on ENTSOG website 13th June 2017	TSOs	Completed
Alignment of GT & Cs	Developed a report identifying differences in categories of GT & Cs	Launched in November 2016 Publication on 6 January 2018	Stakeholders, TSOs, ACER	Completed
Development of Demand Assessment Report template for INC capacity	Provided TSOs with final DAR template	Launched in November 2016 Finalised in March 2017	TSOs, ACER, NRAs	Completed
Publication of demand assessment report	Consolidation of all the market demand assessment reports and its publication on ENTSOG web site	27 July 2017	TSOs	Completed
Development of ENTSOG capacity conversion Model	Publish ENTSOG Capacity conversion model	Launched in November 2016 Published in October 2017	Stakeholders, TSOs, ACER	Completed
CMP and CAM NC implementation and effect monitoring report for 2017 Annual Report	Launch the questionnaire for CMP and CAM report to TSOs	Launched in November 2017	TSOs	On-going
Support the Functionality process and any balancing related issues that might come up	Provide assistance to the successful establishment and operation of the Functionality process	N/A	N/A	No issues were raised in 2017
Supporting activities of Energy community secretariat with implementation of CAM NC and CMP in CP countries	Implementation of CAM NC and CMP in CP countries	Ongoing	Energy community secretariat, TSOs and NRAs	On-going

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM DEVELOPMENT				
TYNDP 2017	Assess the infrastructure against the European Energy Policies to identify infrastructure gaps and mitigation of these gaps by projects on the basis of the CBA Methodology in force	Final TYNDP publication on 28 April 2017	Stakeholders, ACER Public consultation from 20 December 2016 to 3 February 2017. TYNDP Presentation Day on 23 January 2017.	Completed. For the first time with TYNDP 2017, following the version published in December 2016, ENTSOG has released a final version taking into account the outcome of the public consultation and the opinion received from ACER.
Support to Regional Groups	Provide technical expertise during the third PCI selection process. Support promoters on CBA at project level by handling modelling and providing templates.	Contribution to the EC / ACER / ENTSOs Cooperation Platform for the 3rd PCI selection process (completed) Operationalisation of the PCI call using ENTSOG Project portal (completed) Support to promoters for the 3rd PCI selection process (completed)	N/A	Completed for 3rd PCI selection process
Support to TSOs for GRIPs	Support in modelling	3rd edition of GRIPs delivered in 2017		Completed
ENTSO-E / ENTSOG consistent and interlinked model	Submit the ENTSOs draft model in line with Art 11(8) of Regulation (EU) 347/2013 and adapt it further to ACER and EC opinions in view of submission for approval to EC	Submission to ACER and Commission for their opinion on 21 December 2016 The ENTSOs have for the first time developed jointly the scenarios for their TYNDPs 2018, in application of their draft model.	ACER, Commission	Draft version submitted for ACER and EC opinion on 21 December 2016. ACER opinion published on 3 April 2017, EC opinion pending. Completed The ENTSOs intend to adapt their consistent and interlinked model in view of application to TYNDP 2020, taking into account ACER and EC opinions and a study on electricity and gas interlinkages they will perform in 2018
TYNDP 2018 scenario development process	Joint scenario development process between both ENTSOs	Draft Scenario Report published for public consultation on 2 October 2017.	Stakeholders, NRAs, Member States, ACER, Commission	Final report published in March 2018
TYNDP 2018 Practical Implementation Document	Elaborate a "Practical Implementation Document" (PID) for developing the TYNDP 2018 and defining criteria for inclusion of projects in the TYNDP	Release the draft PID and consult it before end of the year	ACER, Commission, stakeholders	The PID was first released in November and consulted through a workshop to collect stakeholders feedback (23 November). The final PID was released in January 2018
2nd CBA Methodology	Develop an updated and improved CBA methodology in line with Art 11(6) of Regulation 347	Draft CBA Methodology released on 24 July 2017	Prime Movers, all other stakeholders. Stakeholders public consultation from 19 May to 16 June 2017.	Draft 2nd CBA methodology published on 24 July 2017 for ACER and EC opinions. ACER opinion published on the 24 October 2017. Adapted version of the methodology currently under development, pending EC opinion.
Summer Outlook 2017	Provide view on injection period ahead	Publication on 27 April 2017	ACER	Completed
Summer Review 2016	Analyse previous summer	Publication on 27 April 2017		Completed
Winter Outlook 2017/18	Provide view on supply-and-demand balance for winter ahead	Publication on 16 October 2017	ACER	Completed
Winter Review 2016/17	Analyse previous winter	Publication on 16 October 2017		Completed
Union-wide SoS simulation report 2017	Simulation of gas supply and infrastructure disruption scenarios to identify which Member States-State can address the identified risks.	Publication on 21 November 2017	EC, GCG, TSOs	Completed
Transmission Capacity Map 2017	Provide overview of annual capacity at IP level	Publication on 18 July 2017	N/A	Completed
System Development Map 2016/2017	Provide project map and graphic representation of supply-and-demand for past year	Publication on 13 November 2017	N/A	Completed

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM OPERATION				
Transparency				
Additional functionalities for Transparency Platform (TP)	Increased usability and user friendliness	Several new TP functionalities were implemented during 2017 with the aim of enhancing data usability and publication comprehensiveness	Gas TSOs, TP users and other stakeholders	In 2017, ENTSOG focused on the implementation of the Tariff Network Code. This was completed as planned. Additional projects included an updated UMM interface and an additional ACER RSS feed. This project will be completed during Q2 2018.
Follow-up on REMIT	Ensure ENTSOG and TSOs' compliance with REMIT requirements	N/A	N/A	Ensuring compliance is an ongoing activity
Follow-up on NC transparency obligations	Ensure timely implementation of new transparency requirements.	Ongoing effort	Gas TSOs, ENTSOG Working Groups, TP users and other stakeholders	In 2017, this activity was mainly focused on implementation of the transparency requirements from Articles 29, 30 and 31 in Reg (EC) 460/2017 (prev. referred to as NC Tariff). Besides an updated standardised table on the TP itself, this work also involved development of a new tool for publishing the data on the TP, and development of a standardised template to be used on TSOs/NRAs websites for a harmonised approach across all websites.
Public surveys and 11th public workshop on Transparency	Ensure transparent dialog with stakeholders	Survey results announced in 27 April and 20 November 2017 Workshop was held in cooperation with the Energy Community on 6 December 2017	Gas TSOs, TP users, ACER, EC and other stakeholders	Completed

Image courtesy of Enagás

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM OPERATION				
Interoperability and Data Exchange				
Facilitate regional cooperation	Further development of the ReCo System	Implementation of the ReCo Team South in March 2017. Communication exercises for all 3 ReCo Teams were carried out.	N/A	Communication exercises are carried out regularly
Facilitate regional cooperation	Contribution to the revision of SoS regulation	ENTSOG provided recommendations to the EC and the GCG for the re-composition of the risk groups, the definition of the scenarios for the first Union-wide simulations and how to insert the ReCo System for Gas into the revised SoS Regulation published in the Official Journal of the EU on 28th October 2017.	EC, GCG, member TSOs	ReCo System is included in the revised SoS regulation
Facilitate regional cooperation	Support the EC in the Ukrainian Monitoring Mission for gas flows and pressure	Daily monitoring of the gas flows and pressure development at the interconnection points between Russia and Ukraine and the gas transit via Ukraine. The EC together with ENTSOG organised a meeting with Gazprom representatives which took place on the 18th July 2018.	EC	Monitoring continues normally
	Support member and EnC TSOs in implementing NC	ENTSOG and TSOs from EU and third countries hold a workshop 9th November at the premises of the EnC Secretariat in Vienna	Energy Community	ENTSOG and EnC to hold a yearly workshop on INT topics
Gas Quality	Follow-up of on-going processes related to gas quality standardisation	Report on Wobbe Index and Gross Calorific Values in European Networks (September 2018)	CEN, JRC	ENTSOG continues cooperating with CEN in the assessment of different WI ranges
Data exchange	To review and update existing common network operation tools (CNOTs) to support the implementation of the Data Exchange rules developed in the Network Codes	ENTSOG data exchange communication profiles (October 2018)	ACER, EC	ENTSOG is analysing together with ACER potential solutions for the functionality issues around data exchange
Data exchange	To support and collaboration with CEF for the CEF Conformance testing platform in respect of the AS4 Module	Continuous activity	Connecting Europe Facility	AS4 module on the CEF testing platform yet to be made available
Data exchange	To cooperate with EASEE-gas in the development and release management of the Implementation Guidelines and other developments in the field of data exchange related to network codes	Continuous activity	EASEE-gas	ENTSOG to host an EASEE-gas workshop on Edigas in September 2018
LIO	Operate the Local Issuing Office for Energy Identification Coding scheme	Issuing and maintenance of codes for gas infrastructure operators	ENTSO-e as CIO	On-going service on ENTSOG's website

Work Space

Market Area | System Development Area
System Operation Area | General Area | Monitoring Reports
IT and Research & Development Activities

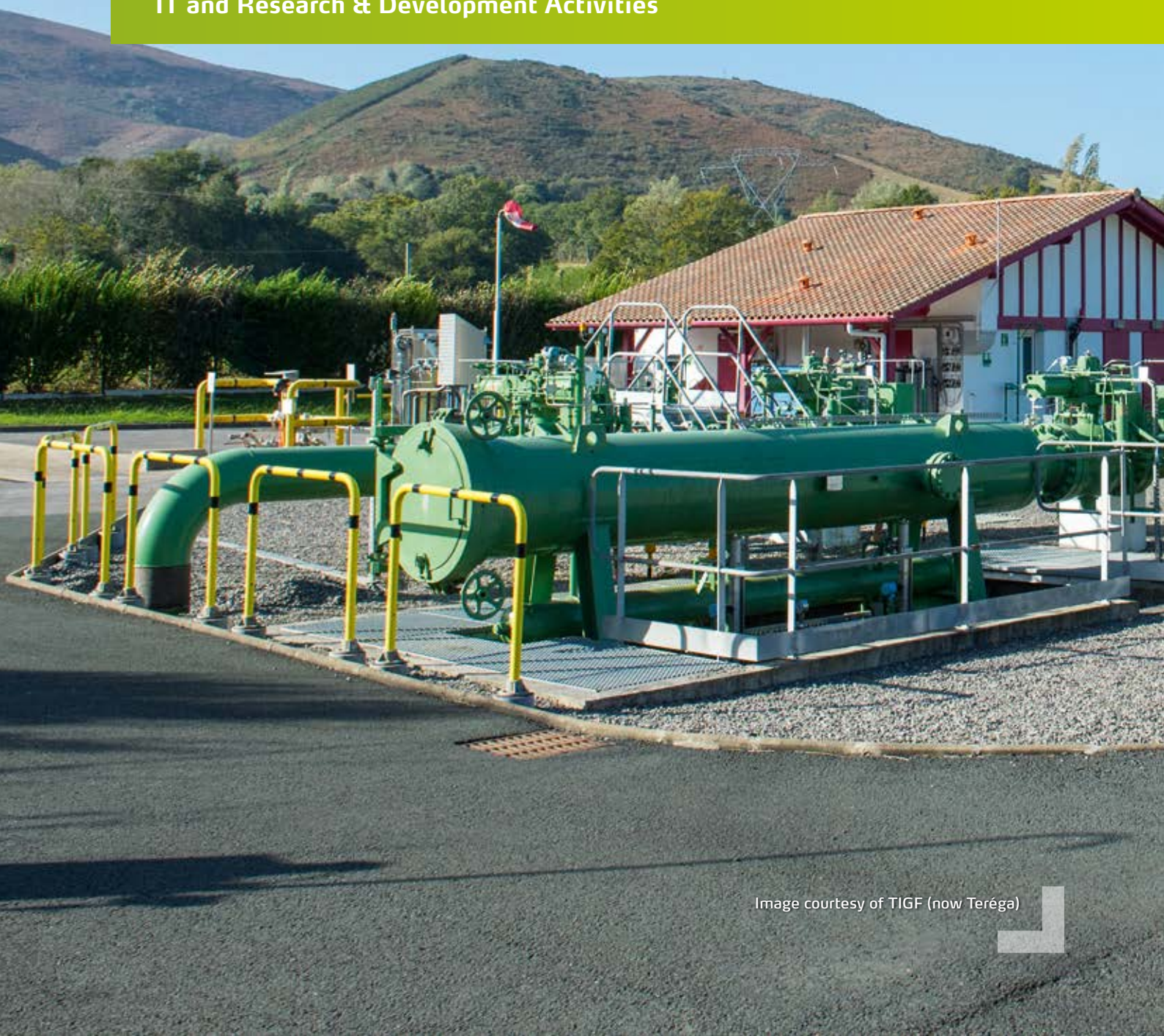


Image courtesy of TIGF (now Teréga)

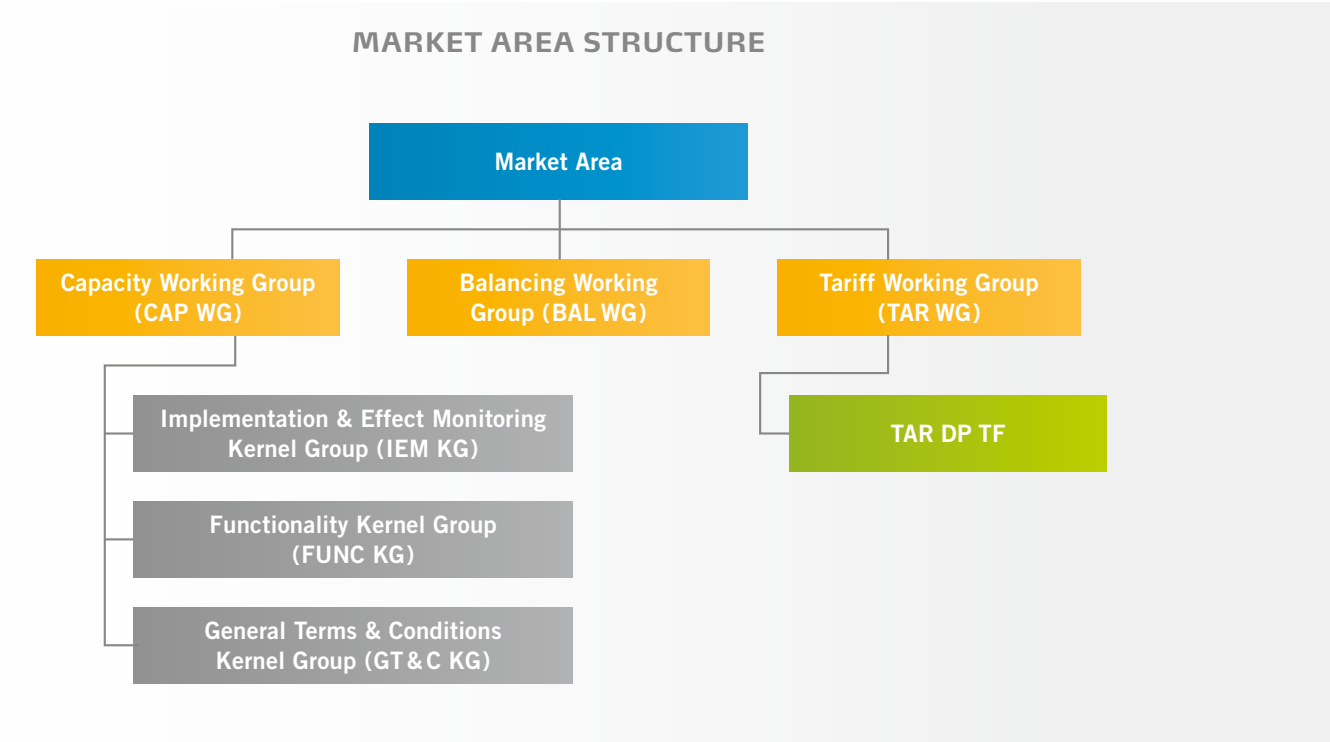
Market Area

ENTSOG's Market Team is responsible for providing expertise, monitoring and development of the market-related network codes that promote the internal European gas market. The Market Area has also been involved with the Energy Community, providing support in their Network Code development and implementation.

In addition to work on the Network Codes, the Market Area is also responsible for the jointly managed ACER and ENTSOG Functionality Process, which addresses not only potential adjustments to the implementation of Network Codes but also to include possible issues which might require future Network Code adaptations.

Area Structure

The work within the Market Area is organised into three main areas, split to align with the relevant Network Codes. The work within these areas is managed via their corresponding Work Groups and supplemented by a number of Kernel Groups with more specialised tasks. The work areas are as follows:



Capacity

The Capacity Working Group (CAP WG) is responsible for ENTSOG's activities related to the allocation of existing and incremental capacity (CAM NC – REG (EU) No 2017/459) and congestion management (Guidelines on CMP – Commission Decision of 24 August 2012 on amending Annex I to Regulation (EC) No 715/2009).

CAP WG consists of the following three Kernel Groups for detailed tasks:

- **Implementation & Effect Monitoring Kernel Group** (IEM KG)
- **Functionality Kernel Group** (FUNC KG)
- **General Terms & Conditions Kernel Group** (GT&C KG)

IMPLEMENTATION & EFFECT MONITORING KERNEL GROUP

The Implementation & Effect Monitoring Kernel Group (I&E KG) is responsible for the monitoring on Capacity Allocation Mechanisms (CAM NC) and the Guidelines for Congestion Management Procedures (CMP guidelines). The IEM KG develops monitoring reports to all implementation deadlines in the CAM NC and CMP guidelines as well as analysis, reports and responses to ACER's implementation monitoring, where appropriate.

FUNCTIONALITY KERNEL GROUP

The Functionality Kernel Group focus on how to facilitate the Regulation (EU) No 2017/459 on Capacity Allocation Mechanisms (CAM NC), and the CMP guidelines to be working properly in practice across borders.

GENERAL TERMS & CONDITIONS KERNEL GROUP

The GT&C KG is responsible for ENTSOG's activities related to the Regulation (EU) No 459/2017 Article 20 CAM NC – the review and creation of a catalogue of the main terms and conditions of the transport contract(s) for bundled capacity products, identifying and categorising differences across Member States in relation to the main terms and conditions and the reasons for such differences. These findings were published in early 2018, for the development of a final template for main terms and conditions. Based on these findings ENTSOG will develop a final Template of main terms and conditions.

Balancing

The Balancing Working Group (BAL WG) is responsible for the Balancing Network Code (BAL NC). In 2017, the BAL WG focused on the implementation and the effect monitoring of BAL NC.

The BAL WG has set up two internal sharing sessions on how to take balancing actions on the market and on TSOs' incentives from the regulators. The group has also organised two joint ACER/ENTSOG workshops on Within-Day Obligations and the information provision and trading platform.

Tariff

The Tariff Working Group (TAR WG) is responsible for the Network Code on Harmonised Transmission Tariff Structures for Gas (TAR NC). In 2017, the TAR WG was primarily focused on delivering the TAR NC post comitology and the implementation of the code after its entry into force on 6 April 2017. The TAR WG contains one joint Task Force – the TAR Data Publication Task Force (TAR DP TF) – hosted together with the Transparency Work Group (TRA WG).

TARIFF DATA PUBLICATION TASK FORCE

The TAR DP TF was established in November 2016 comprising both TAR WG and TRA WG members and is responsible for providing expertise, support and proposals for the activities related to the implementation of the transparency (data publication) requirements of the TAR NC. This included the development of the standardised table for publishing tariff information directly on ENTSOGs Transparency Platform and in addition assisting the TSOs with the 'early compliance'[1)] publication requirements.

Functionality process

Since its introduction in 2016, the Functionality Platform has been open to stakeholder issues to be handled by the FUNC process. In discussions with stakeholders, the limited scope – only NC implementation, functional or operational issues – was outlined as a potential barrier to submission of network code related issues. Therefore, in the summer of 2017, in conjunction with ACER, the functionality process underwent scope broadening allowing any issue related to the network codes to be included. In addition, the number of potential codes and guidelines was also expanded to include the Transparency Guidelines and the Tariff NC.

At the end of 2017, the first stakeholder issue was raised on the Functionality platform, related to data exchange protocol and encryption.

ENTSOG and ACER will process this and other issues and will discuss potential solutions with the stakeholders in early 2018 with the aim of publishing a solution in mid-2018.

