

Securing Europe's energy future

**implementing the internal
market for gas**

**ENTSOG – A FAIR
PARTNER TO ALL!**

Key Facts 2015

240,000 km

is the length of the high-pressure / transmission pipeline network: six times around the equator

90% of the gas used in Europe physically crosses at least one border

49,700 people are employed directly by gas TSOs

21.3%

of Europe's energy consumption is covered by natural gas

Up to 70%

CO₂-reduction can be achieved by replacing an old coal-fired power plant with a modern gas-fired power plant

■ Data based on all ENTSOG members, associated partners and observers, see page 11

■ Source: primary energy consumption, "Statistical Report 2015", eurogas

Image courtesy of Gas Connect Austria GmbH

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Operating Pressure

President's Foreword |

General Manager's Introduction | Our Role



Image courtesy of Ontras Gastransport GmbH



President's Foreword

ENTSOG is in a transitional period. The past few years have been dominated by the development of gas network codes. ENTSOG and its stakeholders have experienced a high workload as a result.

All activities have been targeted at completing the Internal Energy Market. Although there is still some way to go, ENTSOG can be proud of its achievements since 2010. The early involvement of all market participants has established the foundation for a trustful cooperation. It has provided a basis for a relatively smooth workflow in the comitology process and beyond.

More importantly, the first few years have already shown that no more regulatory oversight of ENTSOG is needed. ENTSOG has proven to be a fair partner to all, and it has fulfilled the given tasks on time.

ENTSOG has proven to be a fair partner to all, and it has fulfilled the given tasks on time

Currently, the focus of ENTSOG's work is changing. The implementation and refinements of network codes are on the agenda. But again, ENTSOG is counting on its well-established relationship with its stakeholders. They were supportive when the development of network codes was on the agenda and now ENTSOG will again count on their help to get the network codes implemented and finally on their way. This ongoing dialogue with all market participants will create a constructive climate for the challenges ahead.

ENTSOG will have to deal with the integration of renewable energy sources. The cooperation with its counterpart in the field of electricity should create better stabilised electricity networks. And finally, the gas networks need to get ready for more flexible supply. This should be achieved by completing the internal gas market supporting efficient and pragmatic Security of Supply (SoS) activities, and allowing the necessary gas sources and gas routes to be connected to Europe. Our industry will intensify the efforts to support free flow of gas to the hubs aiming for a competitive, secure and sustainable European gas market.

Stephan Kamphues
President, ENTSOG



STEPHAN KAMPHUES
President, ENTSOG

General Manager's Introduction

The year 2015 was another challenging year for ENTSOG. Together with the already envisaged deliverables, new activities from ACER and the European Commission required our attention.

A Ten-Year Network Development Plan (TYNDP) incorporating cost-benefit analysis (CBA) methodology to support the Project of Common Interest (PCI) selection was published in 2015 for the first time. The third phase of the Gas Regional Investment Plans and the report on Transparency Guidelines added new documents that increased the cooperation with stakeholders. The early implementation of CAM and BAL Network Codes (NCs) brought us first insights on how they are working.

In July, ENTSOG delivered a revised version of TAR Network Code as well as the Amendment on Incremental Capacity to CAM Network Code. Since ACER did not agree to a common opinion on TAR NC, the European Commission took over the continued code development in October. ENTSOG was still involved but in a more consultative role.

ENTSOG now has to take the responsibility for ensuring that the codes work as intended

After having successfully developed the main part of gas network codes over the previous years, ENTSOG must now take responsibility for ensuring that the codes work as intended. We have labelled this the Functionality Process. This process was



JAN INGWERSEN
General Manager, ENTSOG



further developed into the Joint Functionality Process together with ACER.

In February 2015, the European Commission came up with a communication on the Energy Union. A number of issues called for ENTSOG to develop its internal position, including the EC communication on Energy Market Design, even though the communication was mostly on electricity. In general, ENTSOG has clearly stated that the considerations on changing the regulation should await the ongoing implementation and results of network codes and other initiated activities. It is a huge challenge to align operation of some 300 TSO entry/exit points all over Europe, which is requiring very focused efforts. Even if the implementation of

the internal gas market might take longer than we perhaps wished, we strongly believe in maintaining a firm focus on making the new network codes operational and looking into the potential within existing regulations prior to introducing new ones.

ENTSOG will need to continue building what we consider to be the DNA of the association – a respectful, pragmatic and constructive dialogue with all involved stakeholders. This is how we can safeguard ENTSOG's ongoing contribution to the Internal Energy Market.

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 various gas transmission system operators (TSOs) and to support the development of a European transmission system in line with Europe's energy goals.

In pursuit of this overarching objective, ENTSOG strives to complete an internal European market for gas and stimulate cross-border trading, and to establish efficient and well-coordinated management practices. At the same time, ENTSOG is facilitating the technical evolution of Europe's gas network in a systematic and transparent manner.

ENTSOG's tasks are 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.

NETWORK CODES

ENTSOG develops network codes (NC) containing rules on how to integrate the gas market as well as for system operation and development. These NCs deal with subjects ranging from capacity allocation to network interconnections and operational security. The standard NC development process begins when the European Commission (EC) submits a request for a Framework Guideline from ACER (Agency for the Cooperation of Energy Regulators). Next, ENTSOG transforms the ACER Framework Guideline into a network code all the while conducting extensive public consultations. Once approved through the European comitology procedure, a network code becomes legally binding for all TSOs.