1) 'Early compliance' is the decision made in favour of publishing certain requirements before 31 December, which is earlier than was originally envisaged. This will ensure additional transparency for stakeholders and easy accessibility for the applicable tariffs.


Image courtesy of ONTRAS

Activities in the Market Area in 2017

CAPACITY WORKING GROUP

Capacity Allocation Mechanisms

ENTSOG prepared auction calendars in 2017 to be published in January 2018 for the gas year 2018/2019.

In June 2017, the Monitoring Report for 2016 for CAM NC and CMP Guidelines was published.

In Q4 of 2017 ENTSOG launched a monitoring process for CAM NC and CMP Guidelines for 2017. This monitoring is required by Article 8(8) of the Regulation (EC) No 715/2009.

On 6 April 2017, the amendment of the CAM NC came into force. ENTSOG according to Article 21(3) has to develop a non-discriminating, free-of-charge conversion Capacity conversion model – a model which was published 1 October 2017. The model functioned as a basis for TSOs to offer capacity conversion services from 1 January 2018. This ENTSOG conversion model builds upon previous work done by ENTSOG in 2015 to prevent the "capacity mismatch issue". The revised CAM NC oblige TSOs to offer capacity conversion service based on the ENTSOG model.

To fulfil ENTSOG's legal requirements as stated in Article 20 CAM NC (EU 459/2017) – alignment of main terms and conditions for bundled capacity products – ENTSOG commenced work at the end of 2016 on the review and creation of a catalogue of the main terms and conditions of the transport contract(s) for bundled capacity products.

ENTSOG supported activities of the Energy Community (EnC) Secretariat related to implementation of CAM NC and CMP Guidelines in the Energy Community Contracting Party countries. ENTSOG experts participated at physical meetings and workshops of EnC to provide know-how and best practices transfer from EU TSOs to EnC members, TSOs, and NRAs.

Congestion Management Procedures

In June 2017, the monitoring report 2016 for CMP Guidelines was published. ENTSOG launched the monitoring process for 2017 at the end of 2017.

Incremental Capacity work

The first demand assessment for incremental capacity, which constituted the start of the incremental capacity process, was conducted in 2017.

It was required that by 8 weeks after the start of the incremental capacity process, non-binding demand indications for incremental capacity were submitted by network users to the affected TSOs. ENTSOG developed a Demand Indication template to express non-binding demand indications to TSOs. Based on the demand expressed by the network users, TSOs created demand assessment reports evaluating the prospective need for incremental capacity and stated whether an incremental capacity project would be initiated.

The market demand assessment report (DAR) was published on the websites of the TSOs concerned in July 2017.

In nine Member States the Incremental Capacity process was initiated.

General Terms and Conditions exercise

Article 20 of the Commission Regulation (EU) 2017/459, CAM NC required ENTSOG to draft and publish a template for the "main" terms and conditions "covering contractual provisions which are not affected by fundamental differences in principles of national law or jurisprudence, for the offer of bundled capacity products".

As a first step in the process, ENTSOG published a catalogue of main terms and conditions, which was provided to stakeholders in May 2017 during a consultation process. As a next step, ENTSOG developed the report on the differences between the main terms and conditions of bundled capacity products of existing transport contracts, and the reasons for such differences. The process is continuing in 2018.

BALANCING WORKING GROUP

The Network Code on Gas Balancing in Transmission Networks (Commission Regulation (EU) No 312/2014) was published in the Official Journal of the EU in March 2014 with a first implementation deadline as of 1 October 2015 and a second implementation deadline for countries which applied transitory option on 1 October 2016.

During 2017, the BAL WG focussed on the implementation requirements set out in the BAL NC. Following its monitoring obligation set out in Article 8(8) of the Regulation (EC) No 715/2009 and to assess the implementation plans of the individual TSOs, ENTSOG elaborated its second BAL NC monitoring report, in which the implementation status of the BAL NC by 1 October 2016 was identified and its first effect monitoring report.

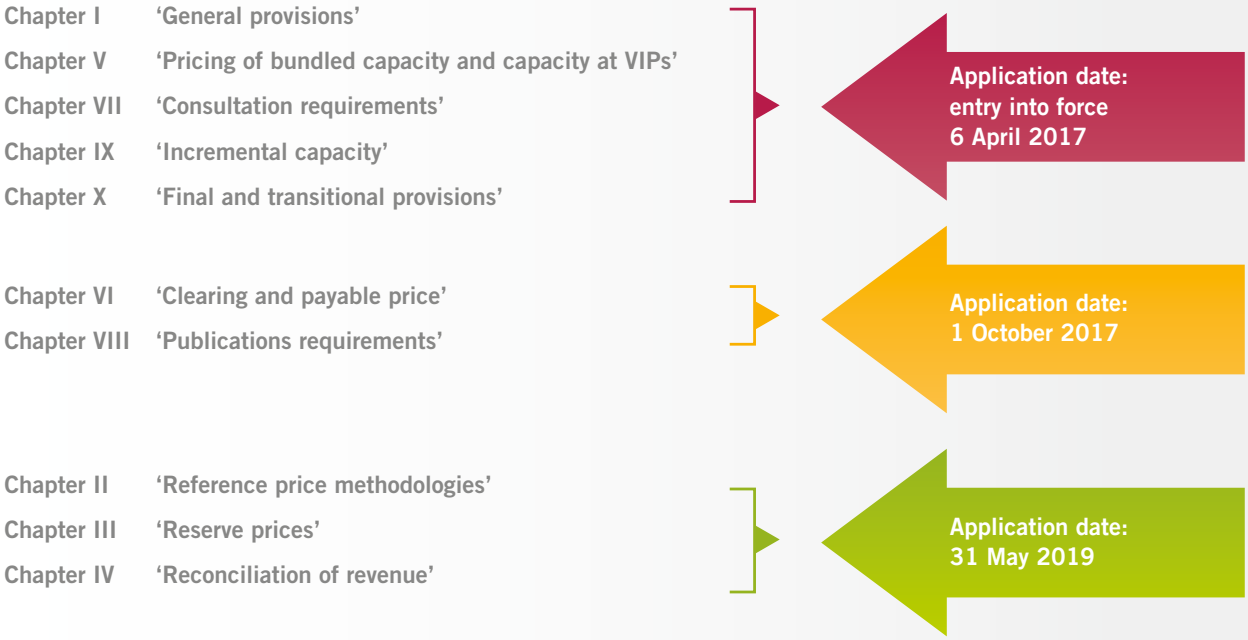
The ENTSOG Report on BAL Monitoring was published in June 2017.

In conjunction with ACER, ENTSOG held two workshops where specific issues were discussed on Balancing such as information provision and within day obligations.

TARIFF WORKING GROUP

The TAR NC entered into force on 6 April 2017. The TAR WG primary focus and workload throughout 2017 was to support ENTSOG members with the implementation of the TAR NC.

TAR NC APPLICATION DATES



The TAR WG completed the TAR NC Implementation Document (TAR IDoc) before the TAR NC entry into force on 6 April 2017. The TAR IDoc is a non-binding document, prepared for information and illustrative purposes, and offers a set of examples and possible solutions for the implementation of the TAR NC throughout the EU. The TAR IDoc was updated and the second edition published in October 2017. The update to the TAR IDoc was based on a TAR WG review, dedicated sessions held with stakeholders such as the European Federation of Energy Traders (EFET) and Storage System Operators, and the responses received from a public consultation.

Two TAR NC implementation workshops were organised by ENTSOG in 2017 to coincide with the entry into force and application dates of the TAR NC. The dates of the two workshops also aligned with the publication of both versions of the TAR IDoc During the workshops ENTSOG presented their views and possible solutions for the implementation of the TAR NC. ACER and stakeholders were also invited to present their views. The videos from the workshops have been made publicly available for future use and reference and are available on the **ENTSOG website**.

In 2017, the TAR WG started work on the TAR NC Implementation and Baseline Effect Monitoring report 2017, which will provide the status of the implementation of the TAR NC by the TSOs and will constitute a baseline study of the effects of the TAR NC on the European gas market. The TAR WG worked on the report throughout 2017, establishing the scope of the implementation monitoring part of the report and developing the relevant indicators for the effect monitoring part of the report. The required data were collected and work on the report commenced in the last quarter of 2017. As per Article 36(1)(a) of the TAR NC, the report was submitted by 31 March 2018 to ACER.

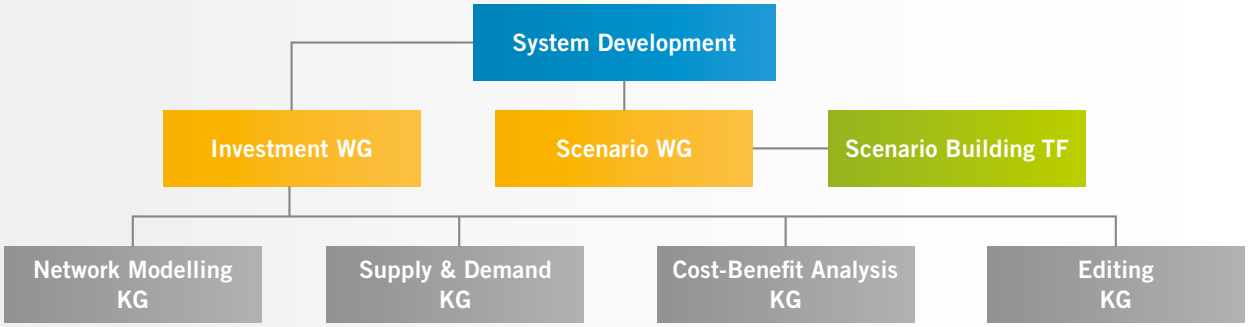
The TAR WG cooperated with other WGs, for example with the CAP WG on tariff issues related to incremental capacity, and with the TRA WG, through the TAR DP TF, on the implementation of the transparency (data publication) requirements of the TAR NC. In 2017, the Task Force provided ongoing assistance to ENTSOG members who successfully implemented the publication requirements of the TAR NC, before the deadline of December 2017. This included developing the standardised table for publishing tariff information directly on ENTSOGs Transparency Platform, and in addition, assisting the TSOs with the 'early compliance' publication requirements.

A number of TAR NC implementation Knowledge Sharing Sessions were organised by the TAR WG in 2017, both internally between TSOs and externally between TSOs and NRAs. The TAR WG supported the further development of the Functionality process and on any tariff related issue. In addition, the TAR WG have been working on the implementation of the TAR NC with the Energy Community and their Contracting Parties, including contributions to the Gas Working Group meetings, Transparency Workshop and providing advice on training for their NRAs. Throughout 2017, the TAR WG also responded to consultations and queries from stakeholders and developed ENTSOG positions on tariff related issues to ensure ENTSOG's work and views are appropriately presented externally.

System Development Area

The System Development business area covers ENTSOG activities related to scenario development, investment planning and infrastructure assessment for the EU energy system. The main deliverables are short and medium to long-term assessments such as the Ten-Year Network Development Plan (TYNDP) and Supply Outlooks. In 2017, the System Development area published the final TYNDP 2017, the first Union-wide Security of Supply Simulation report and the draft 2nd CBA methodology.

SYSTEM DEVELOPMENT WG STRUCTURE



Area Structure

All activities within the System Development Area are managed via the Investment Working Group (INV WG) and supplemented by a number of Kernel Groups (KGs) with more specialised tasks.

The INV WG is responsible for developing regulatory deliverables: the Union-wide Ten-Year Network Development Plan (TYNDP), the Winter and Summer Outlooks and the update to the Cost-Benefit Analysis (CBA) methodology. It is also responsible for deliverables that ENTSOG is developing on a voluntary basis in line with its Annual Work Programme: Winter and Summer reviews, the Transmission Capacity Map and the System Development Map developed in collaboration with GIE.

The Working Group (WG) is supported in its mission by four Kernel Groups (KGs), each of which focus on specific areas:

- **NeMo Kernel Group (NeMo KG):** developing and enhancing ENTSOG's modelling tool and performing the simulations for ENTSOG deliverables in accordance with defined scenarios.
- **Supply & Demand Kernel Group (S&D KG):** developing the supply and demand approaches for ENTSOG deliverables based on analysis of current situation and potential future trends. Particular focus is given to the analysis of data to increase understanding of supply and demand developments, identify trends and outline approaches to defining and studying future scenarios.
- **Cost-Benefit Analysis Kernel Group (CBA KG):** update of CBA methodology under the TEN-E Regulation.
- **Editing Kernel Group:** TYNDP editing, maintaining the terminology used and ensuring the stylistic consistency in reports.

Over 2017, the Working Group has also been supported by the ENTSOs joint Scenario Building Task Force, gathering experts from both electricity and gas TSOs, and tasked with developing joint scenarios for the electricity and gas TYNDPs.

Deliverables

UNION-WIDE TEN-YEAR NETWORK DEVELOPMENT PLAN 2017 (DELIVERABLE 1)

In December 2016 ENTSOG published the Draft TYNDP 2017 and opened the public consultation on the report until February 2017. Following the contribution received from stakeholders and taking on board the recommendations of the ACER Opinion published on 20 March, ENTSOG published the Final TYNDP 2017 report on 28 April.

TYNDP 2017 looks at the next twenty years in assessing the European supply adequacy and the resilience of the system. It identifies if and where investment gaps remain, and how submitted projects mitigate these gaps.

TYNDP 2017 confirms that the current gas infrastructure is close to achieving the infrastructure-related aims of the internal gas market. The gas network is highly interconnected across most of Europe. In the specific areas where persistent long-term investment needs are identified, the necessary projects are included in the TYNDP 2017 and their planned commissioning timeline and potential benefits are presented in the report.

ENTSOG is committed to the continued improvement of the TYNDP and has taken the feedback received from both ACER and the stakeholders and incorporated elements that could be addressed in the final TYNDP 2017 publication. This is largely represented in a brand-new feedback section within the main TYNDP report, but TYNDP 2017 also includes additional or more complete annexes including more information on the projects, the TYNDP map, the Gas Quality Outlook and stakeholders feedback. All feedback will be taken into consideration for future editions of the TYNDP, with some input already fed into the relevant processes.

The European gas infrastructure shows high resilience and is well equipped to support Europe in achieving its energy and climate ambitions. It benefits from large storage capacities, high cross-border energy transmission and peak-demand management capabilities. Its integration with the electricity, heat and mobility infrastructure will support the energy transition and contribute to the decarbonisation of the European energy system.

SEASONAL SUPPLY OUTLOOKS AND REVIEWS (DELIVERABLES 2 & 3)

The objective of the Supply Outlooks is to assess the flexibility offered by gas infrastructures for each of the oncoming Summer and Winter seasons by taking into account the latest supply and demand trends, which are shown in the correspondent Reviews.

Summer Supply Outlook focuses on the ability of the gas infrastructure to allow market participants to reach high storage levels at the end of the summer gas season based on the actual storage levels at the beginning of the injection time horizon. The analysis is completed through the use of sensitivities targeting different stock levels under different supply situations.

Summer Supply Outlook 2017 identified the European Gas network as sufficiently robust to enable enough stock level in preparation for the winter and flexibility for the supply strategy of the network users.

Winter Supply Outlook explores the evolution of the underground storage inventories across the winter gas season while ensuring the supply-and-demand balance during specific high-demand situations. The robustness of the report is complemented by a sensitivity analysis on the different climatic profiles of the winter. The resilience to potential transit disruptions through Ukraine was this year assessed in the Union-wide SoS simulation report (Deliverable 8) published shortly after the Winter Supply Outlook 2017/18.

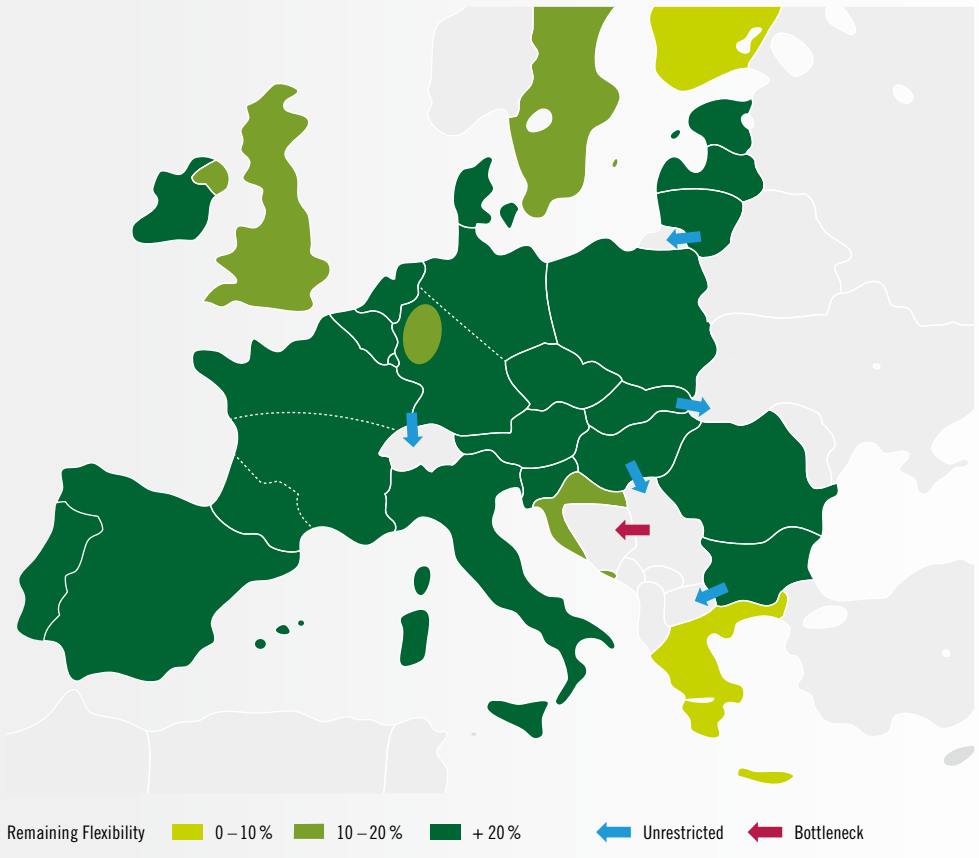
The results of the analysis indicate that the European gas system offers sufficient flexibility across the winter season in Europe, even in the case of high demand during an extremely cold winter. One of the report's key findings is that the average storage level of 84 % on 1 October 2017 is close to its five-year minimum, and the report recommended that shippers would still ensure flexibility by further injecting before the Winter season.

ENTSOG and ENTSO-E cooperated on their Winter Outlooks, which allowed the ENTSO-E Winter Outlook to reflect the ability of the power system to cope with gas security-of-supply situations that may affect gas-fired generation. Both ENTSOs organised a common webinar on their Winter Outlooks on 1 December 2017.

Seasonal Reviews are an ENTSOG initiative based on the internal analysis of the supply-and- demand trends used to feed the TYNDP and Supply Outlooks. ENTSOG publishes these analyses in order to share the results with stakeholders.

These reviews establish the basis to define the input data and methodology of subsequent reports. In addition to the focus on the supply-and-demand balance, the reviews go further by analysing the trend of the gas demand for power generation as well as of providing an insight on gas prices and traded quantities at the main European hubs.

Winter Supply Outlook 2017/18: 1-day Design Case during Cold Winter



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CAPACITY MAP 2017 AND SYSTEM DEVELOPMENT MAP 2016/17 (DELIVERABLE 4)

In 2017 ENTSOG continued the publication of its well-known maps, the Transmission Capacity Map 2017 and the System Development Map 2016/17, the latter in collaboration with GIE.

The Transmission Capacity Map provides an overview of Europe's main high-pressure transmission lines with information on the technical capacities at cross-border interconnection points. The 2017 edition was published in July.

The System Development Map produced in collaboration with GIE focuses on supply and demand trends from April 2016 to March 2017. The 2016/17 edition was published in November.

ENTSO-E/ENTSOG INTERLINKED MODEL (DELIVERABLE 5)

In line with Regulation (EU) 347/2013, the ENTSOs have submitted the draft version of their consistent and interlinked electricity and gas network and market model (the Interlinked Model) to the Commission and ACER on 21 December 2016, and ACER has issued its opinion on 20 March 2017. Currently, the Interlinked Model is with the Commission for their formal opinion.

It is important to highlight that the ENTSOs have already implemented the joint scenario building process described in the draft Interlinked Model starting with TYNDPs 2018 and will continue to do so in the subsequent TYNDP editions.

The ENTSOs acknowledge that ACER's opinion points out additional potential interlinkages that are not part of the draft Interlinked Model as submitted in December 2016. In line with ACER suggestions the ENTSOs are prepared to investigate other possible interlinks and their relevance to infrastructure development. The ENTSOs met ACER and EC and made proposals on possible ways forward and plan to launch a focus study on the interlinkages between gas and electricity.

The ENTSOs will build on the outcomes of the study to prepare the adapted version of their Interlinked Model for EC approval in view of implementation starting from TYNDP 2020.

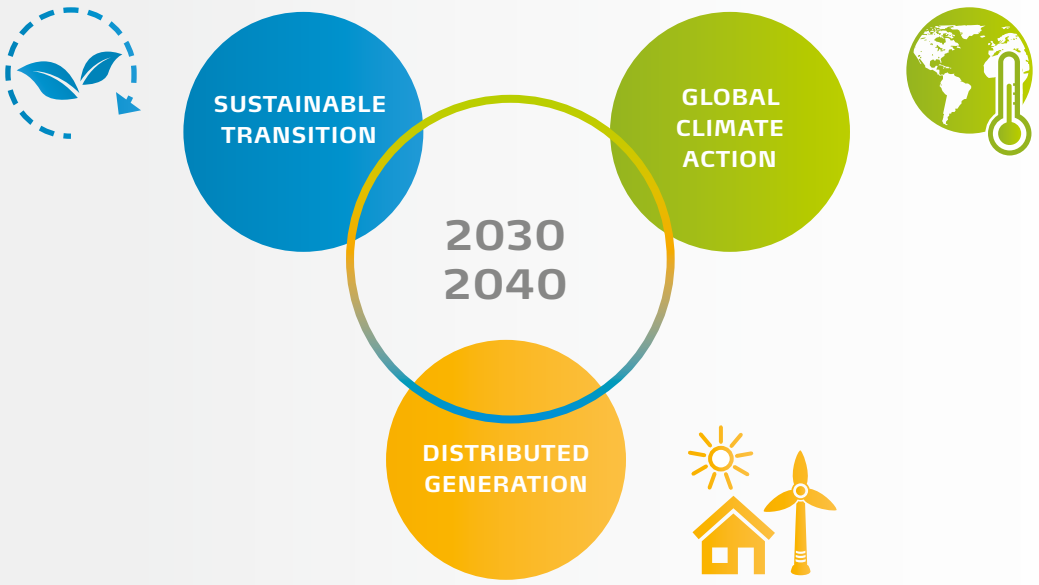
ENTSO-E / ENTSOG JOINT TYNDP 2018 SCENARIO REPORT (DELIVERABLE 6.1)

Scenario building is the very first step in developing TYNDP. For TYNDP 2018 it started already in 2016. With TYNDP 2018 ENTSOG decided to adapt its labelling rule, based on an earlier development timeline compared to previous editions and on its closer collaboration with ENTSO-E. ENTSOG TYNDP is now labelled as ENTSO-E's based on its publication year, which explains that TYNDP 2018 follows TYNDP 2017, although TYNDP remains a one in two years exercise.

ENTSOG and ENTSO-E published their draft joint TYNDP 2018 Scenario Report on 2 October 2017 and launched a public consultation on the document that ran until 10 November 2017. The ENTSOs took on board the feedback received to adapt the report and published their Final Scenario Report on 20 March 2018.

Following their work engaged in 2016 on a consistent and interlinked model, ENTSOG, together with ENTSO-E, have joined efforts to develop for the first time a common set of scenarios, building on their combined expertise and modelling capabilities as well as on the input received from dozens of stakeholders from the industry, NGOs, National Regulatory Authorities and Member States. This co-development approach results in a set of ambitious, technically robust and equally realistic scenarios.

The joint scenarios outline three markedly different possible paths towards a low-carbon energy system in line with EU targets. They build on innovative and challenging storylines and are complemented by an additional perspective based on the EC EUCO30 policy scenario. The TYNDPs will next assess the electricity and gas infrastructure development requirements needed for realising the benefits of meeting ambitious EU goals.



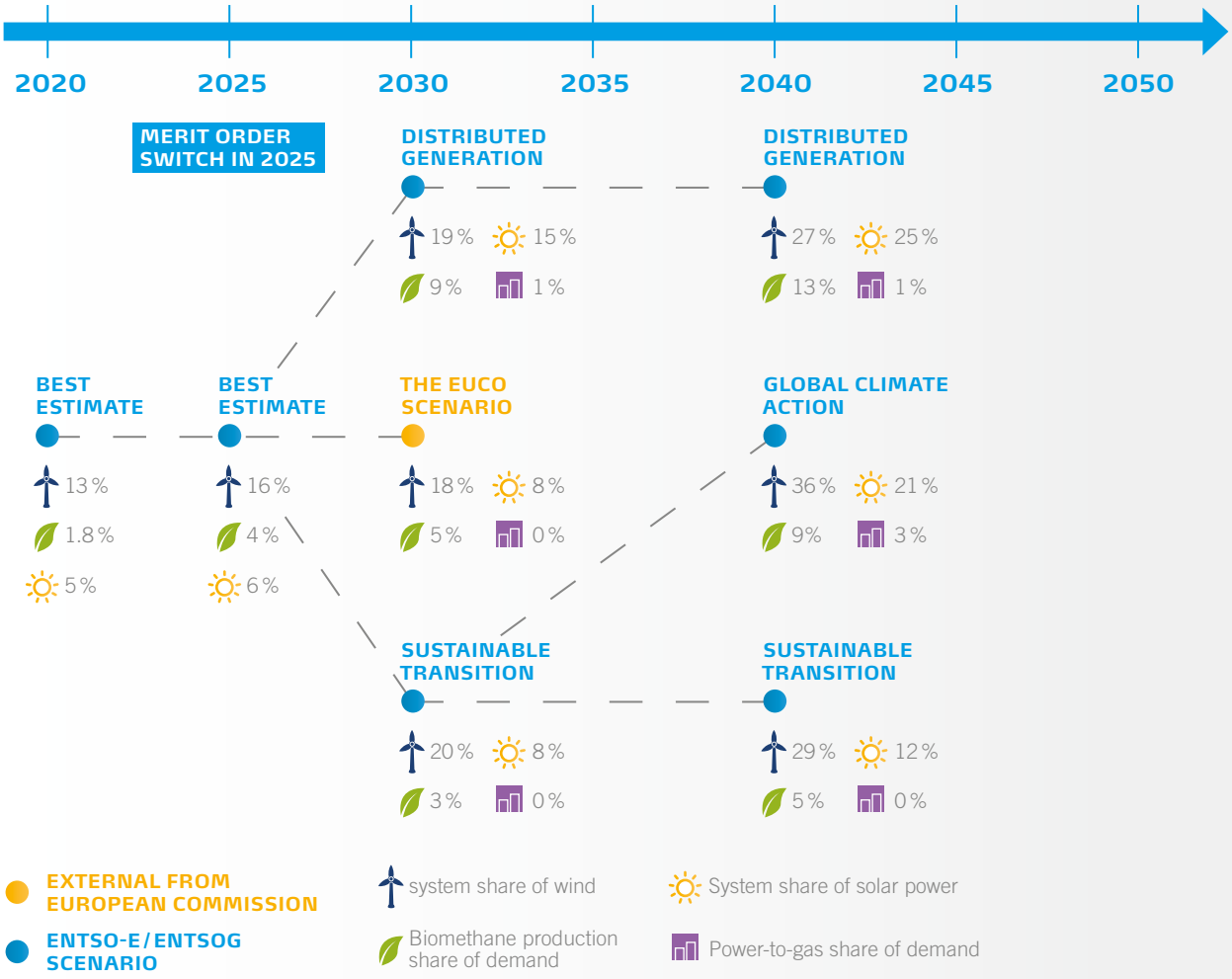
The TYNDP 2018 scenarios for 2030 and 2040 are defined by three storylines

DRAFT TYNDP 2018 PRACTICAL IMPLEMENTATION DOCUMENT (DELIVERABLE 6.2)

Following the European Commission's recommendation on "Guidelines on equal treatment and transparency criteria to be applied by ENTSO-E and ENTSOG when developing their TYNDPs" as set out in Annex III 2(5) of Regulation (EU) No 347/2013, ENTSOG elaborated its "Practical Implementation Document (PID) for developing the 10-year network development plan (TYNDP) 2018".

Starting with the TYNDP 2018 edition, the projects submitted to TYNDP will in fact need to comply with specific administrative and technical criteria for inclusion of project, as defined in the ENTSOG PID.

On 23 November 2017, ENTSOG hosted a workshop on the published draft ENTSOG PID. The aim of the workshop was to get views on the draft Guidelines for inclusion of projects in TYNDP, as well as to inform the participants of the main improvements and the timeline related to the TYNDP 2018 Project Collection.



The scenario building framework for the TYNDP 2018.
Renewable Energy Systems (RES) share of demand for electricity and gas

UPDATE OF THE COST-BENEFIT ANALYSIS (CBA) METHODOLOGY (DELIVERABLE 7)

The first CBA methodology was approved by Commission in 2015. It was applied to develop TYNDP 2015 and TYNDP 2017, and therefore supported the 2nd and 3rd PCI selection process.

Based on the experience and feedback collected, ENTSOG has engaged in developing the 2nd CBA methodology, in line with Article 11(6) of Regulation (EU) 347/2013, in view of applying it to TYNDP 2018.

Early in 2017, ENTSOG organised meetings with a Prime Movers group (composed by relevant stakeholders and institutions) to identify the most requested improvements for ENTSOG CBA methodology. Following the feedback ENTSOG prepared an extended public consultation from 19 May to 16 June 2017. The feedback received was published on the ENTSOG website and the public consultation was complemented by a webinar, held on 31 May.

The draft 2nd CBA Methodology was published and submitted to ACER and EC for their opinions on 24 July 2017. The draft includes concrete and significant improvements in terms of simplification and transparency. Cost-benefit analysis of projects in the TYNDP for projects intending to apply for the PCI status are proposed to be included and to be published directly in the TYNDP. Additionally, in view of the Adapted Methodology ENTSOG further investigated the possibility to enhance the market modelling, in particular with the inclusion of infrastructure tariffs in the modelling assumptions, in line with stakeholders' request. ENTSOG worked further in view of the preparation of the Adapted version of the CBA Methodology, based in particular on ACER opinion received on 24 October 2017 and the draft recommendation from the EC Gas CBA study carried out by Florence School of Regulation and Deloitte and published on 10 March 2017.

The Adapted CBA methodology will be applied to TYNDP 2018 once approved by EC, whose timely approval is expected for summer 2018.

UNION-WIDE SECURITY OF SUPPLY SIMULATION REPORT (DELIVERABLE 8)

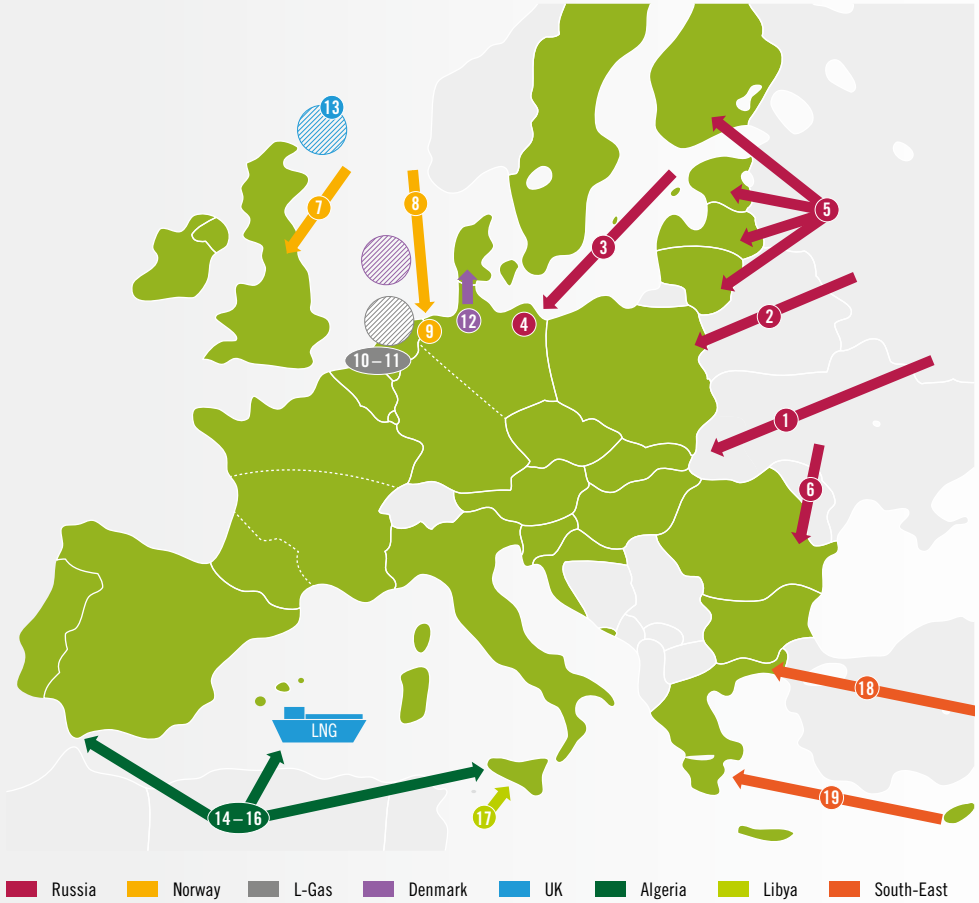
ENTSOG published its first Security of Supply report on 21 November 2017, which includes 17 gas supply and infrastructure disruption scenarios defined in cooperation with the EU Gas Coordination Group. The report has been presented to the Gas Coordination Group (GCG) on 9 November 2017.

The simulation has been performed within the framework of the recently entered into force Security of Supply Regulation (EC) 2017/1938 and has to be done every fourth year. It builds on the supply corridors concept, identifying how Member States can support each other along these corridors in case of disruption events. It subsequently intends to support Competent Authorities in preparing their regional risk assessments.

ENTSOG and the GCG members collaborated throughout the process to define the simulation methodology and 17 scenarios. The scenarios cover the eleven risk groups of countries defined by Regulation (EC) 2017/1938 along the main gas supply corridors.

The report confirms that the overall European gas system is resilient and can support regional cooperation. A limited number of scenarios still indicate local infrastructure limitations that could hamper cooperation. Most of these limitations are already identified in previous assessments.

Supply and infrastructure disruption scenarios



Supporting activities

SUPPORT TO GAS COORDINATION GROUP

The Gas Coordination Group (GCG) is a platform established by Regulation (EU) 944/2010 that introduces measures of safeguarding the security of gas supply.

The role of the Gas Coordination Group (GCG) is to exchange information and best practices, and to facilitate Security of Supply (SoS) standards and to support supply-and-demand balance especially in case of critical situations. Members include the European Commission, representatives of EU Member States, ENTSOG, and other international organisations as well as the industry.

In relation to the Union-wide simulation of supply and infrastructure disruption scenarios ENTSOG has the task towards the GCG to propose the most meaningful scenarios and further on submitting the simulation results to the GCG.

Additionally, Seasonal Outlooks continue contributing to support the Gas Coordination Group on a more regular basis.

SUPPORT TO REGIONAL GROUPS

ENTSOG has brought its constant support to the Regional Groups in the third process of selecting projects of common interest (PCI). ENTSOG actively engaged, in 2017 as previously in 2016, in providing its technical support to the Regional Groups, in particular through its technical contribution to the activities of the Cooperation Platform, composed of the European Commission, ACER and the ENTSOs and meant at streamlining the work of Regional Groups.

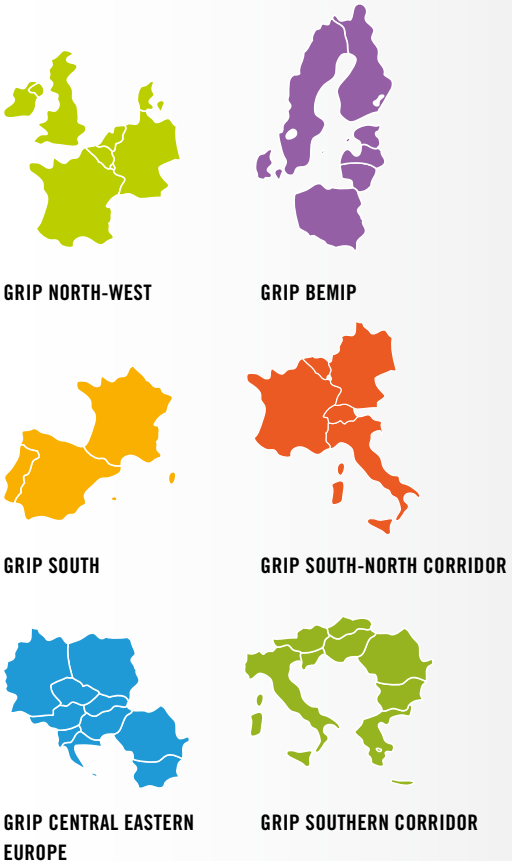
TYNDP 2017, published in December 2016, played a key role in the 3rd PCI selection process initiated by the European Commission. In 2017, ENTSOG has provided further support to the PCI selection process. It has closely cooperated with the European Commission in configuring and offering its technical platform – the ENTSOG Project Portal – to perform the call for PCI projects. And additionally, upon formal invitation by the European Commission, and under the mandate of project promoters, ENTSOG handled and delivered to PCI candidates promoters the modelling of their project-specific CBAs. ENTSOG also provided support to all promoters in the submission of their project-specific CBAs to the European Commission and the Regional Groups.

SUPPORT TO GAS REGIONAL INVESTMENT PLANS

Establishment of Gas Regional Investment Plans (GRIPs) is a requirement under Art 12(1) of Regulation (EC) 715/2009. These GRIPs are developed by member TSOs under the umbrella of ENTSOG. These plans help to coordinate activities between neighbouring TSOs and provide support for further infrastructure development wherever necessary. GRIPs serve as a link between TYNDP and national plans.

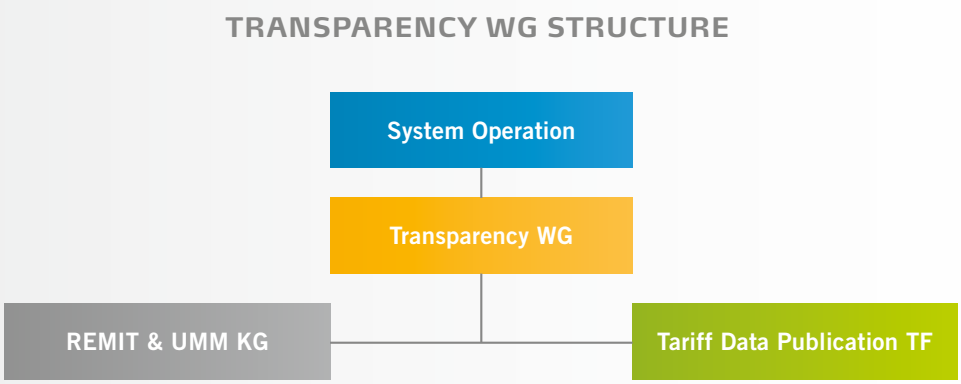
The third editions of GRIP reports have been developed jointly with TYNDP 2017. This ensures the use of a common dataset for GRIPs and TYNDP and complementarity between the reports.

For the GRIPs published in spring and summer 2017, ENTSOG handled a joint TYNDP 2017 and GRIPs data collection and centralisation of data processing, ensuring the full consistency between GRIPs and TYNDP. Additionally, ENTSOG performed the modelling of all the GRIPs, building on its European-wide gas system modelling, and performing a large variety of GRIP-specific simulations based on TSOs expertise to best reflect regional specificities.



System Operation Area

The primary work of the System Operation business entails developing and monitoring technical network codes, evaluating activities related to gas quality standardisation, developing and maintaining existent Common Network Operation Tools (CNOT), the ReCo System for gas, and the maintenance and continuous development of ENTSOG's Transparency Platform (TP) including activities referring to REMIT. At present, System Operation comprises two main working groups: Interoperability (INT WG) and Transparency (TRA WG).