On the way to EU law and to implementation

- ▲ **CMP Transparency Guidelines for Congestion Management Procedures**
Implementation starting from October 2013
- ▲ **CAM NC – Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems**
ENTSOG's first NC – published on 14 October 2013 as Commission Regulation (EU) No 984/2013
- ▲ **BAL NC – Network Code on Gas Balancing of Transmission Networks**
ENTSOG's second NC – published 26 March 2014 as Commission Regulation (EU) No 312/2014
- ▲ **INT NC – Network Code on Interoperability and Data Exchange Rules**
ACER recommendation to EC on 15 January 2014 – Comitology meetings in 2014 – published on 30 April 2015 as Commission Regulation (EU) No 703/2015
- ▲ **TAR NC – Network Code on Harmonised Transmission Tariff Structures for Gas**
Invitation to draft NC from EC on 19 December 2013 – draft completed by ENTSOG in December 2014. Resubmitted to ACER 31 July 2015
- ▲ **CAM NC Amendment for Incremental capacity**
Invitation to draft NC amendment from EC on 19 December 2013 – draft completed by ENTSOG in December 2014
- ▲ **Invitation from ED to draft amendment on gas quality**



Natural gas can be stored easily and affordably in existing underground gas storages

Image courtesy of Enagas S.A

NETWORK DEVELOPMENT PLAN

The Ten-Year Network Development Plan (TYNDP) provides a picture 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 Capacity 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.

ADEQUACY FORECASTS

The aim of seasonal Supply Outlooks is to give an overview of how the European gas system can potentially cope with the main challenges of the season ahead. This is done by taking into account the latest supply and demand trends captured by seasonal Reviews. ENTSOG's Annual Summer and Winter Supply Outlooks review near-future projections for the gas supply, demand and capacity. Supply Reviews analyse the actual situation over a particular period.

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.



Infrastructure

ENTSOG Members | Members Map

2015: A Year of Changes | ENTSOG Takeaways

ENTSOG Deliverables 2015 | ENTSOG Structure

Work Programme Status

Image courtesy of FluxSwiss Sagl

ENTSOG Members

STATUS: END OF 2015

In 2015 ENTSOG consisted of 44 members and two associated partners from 26 EU countries and four observers from non-EU countries.

MEMBERS (44)

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.dk

Finland – Gasum Oy

France – GRTgaz
– TIGF SA

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 Private Company Limited By Shares

Ireland – Gas Networks Ireland

Italy – Infrastrutture Trasporto Gas S.p.A.
– Snam Rete Gas 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 – Latvijas Gāze JSC

OBSERVERS (4)

F.Y.R.O.M. – GA-MA AD Skopje

Norway – Gassco AS

Switzerland – Swissgas AG

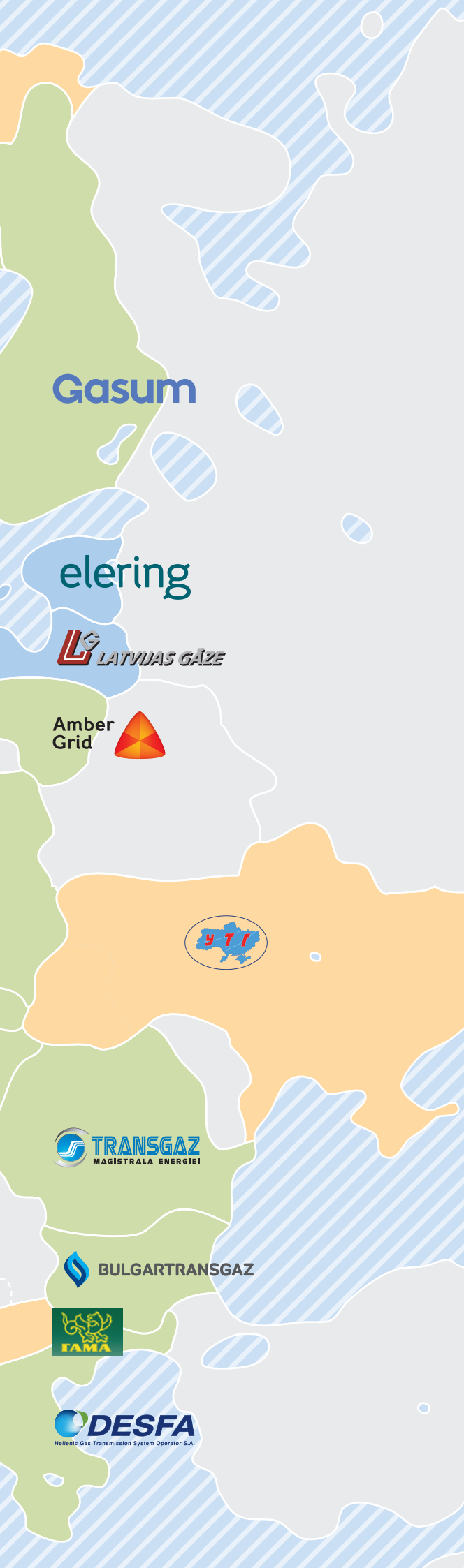
Ukraine – PJSC UKRTRANSGAZ

Members Map

STATUS: END OF 2015

- Members
- Associated Partners
- Observers





Since its foundation, ENTSOG member TSOs have provided wide coverage of the European gas market. In addition, ENTSOG's articles of association were modified in December 2010 to admit TSOs from EU countries currently derogated from the Third Energy Package, such as the Baltic States, as associated partners able to participate in its activities.