Transparency

The energy market liberalisation process, aimed at securing a genuine, well-functioning, open and efficient internal market in gas, has significantly changed the gas transmission business and increased the need for transparency. In this respect, specific obligations for gas TSOs were introduced through Regulation (EC) No 715/2009, which defines the basic transparency rules, further specified in Chapter 3 of Annex I (and its amendments).

The network codes have been developed to provide rules and procedures to reach an appropriate level of harmonisation towards efficient gas trading and transport across gas transmission systems in the EU, increasing data publication requirements.

Regulation (EU) No 1227/2011 and its Commission Implementing Regulation (EU) No 1348/2014 introduced additional publication and reporting obligations to the market participants, aimed at supporting market monitoring, fostering open and fair competition in wholesale energy markets. These obligations are also dealt with in the Transparency Area in ENTSOG.

GROUP STRUCTURE

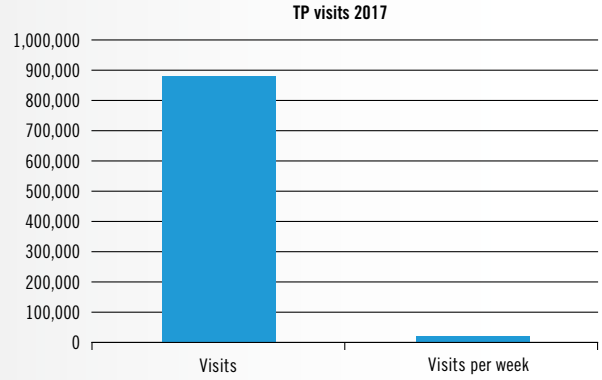
The Transparency Working Group (TRA WG) is supported by the REMIT & UMM Kernel Group and in 2017 also by the Tariff Data Publication Taskforce.

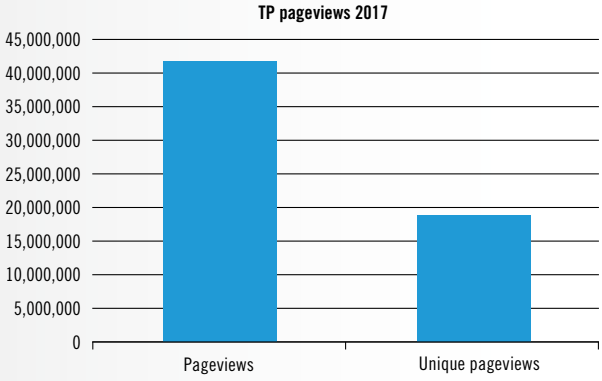
ENTSOG TRANSPARENCY PLATFORM (TP)

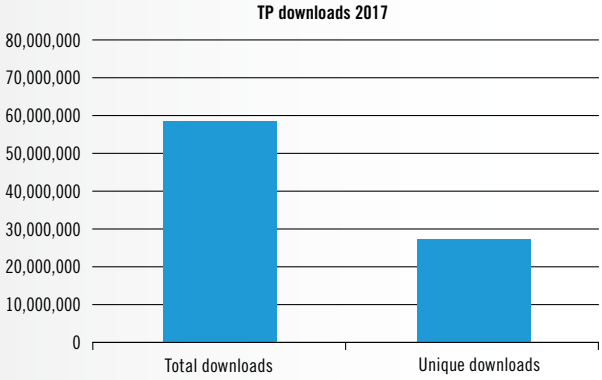
ENTSOG's TP provides technical and commercial data on the gas transmission systems, which includes interconnection points and storage connections, LNG facilities, distribution networks, final consumers and production facilities. The current version of ENTSOG TP was launched on 1 October 2014. It was developed with the aim of improving transparency, user friendliness and data publication capabilities. It is a powerful tool providing the means for ENTSOG's members, associated partners and observers to fulfil their data publication obligations (see Chapter 3, Annex I, Regulation (EU) No 715/2009). ENTSOG received strong support from many stakeholders with regards to TP functionality and the information provided therein.

Link to the TP:
https://transparency.entsog.eu/

Usage statistics







Released Functionalities and Improvements During 2017

- Implementation of a new section for tariffs on the TP fulfilling the obligations resulting from the Tariff Network Code.
- Implementation of a supporting tool which enables TSOs to provide tariff information fulfilling the requirements set for this publication.
- Improved TP performance and response times, optimisation of TP database.
- Improved TP help section with tutoring videos for capacity indicators, the upgraded tariff section, physical flow data, export wizard and general introduction of the TP and the search possibilities.
- The TP User Manual was updated based on the above tariff-related functionality updates.
- Introduction of full-text point direction labels (entry, exit) as a module of the TP Data part, to make it easier for TP users to understand the legends in the recently viewed items.
- Display of Pipe-in-Pipe situations: Improved visualisation of Pipe-in-Pipe points on TP
- A new page called "Actual interruptions", displaying "Unplanned interruption of Firm Capacity" and "Actual Interruption on Interruptible Capacity" in a format focused on displaying the most recent interruption information was added.
- Improved visualisations on unlimited interruptible capacity.
- Data processing indicator, providing information to stakeholders about the data processing and TP publications.
- Data publications for planned points, to enable transparency on planned or future potential points, mainly related to capacity information.

Updated tariff section: Standardised Table

The updated tariff section includes all parameters required by the Tariff Network code: commodities, applicable tariffs (firm and interruptible) including various parameters such as seasonal factors, and discounts.

The tariff section is divided into two main parts: tariff part and simulation costs.

The tariffs are published in local currency and the calculation into EUR is done by the TP based on the daily exchange rate of the European Central Bank.

All tariff data can be downloaded, like all other data on the TP, via the Export Wizard.

The tariff data published before December 2017 is available as an archive which can be found in the Export Wizard section.

Since tariff data is not published on daily basis, an additional Data Entry Platform for Tariffs (DEPT) was introduced enabling TSOs to enter their data, perform syntax checks and publish it on the TP without any change within their internal IT system.

TP Usage, Stakeholder Involvement and Data Publication

ENTSOG and TSOs work closely together to achieve the highest quality and comprehensiveness of the data published on the platform. To satisfy and serve the market expectations of data quality and transparency, an internal monitoring process has been established to facilitate the joint efforts of ENTSOG and its members. This process is continuously evaluated and updated, to keep up with the constant changes in functionalities and reporting requirements.

Besides TSO publications, ENTSOG is also supplying the European Commission and ACER with customised reports for specific tasks. In 2017, this entailed extensive work on reports to ACER in relation to their monitoring obligations for application of CMP measures and CAM NC and data exports to EC in the context of the Quo Vadis study.

In 2017, ENTSOG executed two TP Satisfaction Surveys, to get a better understanding of user satisfaction with TP and providing an additional forum for receiving TP user input. Since less than 20 users participated in these surveys[1)], the results cannot be considered representative. However, ENTSOG did receive many valuable suggestions and these were discussed in the Transparency Working Group and prioritised for processing. It was also decided to implement a link to a "standing TP survey" directly on the TP, to make it easier for stakeholders to share their feedback.

REMIT ACTIVITIES

Regulation on Energy Market Integrity and Transparency (REMIT)

Regulation (EU) No 1227/2011 (REMIT) establishes rules prohibiting abusive practices affecting wholesale energy markets and providing more transparency regarding price-relevant (inside) information. It provides for the monitoring of wholesale energy markets by the Agency for the Cooperation of Energy Regulators (ACER) in close collaboration with national regulatory authorities. The goal of REMIT, through strong cross-border market monitoring, is to detect and avoid market manipulations and to facilitate the completion of a fully functioning, interconnected and integrated internal energy market.

Commission Implementing Regulation (EU) No 1348/2014 stipulates the information that shall be reported and defines the rules to be followed by the market participants with regards to their REMIT reporting to ACER.

1) Reports published after running the survey:
https://www.entsog.eu/public/uploads/files/publications/Transparency/2017/TRA0429-170404%20TP%20satisfaction%20survey%20report.pdf
https://www.entsog.eu/public/uploads/files/publications/Transparency/2017/TRA0495-170927%20TP%20satisfaction%20survey%20report_final.pdf

ENTSOG's Activities as RRM

Since 2015, ENTSOG has been a Registered Reporting Mechanism (RRM). On behalf of gas TSOs, ENTSOG reports fundamental data to ACER with regards to the capacity and use of facilities for the transmission of natural gas, including planned and unplanned unavailability of these facilities, as defined in Article 9(1) of Commission Implementing Regulation (EU) No 1348/2014.

The ENTSOG reporting system was developed according to the provisions of Commission Implementing Regulation (EU) No 1348/2014 and other supportive documentation issued by the Agency with regards to REMIT. Since 7 October 2015, ENTSOG has been reporting the following set of aggregated fundamental data to ACER, for each TSO that is publishing data on the ENTSOG TP:

- Aggregated day-ahead nominations
- Aggregated final re-nominations
- Actual physical flow
- Technical capacity
- Available firm capacity
- Contracted firm capacity
- Total interruptible capacity
- Available interruptible capacity
- Contracted interruptible capacity
- Planned interruption of interruptible capacity
- Actual interruption of interruptible capacity
- Planned interruption to firm capacity
- Unplanned interruption to firm capacity

ENTSOG submits the required information to ACER as it was received on the TP.

As to the data reporting performed by ENTSOG on behalf of gas TSOs, ENTSOG provides the following information to its members:

- Segregated access (per TSO) to report files submitted to ACER Reporting Information System for Applying REMIT (ARIS)
- Segregated access (per TSO) to return receipts received by ENTSOG Reporting system from ARIS
- Daily report (per TSO) on the status of files reported to ACER

As part of the REMIT Reporting process, ENTSOG is responsible for the following:

- Submitting data to ARIS
- Rectifying and (re)submitting data in case of technical reporting issues between ENTSOG and ARIS

The TSOs are responsible for carrying out the following:

- Performing complete, high-quality and timely data publications on ENTSOG TP
- Monitoring information provided by ENTSOG on data reported on TSOs' behalf to ARIS
- If ACER rejects TSO REMIT data due to content/functional reasons, the respective TSO shall resend the relevant information to the ENTSOG TP. It will then be transmitted to ACER through the ENTSOG Reporting System

TSOs' Implementation of REMIT

Commission Implementing Regulation (EU) No 1348/2014 stipulates that gas TSOs shall report the following disaggregated information per market participant to ACER:

- Transaction data: natural gas transportation contracts within the Union between two or more locations or bidding zones, concluded as a result of a primary explicit capacity allocation by or on behalf of the TSO, specifying physical or financial capacity rights or obligations
- Fundamental data: day-ahead nominations, final re-nominations of booked capacities, specifying the identity of the market participants involved, and the allocated quantities.

The TSOs reporting obligations under REMIT commenced 7 April 2016.

To facilitate the TSOs' REMIT implementation processes, ENTSOG has established the following:

- Regular REMIT panels at Transparency Working Group meetings
- Biweekly discussion sessions between ENTSOG's Transparency Team, TSOs and members of ACER's REMIT Team. The aim is to provide clarity on various technical and policy questions and resolve issues related to data reporting. During 2017, ENTSOG Transparency Team and Transparency Working Group participated in the following events:
- ACER REMIT Expert Group meetings
- ACER RRM User Group meetings
- ACER ENTSOG TSOs biweekly stakeholder webinars
- ACER public consultation on electronic formats for REMIT reporting
- 1st ACER REMIT Forum

ACTIVITIES FOR TARIFF NETWORK CODE PREPARATIONS

The Transparency Area has been following the development of the Tariff Network Code (TAR NC) closely through dedicated updates from the Transparency Working Group meetings. After receiving a positive opinion on the network code in September 2016, ENTSOG decided to establish a joint taskforce between the Transparency and Tariff Working Groups to facilitate the implementation of the transparency requirements laid out in TAR NC. The taskforce was active throughout the year 2017 and will remain active until the suggestions and possible changes resulting from the feedback received during the implementation of the tariff data publication requirements have been analysed and implemented.


Image courtesy of NEL

ANNUAL PUBLIC WORKSHOP ON TRANSPARENCY

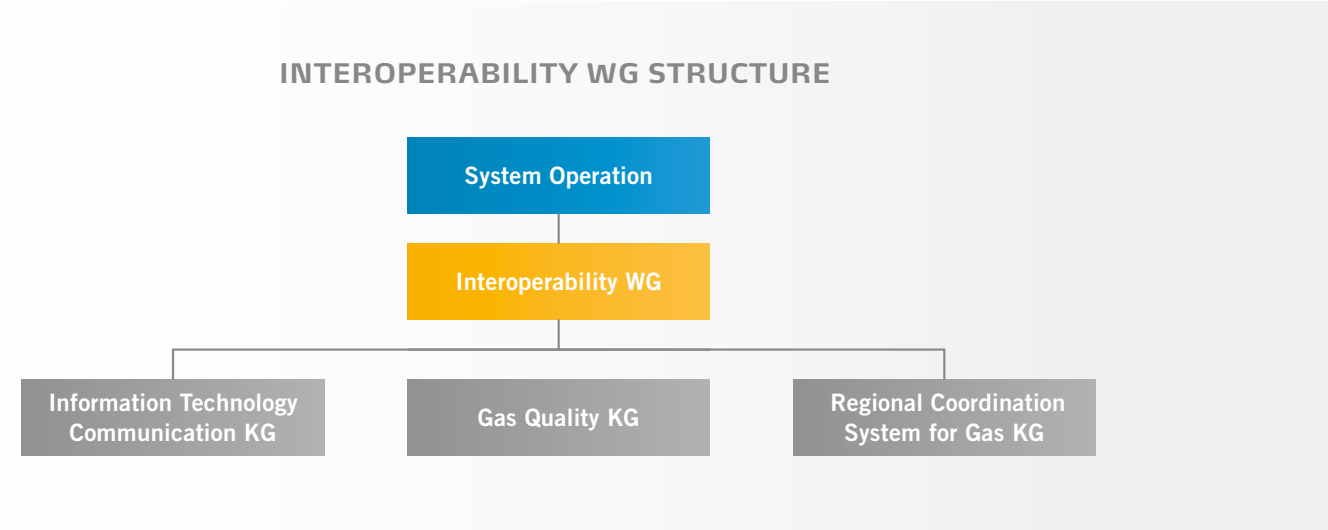
Part of ENTSOG's Annual Working Program is to foster collaboration with the Energy Communities' Contracting Parties, and therefore ENTSOG organised the 11th Annual Public Transparency Workshop in collaboration with the Energy Community on 6 December 2017 in Vienna. The workshop was organised in two sessions dedicated to the following topics:

- ENTSOG TP including stakeholder feedback
- Transparency on Tariffs on ENTSOG's TP and TSO/NRA websites

As part of the workshop, ENTSOG demonstrated the new functionalities of the Transparency Platform presented a series of video tutorials for selected features. The videos are available on ENTSOG's Vimeo channel https://vimeo.com/entsog. Stakeholders from REKK and Route4Gas shared their user experience and feedback of the TP data and functionalities with the audience.

ACER presented its feedback on the platform and suggested improvements in some functional and data publication areas.

During the session dedicated to publication of tariff information, ENTSOG informed the audience about the publications to be made on the TP and TSOs/NRAs' websites respectively, the standardised template developed by TSOs, and the Austrian NRA, E-Control, shared their experience with publication of tariffs on their own website.



Interoperability

The aim of the Interoperability team and WG of ENTSOG is to facilitate an appropriate level of harmonisation in technical, operational and communication areas to enable market integration and to facilitate a free flow of gas in Europe.

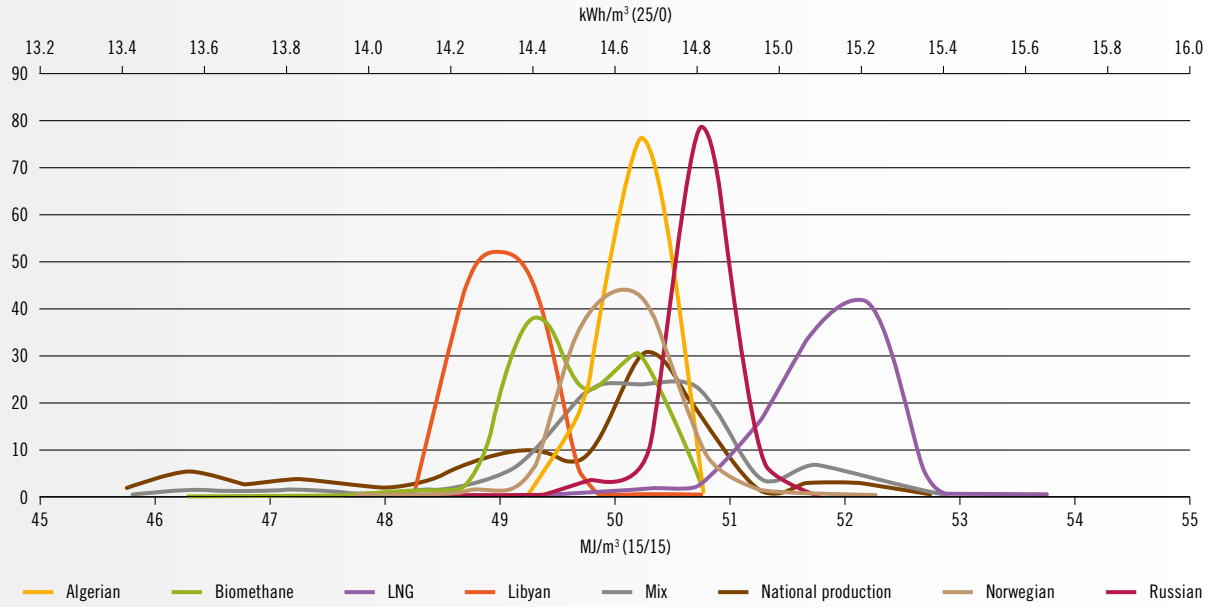
GROUP STRUCTURE

The Gas Quality (GQ) KG elaborates the long-term gas quality outlook in cooperation with System Development area; supports European standardisation activities in the field of gas quality and monitors the implementation of the relevant provisions of the network code

The IT and Communications (ITC) KG develops common data exchange solutions and the related communication profiles streamlining communication solutions for data exchange

The Regional Coordination System for Gas (ReCo System) KG supports the different ReCo Teams (North West, East and South) to facilitate regional coordination in case of a gas supply crisis or in emergency situations and is responsible to further develop the ReCo System for Gas.

Frequency distribution of Wobbe index



GAS QUALITY

Cooperation with CEN, JRC and Marcogaz in gas quality harmonisation.

As a continuation of EC M400 mandate to CEN for standardisation in the fields of gas qualities and supported by the conclusions of the 29th Madrid forum, CEN continues working on finding an EU agreement for a Wobbe Index band, including elaborating on the possibility of regional specific bands.

With that aim, CEN Sector Forum Gas working group "Pre-normative study of H-gas quality parameter" is conducting a study on the impact of H-gas quality parameters not yet or insufficiently specified in EN16726:2015 ('Gas infrastructure – Quality of gas – Group H') on the whole gas supply chain. The analysis will be undertaken on the basis of technical evidence.

As part of the preparatory work, the CEN SFGas WG, in cooperation with the Joint Research Centre of the EC, arranged a survey to collect Wobbe index and gross calorific value measured data from gas system operators and end users. In this context, ENTSOG offered to collect input from its members.

The data collected by ENTSOG were presented in a public workshop in September 2017 and summarised in a report, which, besides presenting the data, proposes an analysis methodology with the view of facilitating the choice of potential Wobbe Index ranges and related parameters (among others, the variability).

ENTSOG continues cooperating with CEN, JRC and Marcogaz (as an observer of the Gas Quality working group) in standardisation developments around natural gas quality, with a special attention to biomethane and hydrogen. ENTSOG also keeps an on-going dialogue on gas quality issues with all stakeholder organisations along the gas value chain.

Regarding biomethane, the standard EN 16723-2, Natural gas and biomethane for use in transport and biomethane for injection in the natural gas network – Part 2: Automotive fuels specification was approved by CEN members in March 2017. Part 2 of this standard complements the already approved part 1 (Specifications for biomethane for injection in the natural gas network).

As for hydrogen, CEN has established different working groups both for the standardisation of pure hydrogen applications as well as hydrogen and natural gas mixtures. These workstreams are expected also to feedback to the EN16726 standard.

Preparation of Gas Quality Outlook 2018

Following provisions of Article 18 of the INT NC, ENTSOG is preparing the next edition of the Gas Quality Outlook, which will be published alongside TYNDP 2018. The new edition will include for the first time biomethane as well as revision of the reference gas quality values for different supply corridors – which were presented at the Stakeholder Joint Working Session for TYNDP 2018 in December – and a reformulation of the gas quality regions.

Support to the implementation of the revised SoS regulation

The Regional Coordination System for Gas (former Early Warning System) has been functioning and progressing since 2014 and is considered as an important tool in case of any crisis event. In 2016, the Commission proposed a new security-of-supply regulation and ENTSOG was also involved in the process.

In 2017 the new Regulation (EU) 2017/1938 of the European Parliament and of the Council concerning measures to safeguard the security of gas supply was adopted and published on 25 October 2017, and the ReCo System for Gas got a legal basis and became part of the Regulation. This Regulation foresees that in the event of a regional or Union-wide emergency, the transmission system operators shall cooperate and exchange information using the ReCo System for Gas established by ENTSOG.

Based on ENTSOG's supply corridor approach, ENTSOG, together with its members, supported the EC regarding the re-composition of the risk groups (Annex I Regulation 2017/1938), defined disruptions scenarios in consultation with the Gas Coordination Group for the first Union-wide simulation and suggested to include the Regional Coordination System for Gas (ReCo System for Gas) in the new SoS Regulation.

The revised SoS Regulation also foresees new tasks for ENTSOG such as the Union-wide simulation of the above-mentioned disruption scenarios and providing the results to MS as the basis for the risk assessments each MS needs to carry out.

ENTSOG's team continued further close cooperation with the European Commission and the Gas Coordination Group in implementing the new Regulation.

Technical cooperation with Energy Community and third country TSOs

According to Article 8(3)(c) of Regulation 715/2009, ENTSOG is in charge of providing "recommendations relating to the coordination of technical cooperation between Community and third-country transmission system operators". In line with this provision, on a yearly basis ENTSOG together with the EnC Secretariat organise workshops for TSOs from the Contracting Parties to the EnC as well as other relevant stakeholders.

In 2017, the workshop was held on 9 November at the premises of the EnC Secretariat in Vienna and one of the main topics addressed was an exchange of EU TSOs' experiences in preparing and concluding Interconnection Agreements and providing recommendations to non-EU TSOs in this regard.

Another important topic was the discussion on the European-Wide simulation of disruption scenario (undertaken by ENTSOG in accordance with Regulation 1938/2017) and its results, as well as the impact of the Regulation on Contracting Parties.

In addition, ENTSOG presented to the participants the way forward in the gas quality harmonisation process, challenges around implementation of common units and the updates on implementation data exchange solutions.

ENTSOG's interoperability team and EnC Secretariat agreed to continue such practice and are open to provide their expertise and recommendations on request of other TSOs.

In 2017 ENTSOG cooperated also with Swissgas, inviting them to join the ReCo Team South. ENTSOG continued close cooperation with Gassco, Ukrtransgaz and Swissgas regarding technical cooperation and kept these gas transmission companies informed of coordination procedures in case of crisis events.

SoS and regional cooperation

After the revised SoS Regulation was published all EU TSOs were officially invited by ENTSOG to participate in already established ReCo Teams and ENTSOG expects to complete the teams in 2018. At the end of 2017, 33 TSOs (including 3 TSOs from non-EU countries) were member of at least one of the three ReCo Teams.

Considering preliminary arrangements in 2016 and the importance of gas supply to Europe from North African countries, the new ReCo Team South was established in March 2017. It started with eight TSOs from France, Italy, Austria, Switzerland, Portugal, Spain and Slovenia. Enagás (Spain) took over the role of the facilitator for the next two years.

During the cold spell in Europe in February 2017, the ReCo Teams East and North-West successfully got together to discuss the situation in European countries, readiness of TSOs to cope with cold weather and increasing demand. It was considered as a good practice and had positive feedback from participating TSOs.

On 12 and 13 December 2017 two virtual meetings took place as a consequence of the incident at the Baumgarten hub in Austria which caused the disruption of the gas flows from Slovakia to Austria, and from Austria to Hungary, Italy and Slovenia, as well as a need to redirect gas flows in other countries. The European Commission as head of the Gas Coordination Group was informed about the ReCo Team East meeting and the coordination of TSOs during the event.

Regarding other activities of the ReCo Teams in 2017 the ReCo Team East successfully completed an unannounced communication exercise. For the ReCo Teams East and North-West planned communication exercises were carried

out on the occasion of the handover of the facilitator role from one TSO to another one and all ReCo Teams agreed on a list of facilitators for the period 2017-2021.

In addition, TSOs were working on how the principles and approaches of the ReCo System for Gas could be considered as a common network operation tool to ensure coordination of network operation in emergency conditions in line with Regulation 715/2009 Art. 8 para 3 (a).

Support of the EC in the gas flow monitoring via Ukraine

In line with the provision set out in Regulation (EU) 994/2010 Article 11 Para. 7 and Articles 5 and 6 of the "Rules of procedure for the Gas Coordination Group", the EC formally asked ENTSOG for its support in establishing a Ukrainian Monitoring Mission in November 2014. Since then several trilateral talks and meetings have been held between Ukrtransgaz, EC and ENTSOG. A daily monitoring report was developed and issued by Ukrtransgaz and is shared with the EC and ENTSOG on a daily basis.

In 2017, Ukrtransgaz was informing the EC and ENTSOG about systematic continuing (since 2016) pressure reductions on the border between Ukraine and Russia. Therefore, information about pressure on the border between Russia and Ukraine was added to the daily monitoring reports in order to provide a better understanding and assessment of the situation.

In addition, ENTSOG's representative visited Gazprom's dispatching centre and discussed the position of the Russian side in this respect. The European Commission was informed about the results of the meeting accordingly.

Image courtesy of Infrastrutture Trasporto Gas

DATA EXCHANGE

Updates of CNOTs

In 2017, ENTSOG continued the improvement of the common network operation tools (CNOTs) with special attention to the communication profiles.

Under the data exchange section of its website, ENTSOG has published or updated the following documents:

- The **Interactive data exchange profile**, which provides guidelines mostly about consistency and usability than about technical conformance, as the exchange involves humans and is not completely automated. Among the use cases, the most relevant is perhaps authenticated transactions involving private information, which is applicable to the capacity trading process.
- The **integrated data exchange profile**. For interoperability and consistency, additional guidelines are required to specify how this data exchange solution, which relies on HTTP/S-SOAP as protocol and Edig@s-XML as format, is to be used. It includes a technical profiling of the use of Web Services. The profile aims to support public, private, anonymous and authenticated access to services in an interoperable way.
- The **ENTSOG AS4 usage profile**, which provides not only interoperability guidance for the required AS4 functionality (i.e., whose requirements are mandatory and are optional) but also security guidance based on state of the art best practices following ENISA recommendations.
- **ENTSOG AS4 Configuration Management Approach**, which proposes a set of key AS4 data exchange configuration parameters that AS4 parties need to exchange to set up a successful connection.
- **AS4 Agreements and Agreement Updates**, describing how AS4 endpoints can handle certificate renewal in a semi-automatic way.
- **Setting up an AS4 System**, which describes the Key steps that organisations need to take to implement AS4.

Follow-up of EASEE-gas developments

ENTSOG cooperates with EASEE-gas in the field of data exchange as an observer in the relevant groups.

Functionality issues around data exchange

In December 2017, the first issue was posted on the ACER-ENTSOG functionality platform. The functionality problem described relates to the use of AS4 by Virtual Trading Point and Storage Operators for notification of traded quantities and nomination to storage points respectively.

ENTSOG, in close cooperation with ACER and the relevant stakeholders, are currently analysing the potential solutions for this interoperability question in advance of stakeholder consultation.

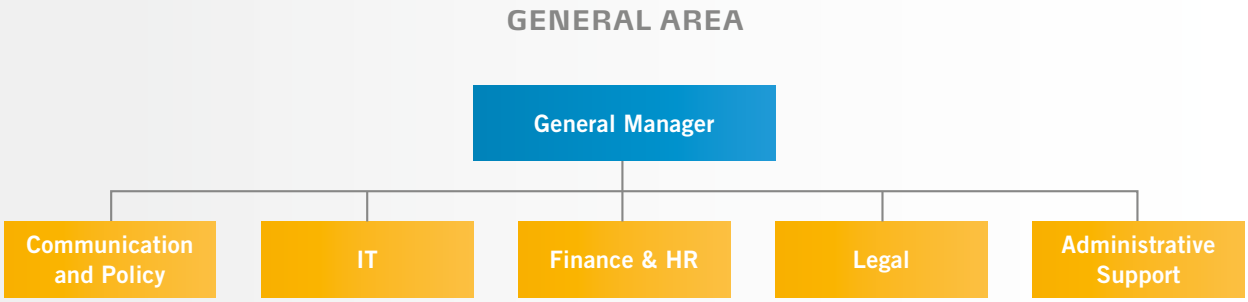
Operation of the LIO office

The Energy Identification Codes (EIC), standardised and maintained by ENTSO-E, provides a unique identification of the market participants and other entities active within the European Internal European Energy Market. It is widely used in the Electronic Document Interchange and shall be used to identify parties and objects for REMIT.

ENTSOG continued to operate the LIO Office 21 throughout 2017 and ENTSOG now manage more than 1200 EIC codes on behalf of market participants.

In 2017, ENTSOG attended joint CIO/LIO meetings and contributed to the upgrading of the EIC Reference Manual.

General Area



Area Structure

In 2017 the General Area continued to provide support to the Business Areas and management in Brussels, and work with ENTSOG members. Support is through the Legal, HR, Finance, IT and Communications functions to ensure there is a robust platform for the activities and deliverables of ENTSOG's Business Areas. The General Area was also responsible for organising the meetings of the General Assembly and the Board as well as coordinating ENTSOG's publications – the Annual Report 2016 and Annual Work Programme 2018. In addition, the activities of the Liaison Group, the Legal Advisory Group and the Financial Committee were organised by the General Area.

Even though the General Area is responsible for coordination of the Annual Report and Annual Work Programme (AWP) these publications are the result of combined efforts from the entire ENTSOG team – the Annual Report assesses ENTSOG's work and achievements retrospectively for each given year and provides an opportunity for comparing the delivered results against the AWP. The ENTSOG AWP contains the expected activities for ENTSOG in the upcoming year, is aligned with the European Commission's (EC's) Three Year Plan, takes into account the ACER opinions on ENTSOG's work and allows the interested stakeholders to prepare their activities vis-àvis ENTSOG.

The Communications Team continued to support managerial activities as well as promoting the activities of ENTSOG to its members and the external environment.

In 2017, the ENTSOG Legal Team ensured the day to day activities of the association from the legal perspective as well as supporting activities undertaken by the different Business Areas, such as support on the implementation of the existing network codes and in some cases effect monitoring.

ENTSOG Human Resources continued with a well-prepared recruitment process, so that the relevant resources and competences were in place to perform the requested activities.

Monitoring Reports

Balancing Network Code

THIRD IMPLEMENTATION MONITORING 2017

The third ENTSOG Monitoring Report on the implementation of the Balancing Network Code aims at monitoring the status of NC BAL implementation in the EU by 1 October 2017.

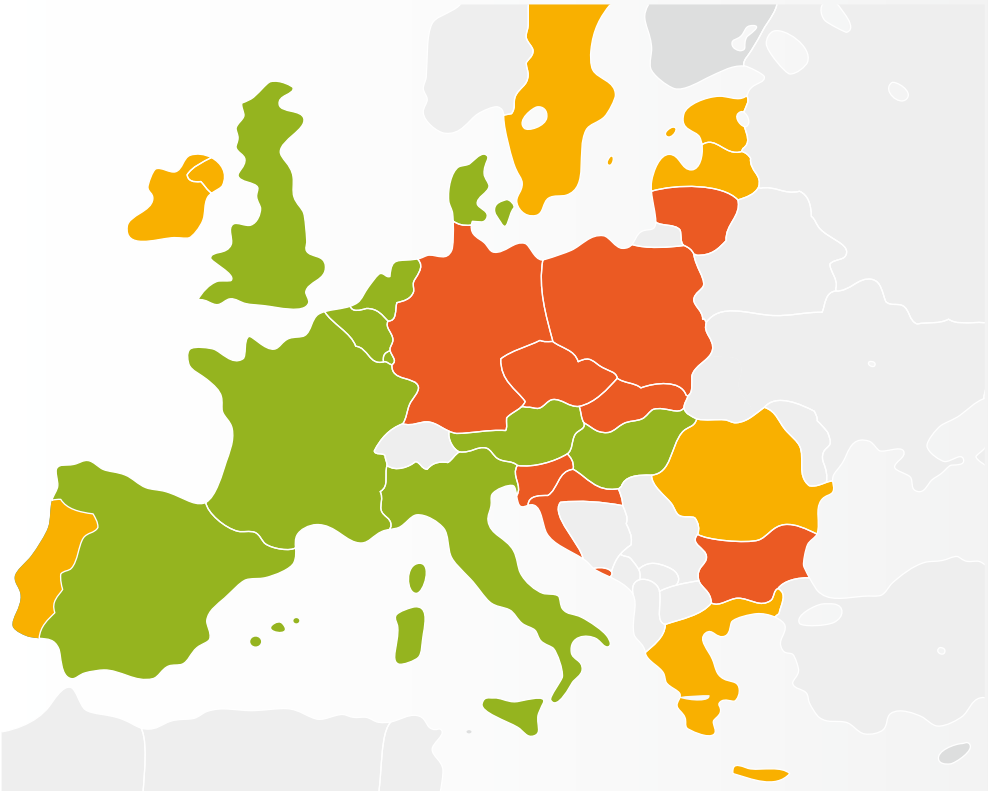
Both ACER and ENTSOG are required to publish monitoring reports – on implementation as well as on effects of the network codes, based for ENTSOG on the provisions of Article 8 (8) of Regulation (EC) no. 715/2009 which empower ENTSOG to monitor and analyse the implementation of the network codes.

Out of 28 EU Member States, the Report evaluates 25 countries (AT, BE/LU, BG, CZ, DE, DK, EE, EL, ES, FR, HU, HR, IE, IT, LT, LV, NL, PL, PT, SE, SI, SK, RO, UK-GB and UK-NI).

Three countries (Cyprus, Finland and Malta) held a derogation meaning that the application of the NC BAL (Code) is not mandatory. Estonia also held a derogation but has responded on a voluntary base. UK is mentioned as UK-GB and UK-NI due to two different balancing regimes in place.

The Code foresees three implementation deadlines: 1 October 2015, 1 October 2016 and up to April 2019. For 10 countries (AT, BE/LU, DE, DK, FR, HU, NL, SI, UK-GB) the Code has been applicable already by 1 October 2015. For another five countries (CZ, ES, IT, HR, PT) which have applied for the provision of Article 52 (1) of the NC BAL, the deadline for full implementation of the Code was by 1 October 2016.

STSP and balancing services in own balancing zone by 1 October 2017



STSP on Trading platforms by 1 October 2017
STSP on Trading platform and/or Balancing platform and/or Balancing Services by 1 October 2017
Only Balancing Services by 1 October 2017


Image courtesy of Snam Rete Gas

Instead of full implementation, 11 countries (BG, DE, EL, IE, LT, LV, PL, RO, SE, SK and UK-NI) applied for interim measures for up to five years from the entry into force of the Code (i.e. until April 2019).

The main findings of this Report are the following:

- 19 countries indicated having implemented the merit order in accordance with Art. 9 with title products at the first place or using only title products whereas 7 countries rely only on balancing services.
- The information provisions according Art. 32 BAL NC (3 types of information) are provided by 23 countries and partially by two countries.
- 20 countries have put in place an information model for daily and non-daily metered off-takes. twelve use the Base Case model, six the Variant 1 and two countries Variant 2. Two countries are still discussing implementation whereas two other countries said that is not necessary since they do not have NDM off-takes connected to their network. Estonia has not chosen yet since they are still holding a derogation
- The cost benefit analysis (CBA) deadline regarding the information provisions passed in April 2016. Seven countries reported that this CBA has been complete.
- Daily imbalance charge provisions are in place in 17 countries while the 8 others are using interim imbalance charge.
- Of the five countries that have already implemented WDOs, two countries stated a change which reduces WDO obligation.
- Five countries reported to have offered Linepack flexibility service by 1 October 2017.
- 11 countries have applied interim measures (balancing platform, balancing services, interim daily imbalance charge and/or tolerances). Some countries have or will reduce progressively the level of their tolerances.
- Four merges of balancing zones (whose two cross-borders) are announced for the next years
  - In France in November 2018,
  - Between Denmark and Sweden, subject to NRAs' agreement, in April 2019,
  - Among the three Baltic States (joint maybe by Finland) by 2020 and
  - In Germany by 2022 at the latest.

SECOND EFFECT MONITORING 2017

Following Article 8(8) of Regulation (EC) No 715/2009, ENTSOG shall monitor the effects of the Balancing Network Code (BAL NC) in the European market. The second ENTSOG report on effect monitoring covers the implementation of the BAL NC on 31 balancing zones across 25 EU countries for the gas year (GY) 2016/2017.

ENTSOG introduces 5 indicators (BAL.1 to BAL.5) in order to show certain effects of the implementation of the BAL NC.

The 25 countries (AT, BG, BE/LU, CZ, DE, DK, EE, EL, ES, FR, HR, HU, IE, IT, LT, LV, NL, PL, PT, SE, SI, SK, RO, UK-GB and UK-NI) where the BAL NC applies are clustered into three groups related to their chosen implementation deadline as follow:

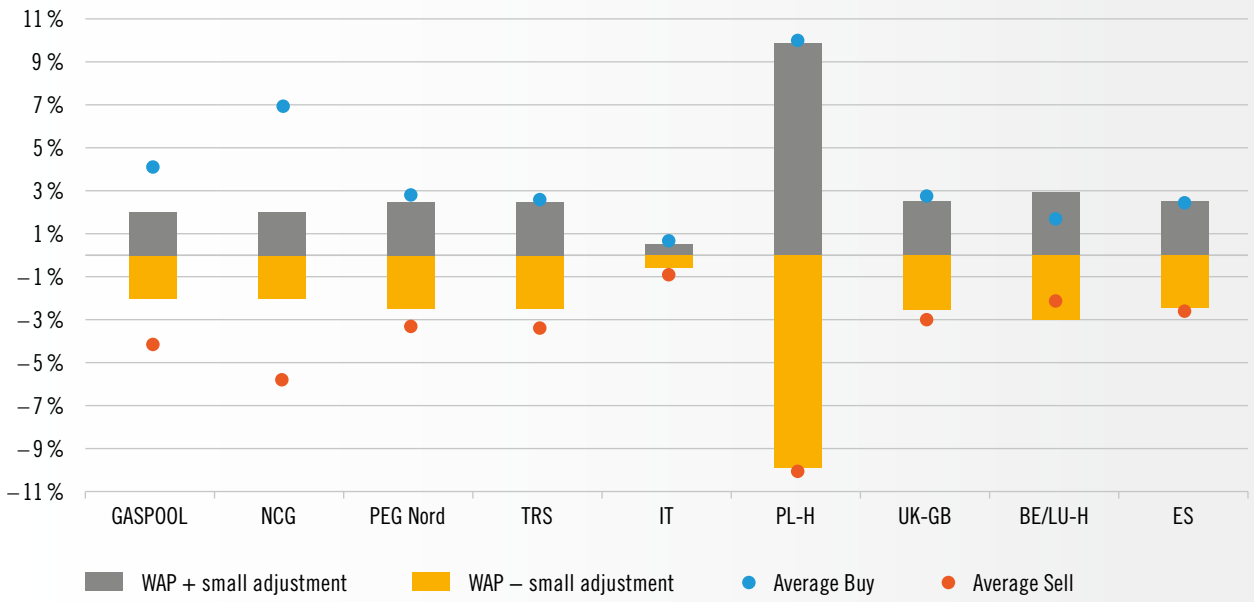
- Cluster 2015: AT, BE/LU, DE, DK, FR, HU, NL, SI and UK-GB (10 countries)
- Cluster 2016: CZ, ES, HR, IT and PT (5 countries)
- Cluster 2019 + Estonia: BG, EE, EL, IE, LT, LV, PL, SE, SK, RO and UK-NI (11 countries). Estonia holds a derogation but has responded on a voluntary base. For the presentation of the indicators, Estonia will be added to this cluster.