In February 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.

2015: A Year of Changes

2015 was the sixth and final year of ENTSOG under Vittorio Musazzi's management. Vittorio proved to be a very active and safe captain in the steering of the ENTSOG ship.

In the first couple of years, he set the course of the ship putting in place not only the necessary infrastructure and administration including all office-related topics but also the way of working and the statutes of the association. He also successfully provided guidance in the development of all gas network codes, TYNDP and the Transparency Platform. At the same time he made sure ENTSOG operated in a very efficient manner. Vittorio deserves a lot of credit for doing all that with a safe hand on the wheel.

In 2015, ENTSOG saw more significant changes in its management. All Business Area Managers changed, including Jan Ingwersen who was later appointed the new General Manager. Also, the rotation at adviser level (eight advisers having been replaced due to the secondment principle) made it a year of changes.

Although, due to the secondment principle, the association changes its team every third year on average, the secondment is one of ENTSOG's strengths. Most of the Brussels team members come from a member TSO.

Seconded colleagues stay in contact with their company while maintaining their TSO perspective. Thus, they remain loyal to both ENTSOG and their home TSO. This creates a dynamic ENTSOG organisation that is able to balance business interests vis-à-vis regulatory interests.



ENTSOG Takeaways

At ENTSOG, we view secondment as a significant step in the career and personal development of each person as it offers not only an opportunity to build a platform of European Energy but also a very international job environment.

As you can see in the statements of former colleagues, working in Brussels is seen as challenging and rewarding at the same time. We shall continue to work with our member TSOs to ensure that ENTSOG can maintain and develop this way of ensuring a constructive interaction between the TSO business aspects and European regulatory development of the gas infrastructure.



RENÉ DÖRING

Secondee from Ontras, Germany

I think the biggest skill I gained through my secondment is self-organisation.

The daily work with different colleagues from all over the European continent brings a lot of fresh ideas and useful inputs (including their habits :-)) and hence creates a multilateral working environment where it is important “to keep cool” and focus on the things that are really important. To avoid losing yourself in all the issues and to deliver on time, it is essential to have your own internal schedule. This is a basic requirement and helps you to survive in your personal working environment.

But my time at ENTSOG also taught me the sense of good and open discussions and that feedback is indispensable. To get the support and to finalise your tasks, it is essential to involve all concerned parties and to discuss every step with them. Transparent and efficient work is half of the deliverable and helps you to achieve your goals. On the contrary, having good discussions also means keeping the respective deadlines in mind and being able to decide whether to follow the discussion further or to move along with the process. So to steer the overall process and reach the ‘port’, you have to be a ‘brave captain’ from time to time and develop your own way of doing things.

My time at ENTSOG also taught me the sense of good and open discussions and that feedback is indispensable.

I am a big supporter of the ENTSOG motto, being “a fair partner to all”.

FREDERIK THURE

Secondee from Energinet.dk, Denmark



Working for ENTSOG was an incredibly rewarding experience both from a personal and professional perspective.

During my time with ENTSOG, I was actively engaged in a number of stakeholder sessions aimed at creating a harmonised legal framework for gas transmission in Europe. This work process tested my ability to establish and nurture relationships with major energy companies, primarily from the European gas sector, along with national regulators and senior EU officials. This experience also gave me a profound understanding of business leaders' mind-set and their preoccupation with preserving and expanding commercial activity in the face of demanding European legislation. Making proposals for business rules or legal texts and taking into account stakeholders' opinions could be extremely challenging but also very rewarding when an acceptable compromise was reached.

Subsequently, the most important thing I learned from my ENTSOG experience was how important it was to listen carefully to people, to understand their core objectives and to incorporate their points of view as much as possible. I am therefore a big supporter of the ENTSOG motto, being “a fair partner to all” which I also try to apply in my current job when working with stakeholders.

It was very hard work from time to time, but hard work that was really enjoyable. It was a great experience.

CARMEN RODRIGUEZ

Secondee from Enagás, Spain

Working as an ENTSOG adviser gave me the chance to work along some really amazing people.



It would be easy to talk about the advantages of the multi-cultural environment of an association like this, but it was not that, or at least it was not only that. It was the people. Some of them were so committed to the job, so passionate, so skilful in one or another aspect, so selfless and kind, and so polite in their manners that they have somehow set a reference for me, a standard of what a colleague and/or a boss should be.

It was a very positive period, particularly from a learning perspective. But it was not acquiring knowledge or developing professional skills which made the experience great. It was something else. It was the feeling of belonging to a team, sharing a target, feeling free to disagree with others' ideas and feeling open to having one's own ideas questioned. It was about trusting the team and being trusted. It was very hard work from time to time, but hard work that was really enjoyable. It was a great experience.

MARK WIEKENS

Secondee from Gasunie
Transport Services,
Netherlands



I found that working in foreign languages made me a better listener in my native language, which enriches my life both as a private person and a professional.

I worked with ENTSOG from June 2013 to June 2015 as Subject Manager for Capacity.

My duties focused on Network Codes in their different stages: setting up Implementation Monitoring for CAM and CMP, writing the Incremental Capacity Proposal, and initiating a process to ensure the functionality of Network Codes in practice. I learned a lot about the inner workings of Brussels but also about how to organise multi-year projects in which support and consensus of members and stakeholders are essential. Contributing to the balance of interests between TSOs, NRAs, EC and stakeholders was at times challenging but, in the end, a rewarding process. The resulting network of international contacts is proof of that.