In 16 countries (AT, BE/LU, CZ, DE, DK, ES, FR, HR, HU, IT, LT, NL, PL, SI and UK-GB), TSOs rely mainly or exclusively on WD title products for their balancing actions.

Portugal, Estonia and seven countries of cluster 2019 (BG, EL, IE, LV, SE, RO and UK-NI) use only balancing services whereas Slovakia use only balancing platform. This analysis should be taken with caution for Portugal, Latvia, Romania and Slovakia, since in these balancing zones, TSOs have taken only a few balancing actions during the year (for 7 days or less).

In order to reduce its residual balancing role, a TSO should reduce the daily volume traded and/or the number of days it is taking balancing actions during the year. Of interest is the yearly evolution for a given balancing zone, since some intrinsic features of each network will make comparison among balancing zones complicated to interpret.

Average shipper's cost of being balanced by a TSO (in % of the WAP)



For this edition, it is only possible to compare to last year the data of cluster 2015 and some countries of cluster 2019. Countries with WDOs (AT, BE/LU, NL) still have the lowest residual balancing role even if the balancing volumes have increased for BE/LU-H and NL. HU and UK-GB are in the same range. The other balancing zones of cluster 2015 except PEG Nord (DK, TRS, Gaspool, NCG and SI) shows decreases in volume and/or number of days. Germany still has the highest residual balancing role, due to their model: TSOs have to take into account gas quality conversion and the handling of NDM off-take volumes in addition to shipper imbalance volumes.

For the cluster 2019 where it was possible to calculate an evolution, we have seen than LT, SE, IE, UK-NI and PL-H have reduced their daily traded volume and/or the number of trading/balancing days. Only the Greek figures are increasing.

Cluster 2016 countries show a similar behavior as cluster 2015 countries which do not have WDOs in place.

A correlation between daily shipper imbalances and the behavior of the TSO is visible. TSO actions are smaller in volume and in occurrence since they are able to handle some imbalances in their system before having to take a balancing action.

The report also presents a synthetic indicator: the yearly volume for balancing actions.

A new indicator BAL5 present the real cost of being balanced by the TSO for some balancing zones. This real cost is slightly greater than the small adjustment. It is deliberate to incentive the shippers to balance themselves. Indeed, it will be risky for them to take the small adjustment as a proxy of the cost of being balanced by the TSOs in their arbitrage/risk analysis.

OVERVIEW OF THE YEARLY BAL.1 INDICATOR PER COUNTRY WHICH INDICATES THE TSO USAGE OF STSP FOR BALANCING PURPOSES

Cluster	Balancing Zone	WD title	DA title	WD locational	DA locational	WD temporal	WD temporal locational	Balancing platform	Balancing Services
2015	AT	100.0							
	BELUX-H	100.0							
	BELUX-L	100.0							
	DE-GASPOOL	59.9	36.8	0.8	0.3			0.0	2.2
	DE-NCG	51.0	19.5	0.0	0.0	0.0	29.2	0.2	0.2
	DK	100.0							
	FR-PEGNord	98.1		1.9					
	FR-TRS	98.7		1.3					
	HU	99.8		0.1					
	NL	45.3				54.7			
	SI	26.8	72.4						0.8
	UK-GB	100.0							
2016	CZ	78.4	21.6						0.0
	ES	59.8	40.6						
	HR	21.3	0.0	0.0	0.0			78.6	0.0
	IT	99.4	0.6	0.0	0.0				
	PT								100.0
Interim measures	BG-N								100.0
	BG-T								100.0
	EL								100.0
	IE								100.0
	LT	10.3							89.7
	LV								100.0
	PL-H	99.9							0.1
	RO								100.0
	SE								100.0
	SK							100.0	
	UKI								100.0
Degoration	EE								100.0

* Austria figures are only for 8 months (from 1 October 2016 to 31 May October 2017)

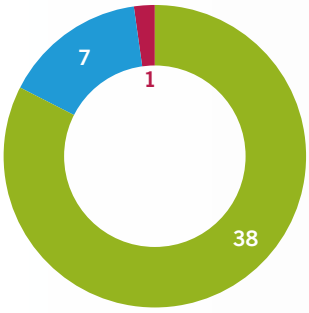
Tariff Network Code

FIRST IMPLEMENTATION MONITORING 2017

The TAR NC has been applicable since 6 April 2017 and it is evident from the first TAR NC monitoring report that the overwhelming majority of TSOs have implemented all the mandatory 2017 requirements from the TAR NC. In addition, 38 out of the 46[1)] TSOs have also implemented the 'early compliance' publication requirements, and TSOs have also started preparations for TAR NC implementation 2018.

For the publication requirements, 40 of the 46[2)] TSOs taking part in implementation monitoring have published the required information as required, and a valid reason was provided by nearly all TSOs that have not published as set out in the TAR NC. Only two TSOs indicated that for some of the publication requirements it is a 'work in progress' or 'will not be done until 2018'. In addition, where the NRA has responsibility for publication, some TSOs have still published information on their websites.

Publication of reserve prices for the current gas year on the TSOs website



All TSOs (46 TSOs)

Have the reserve prices for the current gas year (1 Oct 2017 – 30 Sept 2018) been published on the TSOs website? (For both firm and interruptible capacity products)

- Yes, 38 (from 18 MSs)
- NRA responsibility, 7 (from 5 MSs)
- Non-applicable, 1 (from 1 MS)

Even so, there are a small number of issues that are worth noting. In several cases the information to be published was not in English, or the text on websites leading to the required information was not in English, this issue should be addressed going forward. For three TSOs, even though there is a link on ENTSOG's Transparency Platform (TP) leading to the information on the TSOs or NRAs website, and the information to be published, it was at times difficult to find, as the link did not bring the user directly to the required information. In this case user-friendliness and ease of access can be improved. It would benefit all by the link on ENTSOG's TP leading directly to the standardised section template developed by ENTSOG and its members. The template allows the TSO to place links leading to the information required to be published for Article 29 and 30, including a link to the NRA website if they are the entity responsible for publication.

The 2017 monitoring obligations under the TAR NC Article 36 'Implementation monitoring' only covers Chapter VIII 'Publication requirements'. Despite this, it was decided to include all provisions TSOs must implement and comply with in 2017. This also covers the TAR NC rules from AD 1, coinciding with the entry into force. The outcome gives a more accurate and complete representation of the work TSOs are undertaking in 2017 to implement the TAR NC, and their preparation for implementation in 2018.

Although not mandatory, two TSOs undertook 'intermediate' consultations and published it in English. For the majority of TSOs it is their NRA who is responsible for the consultation process, however, most have already started contributing to the process through meetings and by providing any requested documentation. Eight TSOs are implementing the 'limited scope' rules at points with third countries, and two TSOs at points other than IPs and points other than with third countries. Thirty-six TSOs have commenced using the definitions from the TAR NC that should be introduced in

1) For the publication of the reserve prices, in seven out of the remaining eight cases, it is the responsibility of the NRA and for one TSO it is non-applicable as they don't have an IP. For the publication of Article 30 (1)(b), 11 out of 19 TSOs have published this information, it being the responsibility of the NRA for six TSOs, two TSOs have not published this information as one is applying for a derogation and the decision on this will determine the scope of what is to be published, and for the other TSO it is a work in progress after their derogation expired in 2017.

2) Of the remaining six TSOs, a decision on publication responsibility is still to be made for two TSOs from the same MS, for four TSOs certain requirements were not fulfilled due to, for example, being non-application for one TSO as they don't have an IP, due to pending derogation applications or it being a work in progress for one TSO.

2017, and this will contribute to clearer communication and help avoid any potential misunderstandings.[3)]

For the attribution of the auction premium from the sale of bundled capacity, it was noted in one case only that TSOs will change their current arrangements. One TSO indicated they are planning to change their arrangements regarding the use of fixed or floating payable price, in 2018. All TSOs with fixed price contracts concluded before 6 April 2017 issued the contracts or information to their NRA before 6 May 2017. Both TSOs operating interconnectors have, or will, apply for derogations from some Articles in the TAR NC.

Several TSOs highlighted some key challenges they are facing with the implementation of the TAR NC. Some have already identified solutions to these challenges and for others it is a work in progress. 2017 was a busy year for the implementation of the TAR NC, especially with the publication requirements in December. TSOs indicated that they were already planning for 2018 with the publication requirements before the TSOs new tariff period and before the annual capacity auctions and the consultation process being prominent features of upcoming implementation in 2018.

BASELINE FOR EFFECT MONITORING 2017

Monitoring the effect of the TAR NC as early as 2017 is necessary to provide a baseline for effect monitoring comparison in future years. The effect of the TAR NC should be compared to the baseline situation assessed in 2017, since the implementation of TAR NC Articles is staged during several years.

The 5 EM indicators used by ENTSOG that will be used for the effect monitoring of TAR NC are as follows:

- **Indicator TAR.1 on the 'Level and variability of the under-/over-recovery' for TSOs.**

The objective of TAR.1 is to provide an assessment of the evolution of the regulatory account balance compared to the allowed revenue during the years following the implementation of the TAR NC.

- **Indicator TAR.2 on 'Tariff changes at CAM and non-CAM points'[4)].**

The objective of TAR.2 is to consider the evolution of capacity-based and commodity-based tariffs between the tariff period before the prevailing tariff period and the prevailing tariff period for each TSO.

- **Indicator TAR.3 on 'Evolution of short-term and long-term bookings' of TSO capacity at CAM points.**

This indicator aims to check the possible changes in the way network users book capacities after the TAR NC implementation. The objective is to consider if the TAR NC contributes to the increase in the share of short-term bookings in total bookings.

- **Indicator TAR.4 on 'Publication of information in English'.**

Indicator TAR.4 aims to check if information to be published per the TAR NC will be available in English, which is supposed to facilitate access to markets for all network users. It contributes to transparency and tariff comparability across Europe.

- **Indicator TAR.5 on 'Multipliers for short-term capacity products' at IPs.**

The objective of TAR.5 is to give transparency on multipliers applied to short-term products at IPs only.

3) The remaining TSOs are waiting on: NRA decisions, derogation applications or reviews currently taking place.

4) CAM points in a MS correspond to IPs and – where relevant – non-IPs (including entry-points-from and exit-points-to third countries) where the NRA decided to apply the CAM NC. Non-CAM points are all other points in the specific MS.

The following **conclusions** can be drawn in terms of the 5 EM indicators used in this EM report 2017:

TAR.1 (under-/over-recovery): the evolution is mixed in terms of revenue recovery, with most TSOs reporting mixed results as regards the level and the variability of the regulatory account balance since 2013. However, these results correspond to early years and stem from a limited number of TSOs participating in this indicator. Data to be collected in following years will be useful to verify the impact of the TAR NC on revenue recovery.

TAR.2 (tariff changes): the pattern followed in Europe shows a moderate increase in tariffs across all TSOs between the last 2 tariff periods, with some special cases due to radical changes in capacity-based and commodity-based tariffs. Longer time series will be necessary to check which effect the TAR NC will have on tariff changes.

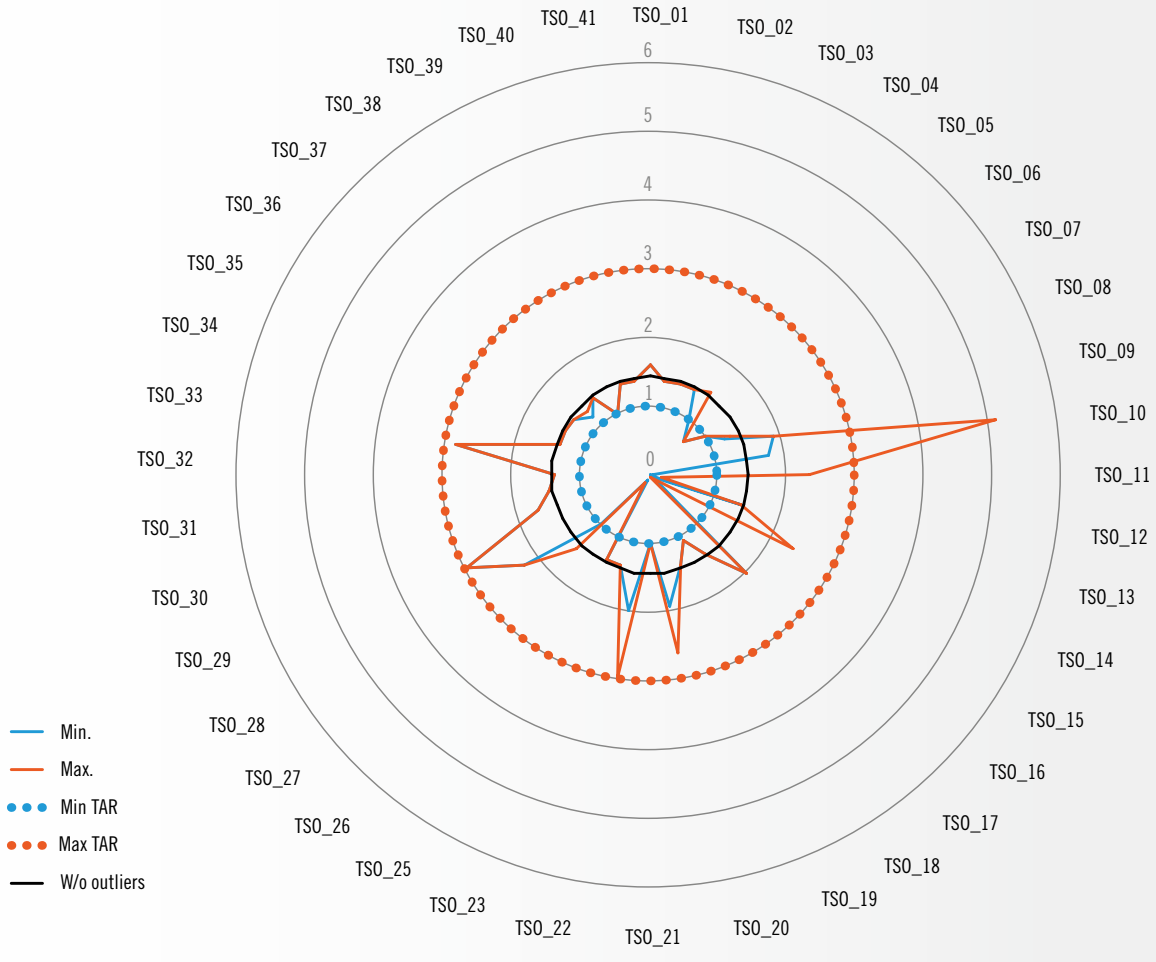
TAR.3 (bookings): for most TSOs taking part in this EM report, the share of yearly capacity products remains dominant in recent years. Nonetheless, between gas years 2014–15 and 2015–16 a slight shift towards short-term products was observed in many TSOs and it is especially beneficial to daily products. This trend will have to be checked in future Effect Monitoring reports.

TAR.4 (publication in English): across the 5 sub-indicators used for TAR.4, it appears that the availability of English translations will mainly depend on the decision of NRAs with regards to the periodic consultation and the consultation on some discounts, multipliers and seasonal factors. More than one third of TSOs highlighted that an English version would be available for the yearly auctions, and more than a half of TSOs stated that an English version would be available for the tariff periods.

TAR.5 (multipliers): considering all types of short-term products, most TSOs already comply with the ranges of multipliers which are defined in the TAR NC. A few TSOs currently use multipliers which are sometimes significantly out of the ranges. For the tariff period following AD3 of the TAR NC, they will have to adjust to these ranges (for quarterly and monthly multipliers), or they will have to provide a due justification for this level (for daily and within-day multipliers).

These baseline results paint a picture of the situation of European TSOs at the start of the implementation of the TAR NC.

TAR.5 sub-indicator on daily multipliers for TSOs in Europe



CAM Network Code

IMPLEMENTATION MONITORING 2017

The implementation of the CAM NC is an important step in the harmonisation and development of an integrated energy market within the European Union. Network Users can join and operate within the integrated market more easily than in a multitude of separate national markets with different rules and regulations for network access and capacity trading. In the European Union, standard procedures for capacity booking are provided within the integrated market, for example unified capacity auction dates for capacity products offered on no more than one common booking platform, with one exception – at any single interconnection point instead of individual TSO websites for the booking procedures. Moreover, capacity products are harmonised and operational steps are facilitated by booking the entry and exit capacity at an IP in one single step by bundling the respective products.

The integrated energy market goal of the CAM NC has been almost achieved. The clear majority of TSOs have implemented all of the mandatory requirements from CAM NC on time, thus providing strong support for the integrated EU gas market. To fully achieve the desired results, certain measures that have not yet been implemented by some TSOs should be done as soon as possible. The implementation monitoring report shows further developments regarding the implementation of provisions in comparison with the monitoring report for 2015.

Both ACER and ENTSOG are required to publish monitoring reports. ENTSOG's and ACER's implementation monitoring reports are complementary. ENTSOG's report was developed based on data provided by TSOs.

The survey conducted by ENTSOG regarding TSO implementation of the CAM NC shows that of the 43 TSOs required to apply CAM NC, 37 have already developed and applied all or at least all mandatory CAM NC measures. This means that they fully comply with the obligations defined in the CAM NC.

Image courtesy of Enagás

6 TSOs indicate that they have partially implemented the CAM NC requirements, while 3 TSOs are under derogation, therefore they were excluded from this monitoring report. Furthermore, 3 TSOs have applied implicit allocation method (Baltic states), where NRA decided not to apply Art. 8 to 37 of the CAM NC (Art. 2(5)).

Based on the last years analysis, ENTSOG decided not to collect data on the CAM NC requirements at each side of an Interconnection Point. ENTSOG believes that the requirements are widely implemented, and IP analysis would not provide added value to the report.

The implementation of the NC CAM provisions involves the auctioning of bundled capacity products at all IPs within the European Union, expect where implicit allocation applies. Three different booking platforms are established in the European Union: PRISMA, GAZ-SYSTEM Auction Platform (GSA) in Poland and the Reginal Booking Platform (RBP) in Hungary.

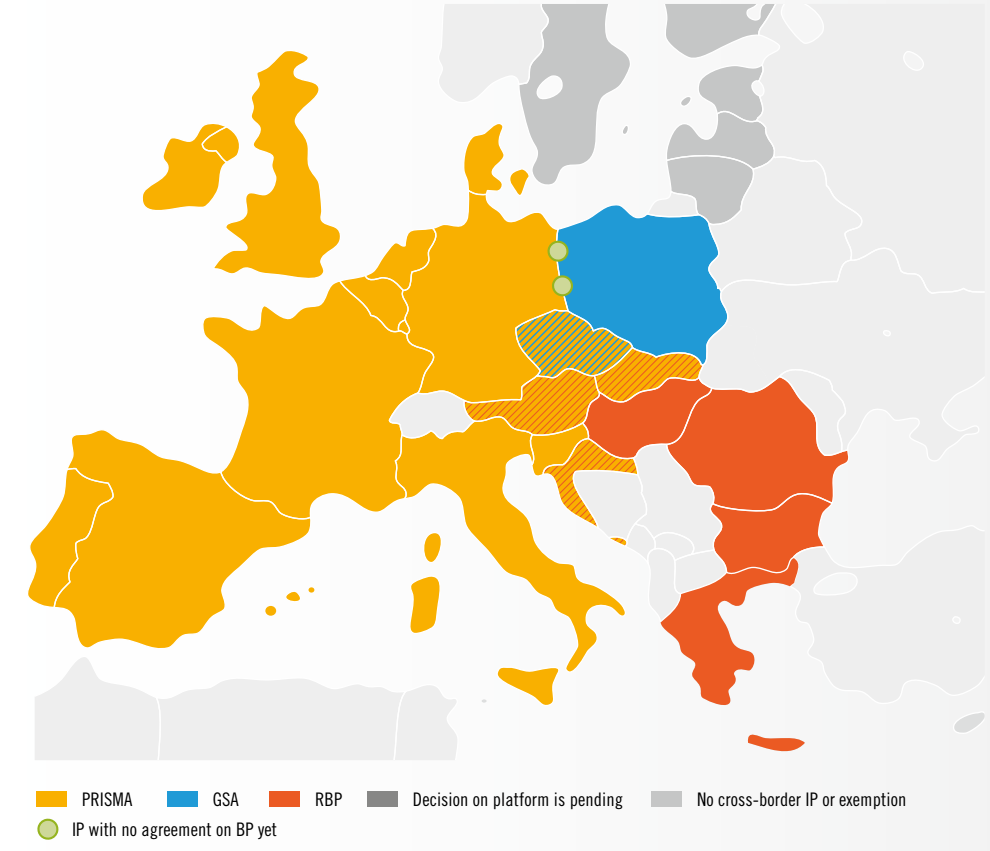
As from end of year 2017, all relevant TSOs are connected to a booking platform. There are only two IPs for which no agreement on a booking platform has been reached so far. These IPs are at the German-Polish border.

Some TSOs have applied interim measures from the Commission Regulation (EU) No 312/2014, also known as Network Code on Gas Balancing of Transmission Networks. In these cases, certain provisions laid out in the CAM NC are not applicable, e.g., the introduction of an over-nomination procedure or the offer of within-day interruptible capacity.

Moreover, at some IPs it is not possible to implement all CAM NC articles in daily use since all technical capacity has already been booked on a long-term basis. Hence, no auctions can take place and neighboring TSOs cannot bundle the available capacity.

However, such restrictions in applying of the CAM NC provisions, especially in the last case, do not necessarily mean a delayed implementation. Despite the non-application of certain rules, TSOs may still have implemented the required measures.

Current use of capacity booking platforms within EU



EFFECT MONITORING 2017

ENTSOG launched the first annual effect monitoring process in December 2017 to ensure the timely publication of results in this Report.

To measure the effects of the CAM NC on the European market, ENTSOG used three indicators that show the impact of the mechanisms.

To monitor the effects of CAM NC, the data was requested from all TSOs using any of the booking platforms for capacity allocation during the gas year 2016/2017. ENTSOG has aimed to produce its report to be supplementary to ACER's report. Regarding the effect monitoring, ENTSOG's focus has been to identify to which extent the main aims of the Network Code have been achieved.

Share of bundled capacity to sold capacity over the entire capacity increases, except of the daily products. One of the reasons for an increase in the bundled capacity share was caused by the exceptional long-term bookings in the annual yearly auction in March 2017.

ENTSOG has further developed the methodology and in this report, the indicator uses only data from IPs that are CAM relevant on both sides. ENTSOG believes this will give a better picture on the volumes of sold bundled capacity. In the previous year's report, all CAM relevant IP sides were considered; even those with third countries and DSOs, where no bundled capacity can be auctioned and allocated.

Image courtesy of TIGF, now Terega

Effect Monitoring Indicators and their results

CAM.1: Share of bundled capacity to sold capacity

The ratio of bundled capacity to firm capacity booked for quarterly products was the highest at 77 % of overall sold quarterly capacity and the second highest was 76 % for yearly capacity. There is an increase in the case of the quarterly products in comparison to previous year monitoring. It can be assumed that four different auction times, as set in Regulation (EC) 2017/459 for the quarterly auctions increased the booking of this capacity product. The next significant increase of the bundled share is in case of monthly products, where half of the capacity has been sold as bundled. The share of bundled capacity in case of daily products has decreased from one third to twenty percent.

CAM.2: Share of secondary market-traded bundled capacity to secondary market traded unbundled capacity

Share of bundled capacity reallocated due to secondary market trades is marginal at less than 1 %. This is caused by the historical dominance of unbundled capacity.

CAM.3: Increase of market participants in a system

The indicator shows an important increase of both, "all participants" and "active participants" in the European market. Number of all participants has increased from gas year 2015/2016 to gas year 2016/2017 with almost 313 new network users being approved in European systems to participate in the gas market. This means an increase of 14% in one year.

Increase of active participants is even clearer, since the number of active participants in European markets has increased by 25% compared to the previous year. In other words, 180 new network users became active on the European market in 2017.

CMP Guidelines

IMPLEMENTATION MONITORING 2017

ENTSOG independently launched its annual implementation monitoring exercise for CMP Guidelines in November 2017.

Most of ENTSOG members have already fully implemented the CMP Guidelines. 42 of 49 TSOs are fully compliant with the CMP Annex, and only two members were still in the process of implementing some of the CMP measures. After the approval by the NRAs of most of the proposals of implementation of the remaining mechanisms by the end of 2017, most of the TSOs that were not fully compliant with CMP rules have finalised the implementation of the remaining mechanisms at the end of the first quarter of 2017. Two TSOs expect to implement all CMP rules before the end of year 2018.

This means that, with the information received by ENTSOG during December 2017 and January 2018, a total compliance with the CMP Annex all around Europe is expected at the end of 2018. This compliance is subject to the expected approval by the NRAs of the CMP implementation proposals provided by the TSOs, and to the fact that the expected times for the implementation of the remaining CMPs are accomplished and experience no delays.

EFFECT MONITORING 2017

ENTSOG launched the annual effect monitoring process in December 2017 to ensure the timely publication of results in the 2017 Annual Report. ENTSOG has aimed to produce reports that can be considered supplementary to ACER's report. Regarding effect monitoring, ENTSOG's focus has in particular been to identify to which extent the main aims of the guidelines has been achieved.

To measure the effects of the CMP Guidelines on the European market, ENTSOG used two indicators that show the impact of the mechanisms.

To monitor the effects of CMP Guidelines, the data was requested from all TSOs that owned IPs considered congested by ACER in his Congestion Report 2016/2017. In addition, ACER undertakes its own monitoring and ENTSOG considers its report as supplementary to ACER's.

Effect Monitoring Indicators and their results

CMP.1: Additional capacity volumes made available through each CMP

As shown, FDA UIOLI is the only CMP mechanism that releases capacity – on a cumulative basis for the period under consideration – at congested IPs while the LT UIOLI mechanism, OS+BB and Capacity Surrender does not provide any additional capacity at congested IP sides to the market for the observed period.

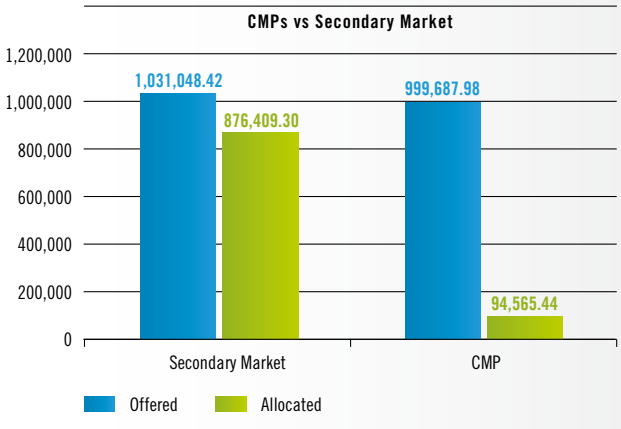
Indicator 2 (CMP.2): Share of capacity reallocated through CMP relative to total capacity reallocated

$$CMP.2 = \frac{ACMP}{(ACMP + ASM)} \times 100 = 9.7\%$$

The chosen indicator compares the allocation of additional capacity through CMP mechanisms with the allocation of the total additional capacity (additional capacity allocated from that offered through CMP mechanism + additional capacity allocated from offered capacity in the secondary market).

In the figure here, it is seen that both means of re-offering unused capacity via CMP mechanisms and the secondary market have been established in Europe. 10 % of the capacity is allocated via CMPs. Bilateral agreements between network users (secondary market) are still the preferred solution for trading unused capacity.

Results of CMP indicator 2



Additionally, it is worth noticing the importance of the secondary market in offering additional capacity. Almost 50 % of the total amount of reoffered capacity is traded on the secondary market. However, it is important to note that from the total amount of allocated capacity that is re-offered, 85 % of it is allocated to other network users on the secondary market.

To conclude, the current ways of offering additional capacity from unused allocated capacity effectively allows network users to access markets in situations where IPs are contractually congested and technical capacity is not available. The current situation in the European gas market shows that, of the total amount of additional capacity offered through CMP mechanisms, around 10 % is reallocated. This means that contractual congestion situations are not limiting market access to other network users who do not hold capacity at the relevant IPs. Otherwise, the demand for additional capacity and reallocated amounts would be much higher. The secondary market is an important tool for trading unused capacity between network users and thus significantly helps to ease market access at congested IPs. It can therefore be considered to be a widely accepted alternative to CMP mechanisms by network users.

Network Code on Interoperability and Data Exchange Rules

As per Article 8 (8) of Regulation (EC) No 715/2009, as well as to Article 25 of the INT NC, ENTSOG monitors the implementation of the Network Code. The first implementation monitoring report of ENTSOG was published in September 2016. By 15 January 2018, TSOs provided ENTSOG with the necessary information (by questionnaire) allowing the fulfilment of its monitoring and reporting obligations for 2017.

The data provided by 45 TSOs have been used as the basis for this report.

Based on the replies from participating TSOs, the report shows that 69 of 72 interconnection points (IPs) are covered with interconnection agreements (IAs) between adjacent TSOs. Results indicate that, in the signed IAs, the adjacent TSOs agreed on the main terms and conditions foreseen in the INT NC. In the most of agreements, the lesser rule is implemented as the matching rule and the operational balancing account (OBA) as allocation rule.

In the majority of IAs measurement principles and rules for flow control which are foreseen in the INT NC are taken into consideration.

Chapter IV of the INT NC covers gas quality and odourisation issues and prescribes instruments for managing cross-border trade restrictions due to differences in terms of gas quality or odourisation practices. According to the results, no cross-border trade restrictions due to differences in gas quality or odourisation practices. On 2 IPs, a potential restriction has been reported by only one of the adjacent TSOs. Nevertheless, the issues are solved by cooperation between the relevant TSOs and therefore, not subject to the procedure of Article 15 (2).

More than 84 % of the TSOs comply with the obligations regarding short-term monitoring on gas quality (Wobbe Index [WI] and Gross Calorific Value [GCV] hourly data for each entry IP).

The data exchange security requirements stated in article 22 of the INT NC are met by 84 %, (this requirement – and the whole chapter 5 – is not applicable 11 % of TSOs).

The majority of TSOs (68.9 %) have already implemented the common data exchange solutions.

Regarding the 20 % TSOs who have not implemented these solutions yet, 2 TSOs have only implemented the optional solution (interactive) but not the mandatory one (document-based) with NRA approval. One TSO has another interpretation of the provisions in the network code and has implemented interactive as well as the integrated solution, but not the mandatory one.

The implementation of CNOTs should have been completed by November 2017, which is 12 months after the publication.

In accordance with Article 23.2, other solutions from those listed in Article 21 are in place for 31 TSOs.

SUPPORT THE TSOs OF MEMBER STATES, ENERGY COMMUNITY AND THIRD COUNTRIES IN THE IMPLEMENTATION OF THE NC

The Interoperability team and WG keep building a close cooperation with the Energy Community through the ReCo teams and joint workshop on Interoperability and Transparency and advise on the roadmap for implementation of the NC within the Contracting Parties and adjacent Member States.

IT and Research & Development Activities

IT Activities

TARIFF PUBLICATION

Following the completion of the Tariff Network Code, there is a requirement for all TSOs to publish tariff information in a consistent and standardised format allowing comparisons of tariff information across different products types, discounts and periods for all TSOs.

A significant IT project was completed by ENTSOG to collect tariff data from TSOs and to publish it on the Transparency Platform (TP). The project was completed on time to allow all TSOs publish tariff data during December 2017.

ENTSOG have also delivered a web application tool to allow TSOs and NRAs input tariff information centrally. This eliminated the need for some TSOs or NRAs to have an IT project to develop an interface to deliver tariff data to the TP.

TRANSPARENCY PLATFORM ENHANCEMENTS

A number of different and significant enhancements were delivered in order to continuously improve the performance and functionality of the TP.

Following requests from stakeholders, there were a number of functionality enhancements delivered including improvements to the TP API to extract data from the TP, additional data and filters on available on the TP, and improvements to visualisation components of the TP.

A performance improvement project was completed to deliver enhanced performance of loading of data from TSOs, introduce a "Quality of Service" to loading of data and provide scalability for future data volumes.

ACER has undertaken to standardise the format of inside information, Urgent Market Messages (UMM) across all relevant websites and platforms, including the TP. ENTSOG has developed a new interface to allow TSOs to create UMM on the TP, in line with ACER format, and an automated integration with ACER. This will be delivered in 2018.

CYBER SECURITY PROGRAMME

During 2017, ENTSOG IT have developed a Cyber Security programme that further protects ENTSOG information assets from Cyber Security attacks. The programme also ensures that ENTSOG delivers on its obligations for the General Data Protection Regulation (GDPR) before it comes into effect in May 2018.

The ongoing programme includes the development and implementation of policies, controls and governance that balances the need to protect ENTSOG and its members against Cyber Security attacks with the need to run the organisation.

IMPROVED DATA COLLECTION PORTAL

The Project Data Collection Portal evolved significantly to facilitate both the TYNDP 2018 data collection and the PCI application data collection.

The layout was enhanced and made more user-friendly; unnecessary questions were removed, and new ones were added; and the usage of tool tips and explanatory texts was systematised. A comprehensive handbook was produced to document the Project Data Collection portal.

A comprehensive set of reports was produced and integrated in the data collection interface, to assist and support project promoters in the data collection process, and provide a better insight into the data submitted.

Research and Development Plan

To meet stakeholder expectations, ENTSOG methodologies, tools and data scenarios are continually being improved. The resulting improvements have provided benefits to a number of ENTSOG deliverables and activities.

The Supply and Demand (S&D) and NeMo Kernel Groups form the core of the Investment Working Group in charge of developing innovative approaches and tools. In 2017, ENTSOG and its members also participated in a joint Scenario Building Task Force with ENTSO-E. This intense cooperation has allowed for in-depth knowledge sharing, and a much better understanding by each association of the dynamics and drivers of the other sector.

SUPPLY AND DEMAND

The Supply and Demand Kernel Group performs research to expand knowledge of the supply and demand aspects of European gas. This knowledge has been enriched by the cooperation with ENTSO-E on scenario building within the joint Scenario Building Task Force. This knowledge is used to develop an improved definition of the assumptions and approaches used in the Seasonal Outlooks and TYNDP.

Analysis of Gas Demand

During 2017, ENTSOG further developed its knowledge and analysis of gas demand has been, which was driven in 2017 by the creation of the TYNDP 2018 Scenario Report. This is especially relevant in the work completed in collaboration with ENTSO-E regarding the power sector, but also by a number of factors.

For long-term gas demand, developing the scenarios for both TYNDP 2017 and TYNDP 2018, including the extensive stakeholder engagement during this process. The scenario storylines for TYNDP 2018 have encompassed in greater detail the gas and electricity aspects, leading to these processes, which has led to increased focus on sectoral demand behaviour, interrelationships and dynamics. This is especially evident in the work completed in collaboration with ENTSO-E regarding the power sector, both in the use of data available from e-TYNDP 2016 to create the thermal-gap methodology for TYNDP 2017 and the joint development of TYNDP 2018 scenarios.

This has been achieved in both the context of country-level specifics and EU-level dynamics, with efforts to understand how these link in the greater context of European climate goals and how gas plays a key role in the future energy mix.

Analysis of Gas Supply

The framework for the gas supplies was developed by the Supply and Demand KG and completed for TYNDP 2018 Scenario Report and both Seasonal Outlooks taking into account stakeholder feedback.

Regarding the Seasonal Outlooks reports, the definition of supply patterns was derived from the supply mixes captured for the last Summer and Winter Reviews respectively. This method makes it possible to cap the elasticity given to the model for each of the supplies to reliable levels, while giving additional flexibility only to some of the sources when needed to reach the correspondent seasonal targets.

For TYNDP 2018 Scenario Report, the supply assumptions were defined as potential supplies from different sources. In order to capture the uncertainty in the development of the different supplies, the minimum and maximum potentials were defined as the lower and upper limits for the expected imports coming from each source.

The development of these potentials by the Supply and Demand KG was based on publicly available literature and reports and later on discussions between members and stakeholders held during the feedback process. These potentials have covered supplies from outside the EU arriving via pipeline from Russia, Norway, Algeria, Libya, Azerbaijan, Turkey, Turkmenistan and also as LNG.

Moreover, based on stakeholder feedback for TYNDP 2017, it was decided to use a more realistic approach for the LNG diversification by splitting the source in several net exporting regions as defined in the IEA World Energy Outlook.


Image courtesy of DESFA

Supplies also include conventional national production and green gases coming from inside the EU. With the TYNDP 2018 Scenario Report, the first year of the assessment (2017) by taking into account the expertise developed by ENTSOG has also taken a much deeper look into the potential development of green gases: biomethane as well as gases produced from power-to-gas facilities. On biomethane ENTSOG has in particular cooperated with EBA, the European Biogas Association. In terms of power-to-gas production, ENTSOG has developed a first on the seasonal outlooks. The supply potentials for the first year of the assessment were then built using the average of the maximums and minimums historically observed for each source in line with the approach in close cooperation with ENTSO-E. The ENTSOs intend to further improve their approach to power-to-gas in view of TYNDP 2020 scenarios retained for the Seasonal Supply Outlooks.

NEMO KERNEL GROUP

Improvement of the modelling tool

In 2017, ENTSOG initiated the development of the modelling assumptions to reflect the update of the CBA methodology. This work is pursued in 2018.

ENTSOG also introduced in its modelling a differentiated L-gas topology to better simulate the concerned areas.

CBA Kernel Group

In 2017 the CBA KG worked in developing the principle for updating the ENTSOG CBA Methodology and contributed in elaborating the draft 2nd CBA Methodology document that was published by ENTSOG on 24 July 2017.

Organisational Setup and Financials

Organisation | Team | Financial Statements | Press Releases
List of Events 2017

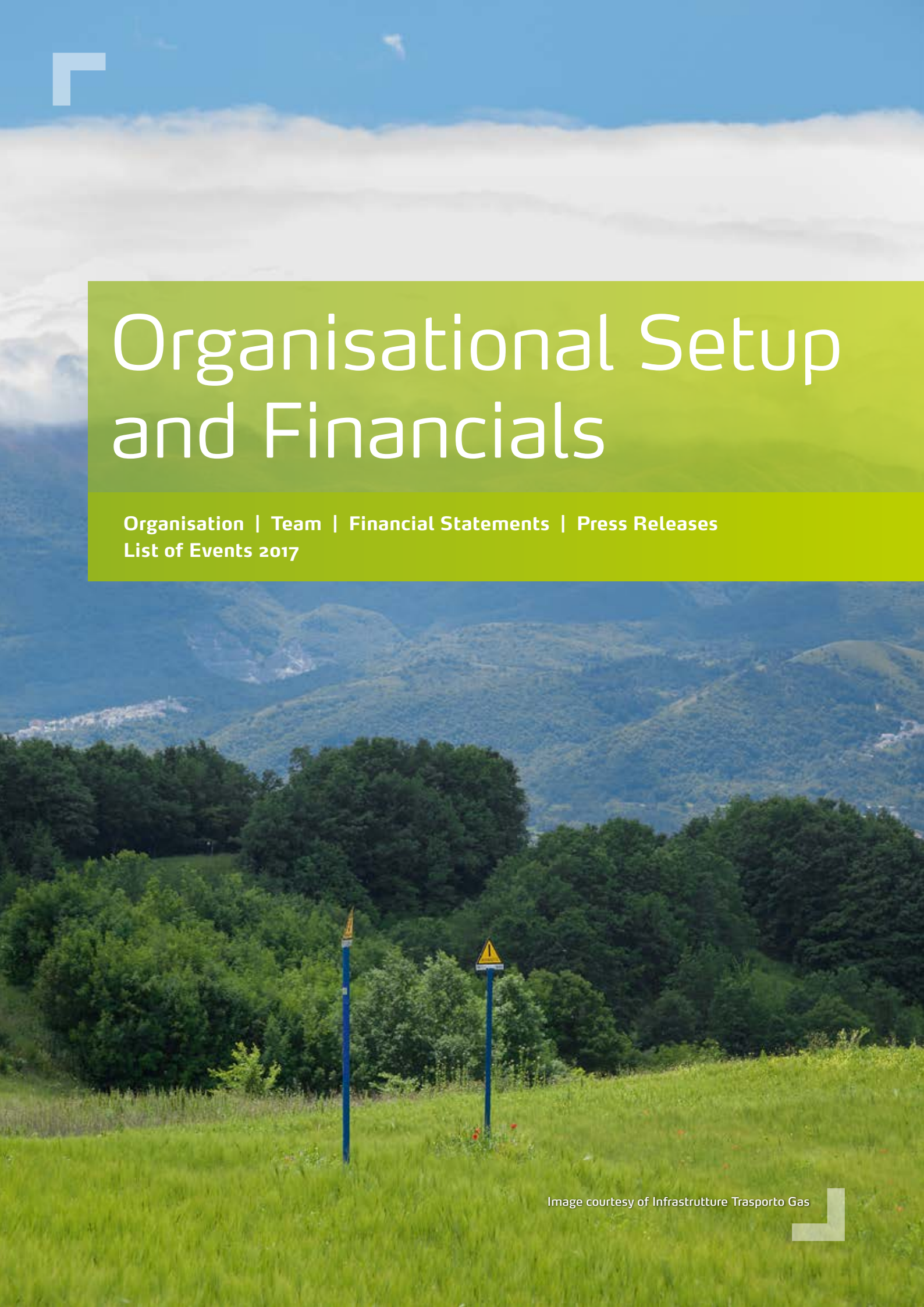


Image courtesy of Infrastrutture Trasporto Gas

Organisation

In 2017, our Members, Associated Partners, Observers and Management Board underwent the following changes:

- The General Assembly accepted Moldovatransgaz as an Observer as of 1 July 2017.
- The ENTSOG General Assembly approved some changes in the Board composition:
  - The replacement of Ms. Annie Krist by **Mr. Anne Boorsma** as of 1 April 2017
  - The replacement, as of 1 July 2017 of:
    - Mr. Marjan Eberlinc (Plinovodi d.o.o.) by **Mr. Vedran Špehar** (Plinacro Ltd.);
    - Mr. Zoltan Gellenyi (FGSZ) by **Mr. Andreas Rau** (Net4Gas s.r.o);
    - Mr. Miroslav Bodnar (eustream a.s.) by **Mr. Paweł Jakubowski** (Gaz-System S.A.)
  - The replacement, as of 26 October 2017 of:
    - Mr. Anne Boorsma by **Mr. Bart Jan Hoevers** (Gasunie Transport Services); and
    - Mr. Georgi Gegov by **Ms Denitsa Beyazova** (Bulgartransgaz).