Above all, I greatly enjoyed working with and learning from all the ENTSOG colleagues. The opportunity to be part of such a diverse team is unique. It offered me inside knowledge and understanding of various companies' and countries' perspectives. One ENTSOG takeaway I would like to share is that when working in foreign languages, one has to make more effort to listen in order to understand the other person. I found that working in foreign languages made me a better listener in my native language, which enriches my life both as a private person and a professional. Therefore, I can conclude that working at ENTSOG was an inspirational experience which made a lasting impact on me.



PANAGIOTIS PANOUSOS

Secondee from DESFA, Greece

I was lucky enough to participate in this tremendous experience almost from the very beginning.

Establishing an organisation with a motto "fair partner to all", trying to persuade people, internally and externally, that this is how things should work, living and handling situations in a pluralistic and multi-cultural environment were great challenges. But, the most valuable takeaway was the experience of team spirit developed internally, among people who understood that their engagement with ENTSOG was temporary. We believed in our targets, cooperated, and there was no antagonism. It's not easy to transfer this back home. People without similar experiences see things differently.

The most valuable takeaway was the experience of team spirit developed internally.

But, at least I have changed in the way I cope with everyday duties, organise my time, set and meet deadlines, and lead my team. My colleagues obviously notice this change after my five-year ENTSOG experience, but I'm not sure they'll like it. I still try to follow the motto and be "FAIR" to all.

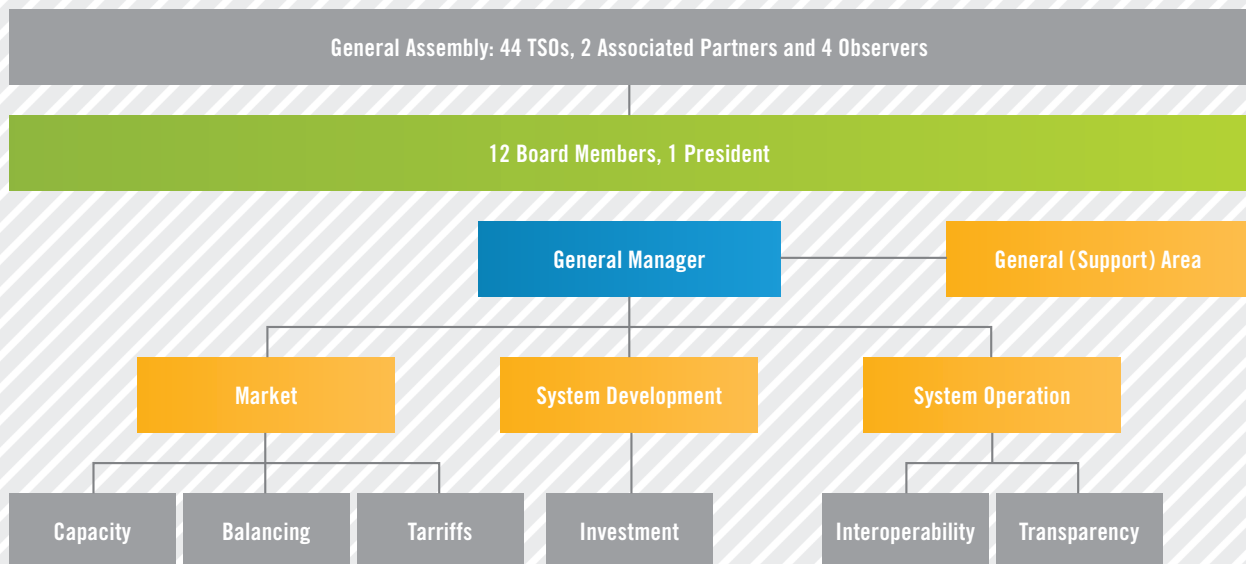
ENTSOG Deliverables 2015





ENTSOG Structure

ENTSOG STRUCTURE (END 2015)



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 2015.