ENTSOG Board, from left to right: **Stephan Kamphues** (ENTSOG President, Open Grid Europe, Germany, **Francisco Pablo de la Flor García** (Enagás, Spain), **Nicola Pitts** (National Grid, Great Britain), **Andreas Rau** (NET4GAS, Czech Republic), **Gabriela Mares** (Transgaz, Romania), **Paweł Jakubowski** (GAZ-SYSTEM, Poland), **Denitsa Beyazova** (Bulgartransgaz, Bulgaria), **Thierry Trouvé** (GRTgaz, France), **Gaetano Mazzitelli** (Snam Rete Gas, Italy), **Christoph von dem Bussche** (GASCADE, Germany), **Pascal De Buck** (Fluxys, Belgium), **Bart Jan Hoevers** (Gasunie Transport Services, Netherlands), **Vedran Špehar** (Plinacro, Croatia)

Team

MANAGEMENT SUPPORT TEAM

From left to right: Paul McCarthy, Maria Dhénin, Nicolas van der Maren, Agata Musial, Carmel Carey, Jan Ingwersen, Sara Piskor, Bogdan Gugescu, Areti Kostaraki, Laura Bordin.

MARKET TEAM

From left to right: Peter Hlusek, Seán Kinsella, Arjan Kleine, Laurent Percebois, Andreas Martens, Claude Mangin, Jan Vitovský, Alexandra Kiss, Malcolm Arthur, Irina Fix, Irina Oshchepkova.

From left to right: Jacques Reberol, Louis Watine, James Gudge, Rares Mitrache, Stefano Astorri, Arturo de Onís, Céline Heidrecheid, Anne Boorsma, Natalia Romero, Cihan Soenmez, Mirsada Spaho.

From left to right: Mirsada Spaho, Anton Kolisnyk, Martin Graversgaard Nielsen, Hendrik Pollex, Katherine Stannov, Marin Zwetkow, Antonio Gómez Bruque, René Prins.

Financial Statement 2017

The Financial Statement 2017 was approved by the ENTSOG General Assembly on 12 April 2018

ASSETS

Values EUR	Note	2017	2016
FIXED ASSETS	20/28	**260,391.89**	**377,322.65**
I. Formation expenses (Note I)	20		
II. Intangible assets (Note II)	21		
III. Tangible assets (Notes III)	22/27	**260,391.89**	**377,322.65**
A. Land and buildings	22		
B. Plant, machinery and equipment	23		
C. Furniture and vehicles	24	88,989.43	132,808.06
D. Leasing and similar rights	25		
E. Other tangible assets	26	171,402.46	244,514.59
F. Assets under construction and advance payments	27		
IV. Financial fixed assets (Notes IV and V)	28		
A. Affiliated companies	280/1		
1. Participating interests	280		
2. Amounts receivable	281		
B. Other companies linked by participating interests	282/3		
1. Participating interests	282		
2. Amounts receivable	283		
C. Other financial fixed assets	284/8		
1. Shares and interests	284		
2. Amounts receivable and cash guarantees	285/8		
CURRENT ASSETS	29/58	**1,959,331.83**	**2,338,175.82**
V. Amounts receivable after more than one year	29		
A. Trade debtors	290		
B. Other amounts receivable	291		
VI. Stocks and orders in progress	3		
A. Stocks	30/36		
1. Raw materials and consumables	30/31		
2. Work in progress	32		
3. Finished goods	33		
4. Goods purchased for resale	34		
5. Immovable property acquired or constructed for resale	35		
6. Advance payments	36		
B. Orders in progress	37		
VII. Amounts receivable within one year	40/41	**67,518.88**	**115,086.03**
A. Trade debtors	40		38,860.74
B. Other amounts receivable	41	67,518.88	76,225.29
VIII. Short-term investments (Notes V and VI)	50/53		
A. Own shares	50		
B. Other inv estments and deposits	51/53		
IX. Cash at bank and in hand	54/58	**1,817,474.49**	**2,211,348.79**
X. Deferred charges and accrued income (Note VII)	490/1	**74,338.46**	**11,741.00**
TOTAL ASSETS		**2,219,723.72**	**2,715,498.47**

Values EUR	Note	2017	2016

LIABILITIES AND OWNERS' EQUITY

CAPITAL AND RESERVES		10/15	**1,289,125.41**	**1,895,248.67**
I.	**Capital (Note VIII)**	10	**619,892.00**	**619,892.00**
	A. Issued capital	100	619,892.00	619,892.00
	B. Uncalled capital	101		
II.	**Share premium account**	11		
III.	**Revaluation surplus**	12		
IV.	**Reserves**	13	**300,000.00**	**300,000.00**
	A. Legal reserves	130		
	B. Reserves not available for distribution	131		
	1. In respect of own shares held	1310		
	2. Other	1311		
	C. Non-taxable reserves	132		
	D. Reserves available for distribution	133	300,000.00	300,000.00
V.	**Profit carried forward**	140	**369,233.41**	**975,356.67**
	Loss carried forward	141		
VI.	**Investment grants**	15		
VII.	**Advance to associates on distribution of net assets**	19		
PROVISIONS AND DEFERRED TAXATION		16		
VIII.	**A. Provisions for liabilities and charges**	160/5		
	1. Pensions and similar charges 160	160		
	2. Tax charges	161		
	3. Major repairs and maintenance	162		
	4. Other liabilities and charges (Note IX)	163/5		
	B. Deferred taxation	168		

Values EUR			Note	2017	2016
CREDITORS			17/49	**930,598.31**	**820,249.80**
IX.	**Amounts payable after more than one year (Note X)**		17		
	A.	Financial debts	170/4		
		1. Subordinated loans	170		
		2. Unsubordinated debentures	171		
		3. Leasings and similar obligations	172		
		4. Credit institution	173		
		5. Other loans pay able	174		
	B.	Trade debts	175		
		1. Suppliers	1750		
		2. Bills of exchange pay able	1751		
	C.	Advances received on orders in progress	176		
	D.	Other amounts payable	178/9		
X.	**Amounts payable within one year (Note X)**		42/48	**867,514.54**	**807,499.80**
	A.	Current portion of amounts pay able after one year	42		
	B.	Financial debts	43		
		1. Credit institution	430/8		
		2. Other loans	439		
	C.	Trade debts	44	828,278.50	757,003.63
		1. Suppliers	440/4	828,278.50	757,003.63
		2. Bills of exchange payable	441		
	D.	Advances received on orders in progress	46		
	E.	Taxes, salaries and social security	45	39,236.04	50,496.17
		1. Income taxes	450/3		
		2. Salaries and social security charges	454/9	39,236.04	50,496.17
	F.	Other amounts payable	47/48		
XI.	**Accrued charges and deferred income (Note XI)**		492/3	**63,083.77**	**12,750.00**
TOTAL LIABILITIES				**2,219,723.72**	**2,715,498.47**

2. INCOME STATEMENT

Values EUR		Note	2017	2016
I.	**Sales and services**	**70/74**	**7,242,356.44**	
	A. Turnov er (Note XII, A)	70	7,102,499.96	7,099,999.96
	B. Variation in stocks of orders and goods in progress and f inished goods (increase +, decrease -)	71		
	C. Own construction capitalised	72		
	D. Other operating income (Note XII, B)	74	109,364.20	142,356.48
II.	**Costs on sales and services**	**60/64**	**(7,813,017.29)**	**(6,704,891.90)**
	A. Raw materials, consumables and goods f or resale	60		
	1.Purchases	600/8		
	2. Stock v ariation (increase -, decrease +)	609		
	B. Miscellaneous goods and serv ices 61 7.186.579,94 6.098.327,10			
	C. Salaries and wages, social security costs and pensions (Note XII, C2)	62	474,700.65	462,685.90
	D. Depreciations and amounts written down on formation expenses, intangible and tangible fixed	630	149,744.70	142,510.41
	E. Amounts written down on stocks, orders in progress and trade debtorss (increase +, decrease -)	631/4	137.50	
	F. Provisions liabilities and charges (increase +, decrease -) (Notes XII, C3 and E)	635/7		
	G. Other operating charges (Note XII, F)	640/8	1,854.50	1,368.49
	H. Operating charges capitalised as reorganisation costs	649		
III.	**Operating profit**	**70/64**		**537,464.54**
	Operating loss	**64/70**	**(601,153.13)**	
IV.	**Financial income**	**75**	**106.16**	**309.99**
	A. Income from financial fixed assets	750		
	B. Income from current assets	751	20.82	153.57
	C. Other financial income (Note XIII, A)	752/9	85.34	156.42
V.	**Financial charges**	**65**	**(5,076.29)**	**(5,985.03)**
	A. Debt charges (Notes XIII, B and C) 650			
	B. Amounts written down on current assets other than mentioned under II.E. (increase +, decrease -)	651		
	C. Other financial charges (Note XIII, E)	652/9	5,076.29	5,985.03
VI.	**Profit on ordinary activities before taxes**	**70/65**		**531,789.50**
	Loss on ordinary activities before taxes	**65/70**	**(606,123.26)**	

Values EUR		Note	2017	2016
VII.	**Extraordinary income 76**			
A.	Adjustments to depreciation and amounts written down on tangible and intangible fixed assets	760		
B.	Adjustments to amounts written down on financial fixed assets	761		
C.	Adjustments to provisions for extraordinary liabilities and charges	762		
D.	Realised gain on disposal of fixed assets	763		
E.	extraordinary income (Note XIV, A)	764/9		
VIII.	**Extraordinary charges 66**			
A	Extraordinary depreciations and amounts written down on formation expenses, intangible and	660		
B.	Amounts written down on financial fixed assets	661		
C.	Prov isions f or extraordinary liabilities and charges (increase +, decrease -)	662		
D.	Realised loss on disposal of fixed assets	663		
E.	Other extraordinary charges (Note XIV, B)	664/8		
F.	Extraordinary charges capitalised as reorganisation costs	669		
IX.	**Profit for the period before taxes**	**70/66**		**531,789.50**
	Loss for the period before taxes	**66/70**	**(606,123.26)**	
IX	**bis. A. Transfers from deferred taxation**	**780**		
B.	Transf er to def erred taxation	680		
X.	**Income taxes**	**67/77**		**(50.00)**
A.	Income taxes (Note XV)	670/3		(50.00)
B.	Income tax adjustments and write-back of tax provisions	77		
XI.	**Profit for the period**	**70/67**		**531,739.50**
	Loss for the period	**67/70**	**(606,123.26)**	
XII.	**Transfers from non-taxable reserves**	**789**		
	Transfers to non-taxable reserves	**689**		
XIII.	**Profit for the period available for appropriation**	**(70/68)**		**531,739.50**
	Loss for the period available for appropriation	**(68/70)**	**(606,123.26)**	

Values EUR		Note	2017	2016
A.	**Profit to be appropriated**	**70/69**	**369.233,41**	**975,356.67**
	Loss to be appropriated	**69/70**		
	1. Profit for the period available for appropriation	70/68		531,739.50
	Loss for the period available for appropriation	68/70	(606,123.26)	
	2. Profit brought forward from preceding period	790	975,356.67	443,617.17
	Loss brought forward from preceding period	690		
B.	**Transfers from capital and reserves**	**791/2**		
	1. to capital and share premium account	791		
	2. from reserves	792		
C.	**Transfers to capital and reserves**	**691/2**		
	1. to capital and share premium account	691		
	2. to legal reserve	6920		
	3. to other reserves	6921		
D.	**Profit/Loss to be carried forward**	**793/693**	**(369,233.41)**	**(975,356.67)**
	1. Profit to be carried forward	693	(369,233.41)	(975,356.67)
	2. Loss to be carried forward	793		
E.	**Shareholders' contribution against the loss**	**794**		
F.	**Profit to be distributed**	**694/6**		
	1. Dividends	694		
	2. Directors' emoluments	695		
	3. Other beneficiaries 696			
OFF BALANCE SHEET				

Press Releases 2017

03 March	ENTSOG informs about the first demand assessment for incremental capacity in 2017
07 March	ENTSOG launches public consultation on alignment of GT&Cs for bundled capacity contracts
17 March	ENTSOG announces timescales for CAM NC related first incremental process
24 March	Common statement (ENTSO-E, ENTSOG, SolarPower Europe, Wind-Europe, EDSO, SEDC, T&D Europe) The European Dream we share, sixty years after the Treaties of Rome: clean energy, innovation and jobs
04 April	TSOs of the North West European Region publish NW GRIP 2017
14 April	ENTSOG launches public consultation on capacity conversion model
27 April	ENTSOG adopts Summer Supply Outlook 2017 & Summer Review 2016
28 April	ENTSOG publishes Final TYNDP 2017
03 May	Joint Press Statement (European Commission, ACER, ENTSOG, ENTSO-E): "The Network Codes for the Energy Union: Joining forces on implementation"
17 May	ENTSOG reminds on Public Consultation of Data Communication Harmonisation
19 May	TSOs of the Central Eastern Europe region publish their Gas Regional Investment Plan 2017
13 June	ENTSOG publishes Annual Report 2016 and Network Code Monitoring Reports 2016
26 June	TSOs of the BEMIP Region publish third edition of GRIP
11 July	TSOs of the South-North Corridor Region publish third edition of GRIP
18 July	ENTSOG publishes Transmission Capacity Map 2017
31 July	ENTSOG publishes Demand Assessment Reports of TSOs
01 August	ENTSOG and ACER broaden scope of Functionality Platform
19 September	TSOs of South Corridor Region publish third edition of their GRIP
02 October	ENTSOs open public consultation process for TYNDP 2018 Scenarios Report
17 October	ENTSOG publishes the Winter Supply Outlook 2017/18 and Winter Review 2016/17
31 October	ENTSOG informs about revised Security of Supply Regulation published 28 October 2017
13 November	ENTSOG publishes the System Development Map 2016/2017 in cooperation with Gas Infrastructure Europe
21 November	ENTSOG publishes the first Union-wide Security of Supply Simulation Report
05 December	ACER and ENTSOG upgrade the functionality platform to support the functionality of gas network codes
20 December	ENTSOG initiates project collection process for the Ten-Year Network Development Plan 2018

List of Events 2017

TYNDP AND SCENARIOS

20 December 2016 – 06 February 2017	ENTSOG TYNDP 2017 Public Consultation
23 January	ENTSOG Workshop for presentation of TYNDP 2017
19 May – 14 June	Web-based Public Consultation for ENTSOG Cost-Benefit Analysis (CBA) methodology update
02 October – 11 November	TYNDP 2018 Scenario Report Public Consultation
23 November	ENTSOG Workshop on "TYNDP 2018 project collection: implementation guidelines and timeline"
07 December	ENTSOG Workshop on the Supply Potentials and Renewable Gases for TYNDP 2018

GAS QUALITY, DATA & TRANSPARENCY, INTEROPERABILITY

16 May	ENTSOG EU Data Communication Harmonisation for Gas Transmission Workshop
17 May – 14 June	ENTSOG Public Consultation for EU Data Exchange Harmonisation
28 September	CEN-ENTSOG Workshop on Wobbe Index and Gross Calorific Value in the European gas value chain
9 November	Joint workshop between the Energy Community and ENTSOG on the developments on Interoperability and the revised SoS Regulation
6 December	ENTSOG 11th Transparency Workshop in Brussels

NETWORK CODES

28 March	ENTSOG Workshop for the CAM NC amendment
29 March	ACER and ENTSOG webinar on the new "Joint Functionality Process for Gas Network Codes"
03 – 04 May	Joint Network Code Event: European Commission, ACER, ENTSO-E and ENTSOG
04 October	ENTSOG Network Codes and Stakeholder Engagement Workshop
05 October	ENTSOG 2nd Implementation Workshop for the Network Code on Harmonised Transmission Tariff Structures for Gas (TAR NC)
22 November	3rd joint ENTSOG/ACER Workshop on Gas Balancing
01 December	ENTSOs Winter Outlook 2017/18 Webinar

Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
AWP	Annual Work Programme
BAL NC	Network Code on Gas Balancing of Transmission Networks
BAL WG	Balancing Working Group
BOA	ENTSOG Board
CAM	Capacity Allocation Mechanisms
CAM NC	Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems
CAM WG	Capacity Allocation Working Group
CBA	Cost-Benefit Analysis
CBA KG	Cost-Benefit Analysis Kernel Group
CEER	Council of European Energy Regulators
CEN	European Committee for Standardisation
CIO	Central Issuing Office
CMP	Congestion Management Procedures
CNOT	Common Network Operations Tools
DSO	Distribution System Operator
EC	European Commission
EDS	European Dispatch Service
EFET	European Federation of Energy Traders
EIC	Energy Identification Coding
EIP	Energy Infrastructure Priorities
EnC	Energy Community
ENTSO-E	European Network of Transmission System Operators for Electricity
ENTSOG	European Network of Transmission System Operators for Gas
EU	European Union
FUNC KG	Functionality Kernel Group
GCG	Gas Coordination Group
GT&C KG	General Terms & Conditions Kernel Group
GIE	Gas Infrastructure Europe
GRIP	Gas Regional Investment Plan
IEM KG	Implementation & Effect Monitoring Kernel Group
INT NC	Network Code on Interoperability and Data Exchange Rules
INT WG	Interoperability Working Group
ITC KG	Information Technology Communication Kernel Group
KG	Kernel Group(s)
LIO	Local Issuing Office
MW	Megawatt
NeMo KG	Network Modelling Kernel Group
NRA	National Regulatory Authority
PCI	Projects of Common Interest
RCSG KG	Regional Coordination System for Gas Kernel Group
REMIT	Regulation on Energy Market Integrity and Transparency
ReCo System	Regional Coordination System for Gas
REMIT & UMM KG	Regulation on Energy Market Integrity and Transparency & Urgent Market Messages Kernel Group
RES	Renewable Energy Sources
S&D KG	Supply & Demand Kernel Group
SoS	Security of Supply
STSP	Short-term Standardised Products
TAR DP TF	Tariff Data Publication Task Force
TAR NC	Network Code on Harmonised Transmission Tariff Structures for Gas
TAR WG	Tariff Working Group
TEN-E	Trans-European Energy Networks
TP	Transparency Platform
TRA WG	Transparency Working Group
TSO	Transmission System Operator
TYNDP	Ten-Year Network Development Plan
UIOLI	Use it or lose it
UGS	Underground Gas Storage
UMM	Urgent Market Measures
WS	Workshop(s)

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