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
MARKET AREA				
CAM NC AUCTION CALENDAR	Publish the auction calendar for 2015	Publication in January 2015	TSOs	Completed
ACER/ENTSOG CAM ROADMAP PROGRESS UPDATES	Publish the implementation roadmap for CAM NC	Publication on 12 November 2015	TSOs, ACER	Completed
COMMON NETWORK OPERATION TOOLS SPECIFICATION (BUSINESS REQUIREMENTS SPECIFICATIONS AND MESSAGE IMPLEMENTATION GUIDELINES)	Publish the BRS to support CAM NC and CMP implementation by the TSOs		Stakeholders, TSOs, EASEE-gas	Will be published in 2016
COOPERATION ON CAM AMENDMENT DEVELOPMENT	Amendment of CAM NC on incremental capacity and technical changes		ACER, EC	Will be finalised in 2016
CMP AND CAM MONITORING REPORT FOR 2014 ANNUAL REPORT	Publish CMP and CAM IM report	Publication on 11 June 2015	TSOs	Completed
CMP AND CAM NC MONITORING REPORT FOR 2015 ANNUAL REPORT	Launch the questionnaire for CMP and CAM report to TSOs	Launched in December 2015	TSOs, ACER	Ongoing
DEVELOPMENT OF CHANGES/ AMENDMENT OR SUPPORT TO OTHER NETWORK CODES	Organise joint EFET/ENTSOG Workstream and publish ENTSOG's recommendation paper on issues related to bundling of capacities	Joint EFET/ENTSOG Paper published on 2 April 2015 and ENTSOG's Paper published on 31 July 2015	Stakeholders, TSOs, NRAs, ACER	Completed
REFINEMENT OF BUSINESS REQUIREMENTS SPECIFICATIONS FOR NOMINATIONS AND MESSAGE ACTIVITY FOR BALANCING	Publish the refined BRS to support BAL NC implementation by the TSOs	Publication on 12 October 2015	Stakeholders, TSOs	Completed
IMPLEMENTATION SUPPORT FOR BALANCING	Organise a joint ACER/ENTSOG Workshop on Balancing	Organised Workshop on 17 November 2015	Stakeholders, TSOs, NRAs and ACER	Completed
REVIEW PROCESSES OF EARLY IMPLEMENTATION FOR BALANCING	Publish a joint ACER/ENTSOG report on early implementation for Balancing to assess implementation plans of TSOs and NRAs	Publication on 9 November 2015	TSOs and ACER	Completed
BALANCING MONITORING	Publish ENTSOG monitoring report on implementation for Balancing	Launched questionnaire to TSOs in December 2015	TSOs and ACER	Ongoing
INTERACTION WITH ACER DURING THE DEVELOPMENT OF THE REASONED OPINION ON THE TAR NC	Better understand ACER's concerns and how to address in the resubmitted TAR NC	Reasoned Opinion published on 26 March 2015	ACER and EC	Completed
DEVELOPMENT OF TAR NC FOR RESUBMISSION	Address ACER's concerns raised in their Reasoned Opinion within the redrafted TAR NC	TAR NC resubmitted to ACER on 31 July 2015	ACER and EC	Completed
SUPPORT DURING THE TAR NC COMITOLGY PERIOD	Provide support to the EC in Comitology	Ongoing		Ongoing
DISCUSSION BETWEEN THE TAR WG AND THE CAP WG/INC AKG REGARDING THE ECONOMIC TEST FOR INCREMENTAL AND NEW CAPACITY	Develop working level the processes for the economic test	Ongoing		Ongoing
SUPPORT FOR OTHER WORKING AREAS	Provide resources to other ENTSOG areas	Ongoing		Ongoing

ACTIVITY	GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM DEVELOPMENT AREA				
COST-BENEFIT ANALYSIS METHODOLOGY	Publish methodology approved by EC	Publication on 13 February 2015		Completed
TYNDP 2015	Assess infrastructure-related market integration and its contribution to meeting pillars of European Energy Policy	Publication on 16 March 2015	Stakeholders, ACER	Completed
SUMMER SUPPLY OUTLOOK 2015	Provide view on injection period ahead	Publication on 29 May 2015	Gas Coordination Group	Completed
SUMMER REVIEW 2014	Analyse supply and demand trends of previous summer	Publication on 29 May 2015		Completed
WINTER SUPPLY OUTLOOK 2015–16	Provide a view on supply-and-demand balance on winter ahead	Publication on 6 November 2015	Gas Coordination Group	Completed
WINTER REVIEW 2014–15	Analyse supply and demand trends of previous winter	Publication on 6 November 2015		Completed
TRANSMISSION CAPACITY MAP 2015	Provide overview of annual capacity at IP level	Publication on 6 May 2015		Completed
SYSTEM DEVELOPMENT MAP 2014	Provide graphic representation of supply and demand for past year	Publication on 20 July 2015		Completed
SUPPORT TO GAS COORDINATION GROUP	Make available TSO expertise on security of supply			Ongoing task
SUPPORT TO REGIONAL GROUPS	Provide technical expertise during second PCI selection			Completed for second PCI selection
SUPPORT TO TSOS FOR GRIPS	Support in modelling and layout of reports	3 rd GRIP edition to be delivered end 2016/start 2017		Joint TYNDP 2017/3 rd GRIP edition development process
ANALYSIS OF GAS DEMAND	Prepare framework for demand scenarios	Two demand scenarios developed for TYNDP 2015, three demand scenarios under development for TYNDP 2017	Stakeholders, ACER	Ongoing task
ANALYSIS OF SUPPLY FLEXIBILITY	Prepare framework for supply potential	Definition of range of supply for Supply Outlooks and TYNDP 2017	Stakeholders, ACER	Ongoing task
INVESTIGATION OF TRANSMISSION INFRASTRUCTURE ROLE IN SUPPORTING SUSTAINABILITY	Assess ability of gas infrastructure to support RES development			Ongoing task
ENTSO G MODELLING TOOL	Ensure adequacy of modelling tool with assessment methodologies put in place by ENTSOG			Completed for Supply Outlooks issued in 2015. Ongoing for TYNDP 2017
ENTSO-E/ENTSO G “CONSISTENT AND INTERLINKED MODEL”	Fulfil requirement of Article 11(8) of Regulation (EU) 347/2013	Submission to EC and ACER by 31 December 2016		Ongoing

GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM OPERATION AREA: PROJECT PLAN FOR TRANSPARENCY WORKING GROUP			
Implementation of new TP functionalities	Several new TP functionalities were implemented during 2015 with aim of enhancing data usability and publication comprehensiveness.	Gas TSOs, TP users and other stakeholders	Completed
Collaboration with TSOs to improve TP data quality and completeness	Ongoing process of data publication monitoring.		
Joint ENTSOG – TSO effort to improve data quality and completeness.	Gas TSOs, TP users and other stakeholders	In progress	
TP users support	Ongoing process of interaction with stakeholders regarding TP operation and information	Gas TSOs, TP users and other stakeholders	In progress
ENTSOG REMIT implementation	7 October 2015	Gas TSOs, ACER	Completed
Support TSOs with REMIT implementation	Ongoing effort	Gas TSOs, ACER	In progress
Follow-up and implementation of transparency requirements arising from NC CAM, NC INT and NC TAR and liaison with relevant ENTSOG WGs	Ongoing effort	Gas TSOs, ENTSOG Working Groups, TP users and other stakeholders	In progress
Hold public workshop on transparency on annual basis	4 February 2016	Gas TSOs, TP users, ACER, EC and other stakeholders	Completed

GOAL	DELIVERABLE & COMPLETION DATE	CONSULTATION WITH	STATUS / COMMENTS
SYSTEM OPERATION AREA: PROJECT PLAN FOR INTEROPERABILITY WORKING GROUP			
Develop an interconnection agreement template, send it for opinion to ACER and publish it on ENTSOG's website	ENTSOG to publish an IA template draft on its website by 30 June 2015. After NRA and ACER review to publish final version by the 31 December	ACER/EC and NRAs	Completed
Develop and publish an INT NC & DE pre-implementation status report	ENTSOG to develop questionnaire by 1 November and TSOs to answer by 31 December 2015. ENTSOG to write report by 30 April 2016	ENTSOG, TSOs	ENTSOG to produce questionnaire and TSOs to answer. ENTSOG to issue report with AR 2015
Develop the basic ideas for the Long-Term Gas Quality Outlook	Carry out pilot test on TYNDP 2015 data; assess possible methodologies	TYNDP stakeholders in 2015	To be further developed in 2016
Follow-up the processes related to gas quality standardisation	Monitor CEN activities during 2015 meetings; Report to Gas Quality KG and Interoperability WG	CEN TC 234/WG 11, CEN PC 408, Marcogaz, EEASE-Gas, Member State TSOs	CEN GQ Standard issued in 2015 and Pilot II reactivated in 2015. EC invited ENTSOG to amend INT NC
Develop further the Early Warning System mechanism	Implement an Early Warning Team North-West by the 30 June 2015. Contact EC to discuss how EWS could be used as part of the revision of SoS Regulation	Member TSOs, 3 rd Country TSOs, Energy Community, EC	Completed, In progress
Forward recommendations to 3 rd Country TSOs related to INT NC	Prepare and carry out workshops to present and clarify INT NC rules to 3 rd Country TSOs in close cooperation with EnC	Member TSOs, 3 rd Country TSOs, EnC	Workshop held in Vienna on 18 June 2015
CNOT on CAM/CMP	BRS and IG for data exchange related to implementation of CAM and CMP	Member TSOs and EASEE-gas (Edig@s workgroup)	In progress
AS4 implementation support	Follow-up on implementation of AS4 and organise workshop to discuss implementation issues and gain experience		Workshop held in October 2015
Operate the Local Issuing Office for Energy Identification Coding Schema	Codes through weekly updates to Central Issuing Office and ENTSOG website; deliver final responses to requests within 10 days at most		



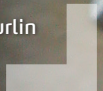
Workspace

Market Area | System Development Area

System Operation Area | General Area | Implementation Reports

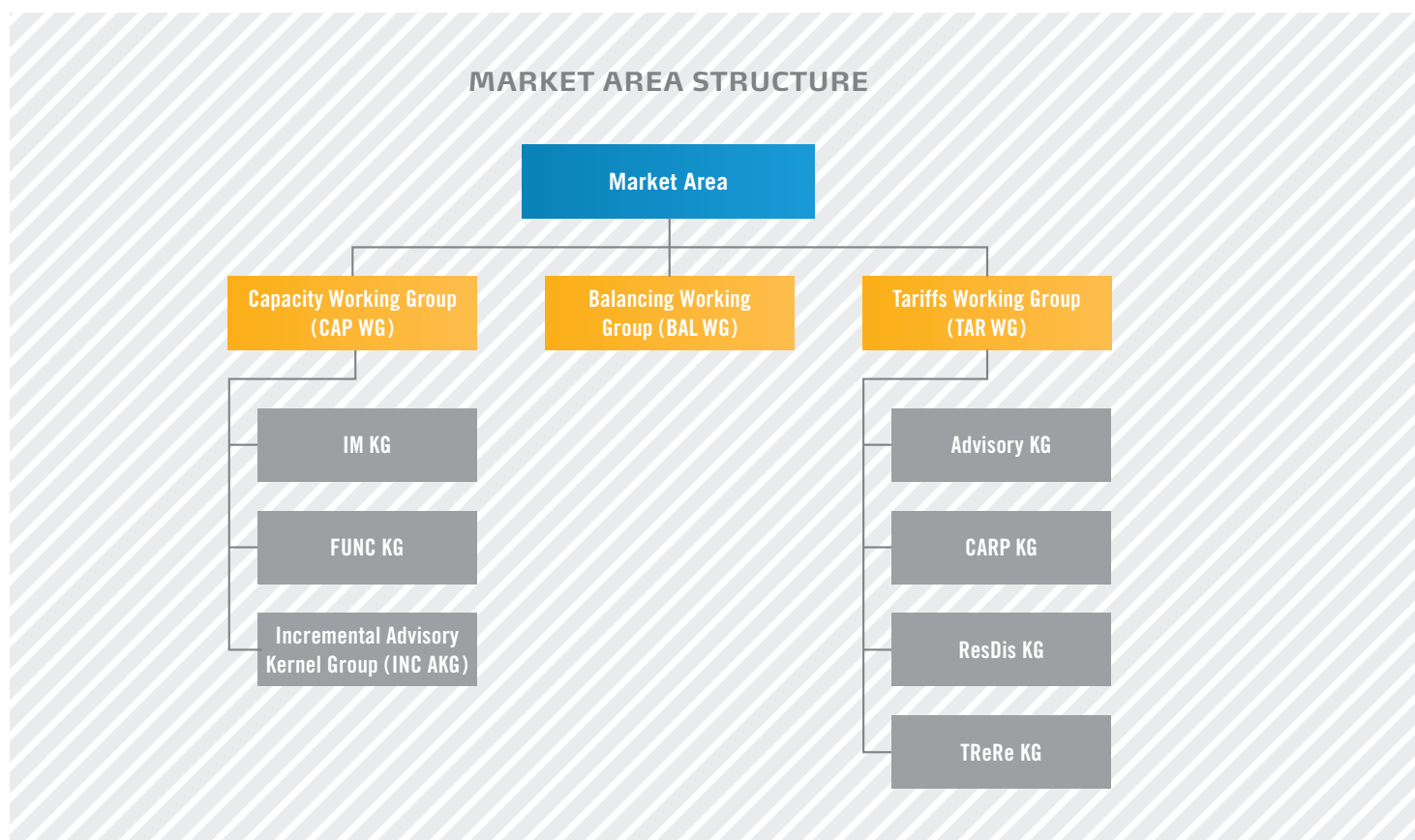
Joint Functionality Process for Gas Network Codes

Current Year and Upcoming Targets



Market Area

ENTSOG's Market Team is responsible for the market-related network codes that will promote the internal European gas market.



AREA STRUCTURE

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

CAPACITY

The Capacity Working Group (CAP WG) has been responsible for ENTSOG's activities related to the allocation of **existing capacity** (CAM NC – Commission Regulation (EU) No 984/2013) and **congestion management** (Guidelines on CMP – Commission Decision of 24 August 2012 on amending Annex I to Regulation (EC) No 715/2009). In 2015, the

activities of CAP WG covered implementation of monitoring tasks for CAM NC and CMP guidelines as well as monitoring obligations and the development of Business Requirements Specifications for both CAM NC and CMP Guidelines. In addition, CAP WG worked closely with stakeholders on developing potential solutions to concerns raised by stakeholders relating to the implementation/functionality of CAM NC and CMP Guidelines.

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

- ▲ **IM KG** (Implementation & Monitoring Kernel Group)
- ▲ **FUNC KG** (Functionality Kernel Group)
- ▲ **INC AKG** (Incremental Advisory Kernel Group)



Implementation & Monitoring Kernel Group (IM KG)

The Implementation & Monitoring Kernel Group is responsible for implementation monitoring under Article 8(8) of Regulation (EC) No 715/2009 of Commission Regulation (EU) No 984/2013 on Capacity Allocation Mechanisms (CAM NC) and the Commission Decision (2012/490/EU), known as Guidelines for Congestion Management Procedures (CMP guidelines). IM KG develops implementation 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.

CAM/CMP Functionality Kernel Group (FUNC KG)

The Functionality Kernel Group focuses on how to facilitate the proper cross-border implementation of Commission Regulation (EU) No 984/2013 on Capacity Allocation Mechanisms (CAM NC), Commission Regulation (EU) No 312/2014 on Gas Balancing of Transmission Networks (BAL NC) and Commission Decision (2012/490/EU) known as Guidelines for Congestion Management Procedures (CMP guidelines). Thus, FUNC KG develops solutions on issues related to capacity allocation mechanisms, balancing and nomination procedures and congestion management procedures.

Incremental Advisory Kernel Group (INC AKG)

The Incremental Advisory Kernel Group developed and drafted the proposal for incremental capacity, under the formal responsibility of CAP WG. INC AKG works in coordination with TAR WG on economic testing and tariffs for incremental capacity.

BALANCING

The Balancing Working Group (BAL WG) is responsible for the Balancing Network Code (BAL NC). In 2015, BAL WG focused on implementing BAL NC, monitoring obligations and amending the Business Requirements Specifications on Nomination and Matching. BAL WG and the Interoperability Working Group (INT WG) jointly steer the Common Network Operations Tools Task Force.

TARIFFS

The Tariff Working Group (TAR WG) is responsible for the ongoing development of TAR NC. In March 2015, ACER provided their Reasoned Opinion on the Draft TAR NC. TAR WG developed TAR NC for resubmission to ACER, taking into account the Reasoned Opinion. Where required, detailed work on specific issues is carried out in the following four kernel groups:

- ▲ **Advisory KG**
- ▲ **CARP KG** (Cost Allocation and Reference Price)
- ▲ **ResDis KG** (Reserve Prices and Discounts)
- ▲ **TReRe KG** (Transparency and Revenue Recovery)

Market Area Activities in 2015

CAPACITY WORKING GROUP

Capacity Allocation Mechanisms

CAM NC came into effect in November 2013 with an implementation date of 1 November 2015. In 2015, ENTSOG voluntarily facilitated the early implementation of CAM NC via the ACER/ENTSOG CAM Roadmap publication and related workshop.

In Q4/2015, ENTSOG launched an implementation monitoring process for CAM NC. This monitoring is required by Article 8 (8) of Regulation (EC) No 715/2009. ENTSOG launched the process in order to ensure timely publication of results in 2015 Annual Report. In addition to implementing monitoring tasks, ENTSOG has also developed Business Requirements Specifications for CAM NC.

EFET and ENTSOG began a dialogue process in an ad-hoc joint work stream. The aim was to identify and resolve potential issues related to the introduction of capacity bundling before more long-term bundled products are offered. The issues identified in the dialogue between EFET and ENTSOG were jointly presented at the XXVII Madrid Forum and welcomed by participants. Afterwards, EFET and ENTSOG opened discussion to all stakeholders including national regulatory authorities and the European Commission.

As a result of the joint EFET/ENTSOG workshops in 2015, four issues related to bundling were selected for further assessment with a view to finding solutions:

- ▲ Already contracted unbundled capacity and offer of bundled products only
- ▲ CMP regulation and its consistent implementation across IPs
- ▲ Alignment of secondary marketing of bundled products
- ▲ Aligned procedures for the surrender of capacity

In April 2015, ENTSOG asked all interested stakeholders including ACER, EC and NRAs to contribute. ENTSOG requested feedback from stakeholders on its proposals and particularly on the identified issues. In April 2015, stakeholders were asked to provide feedback through a consultation tool available on the ENTSOG website (public consultation phase). They confirmed that the ENTSOG/EFET work stream addresses the right issues, highlighting that one of the four discussed issues is the top priority.

ENTSOG invited all interested stakeholders to two public workshops to discuss the identified issues and potential options. Two public workshops were held on 20 May 2015 and 30 June 2015 in Brussels. In addition, ENTSOG organised three preparatory meetings (on 11 May, 3 June and 25 June) with stakeholder experts in order to prepare the content of both workshops and propose some solutions.

Through intensive dialogue with its stakeholders (public consultation, preparatory meetings of stakeholder experts and stakeholder workshops) on the outlined issues, ENTSOG gained their support for potential options related to the second stakeholder workshop held on 30 June. In July 2015, ENTSOG published a recommendation paper on how the issues may be resolved.

Congestion Management Procedures

ENTSOG commenced monitoring the implementation of CMP guidelines in December 2014 and published the results in Annual Report 2014. To ensure timely publication of results in this Annual Report, ENTSOG launched the next monitoring process in Q4/2015. This monitoring is required by Article 8 (8) of Regulation (EC) No 715/2009.

Incremental Capacity work

The ENTSOG incremental proposal consists of two parts:

- 1) An amendment to CAM NC to establish the process of offering and allocating incremental capacity
- 2) Incremental Chapter of TAR NC dealing with the financial regulatory parameters and tariff-related issues of incremental capacity.

Due to the high level of interrelations, the Incremental Proposal and the TAR NC are closely coordinated.

In 2015, the activities of INC AKG covered the ongoing development of the CAM amendment and TAR NC. This included working closely with ACER and DG Energy.



Vehicles powered by natural gas produce 20–30% fewer carbon dioxide emissions than vehicles powered by petrol.

Image courtesy of Gasum Oy

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 of 1 October 2015. During 2015, BAL WG focused on the implementation requirements set out in BAL NC to prepare for the application of the Network Code in the respective Member States. ENTSOG and ACER voluntarily continued to conduct a second joint report to assess the implementation plans of the individual TSOs and NRAs; the report identified the early implementation status of BAL NC in each Member State. It was published at the beginning of November 2015, followed by the related joint ACER and ENTSOG Workshop on Balancing on 17 November 2015.

In addition to this, BAL WG amended the Business Requirements Specifications for the Nomination and Matching Procedures (NOM BRS) and conducted a public consultation on this matter during March 2015. The amended NOM BRS has been published as part of the Nomination and Matching Common Network Operation Tools (known as CNOTs) on the ENTSOG website. NOM BRS defines the data exchange processes between TSOs and network users in the nomination and matching process and provides a framework for the introduction of a single nomination procedure. Thereby, ENTSOG has provided the tools to fulfil the requirement for a single nomination procedure set out in CAM NC.

ENTSOG launched a process of implementation monitoring for BAL NC in mid-December 2015 due to ENTSOG's monitoring obligation as set out in Article 8 (8) of Regulation (EC) No 715/2009. This related process was launched to ensure the timely publication of results in this Annual Report.

TARIFF WORKING GROUP

After submitting the Draft Network Code on Harmonised Transmission Tariff structures for Gas (TAR NC) on 26 December 2014, TAR WG continued to work on further developing TAR NC to comply with proposals from ACER, EC and stakeholders.

ACER provided their Reasoned Opinion on the draft of TAR NC on 26 March 2015. This outlined a number of recommendations to bring the submitted TAR NC more in line with the Framework Guidelines. TAR WG considered these recommendations and resubmitted TAR NC on 31 July 2015. At the Madrid Forum in October, ACER outlined its rationale for being unable to provide a recommendation to the EC on TAR NC. This resulted in the EC managing the further development of TAR NC. ENTSOG has continued to work with EC on developing the detailed proposals with the aim of delivering a TAR NC for Comitology.

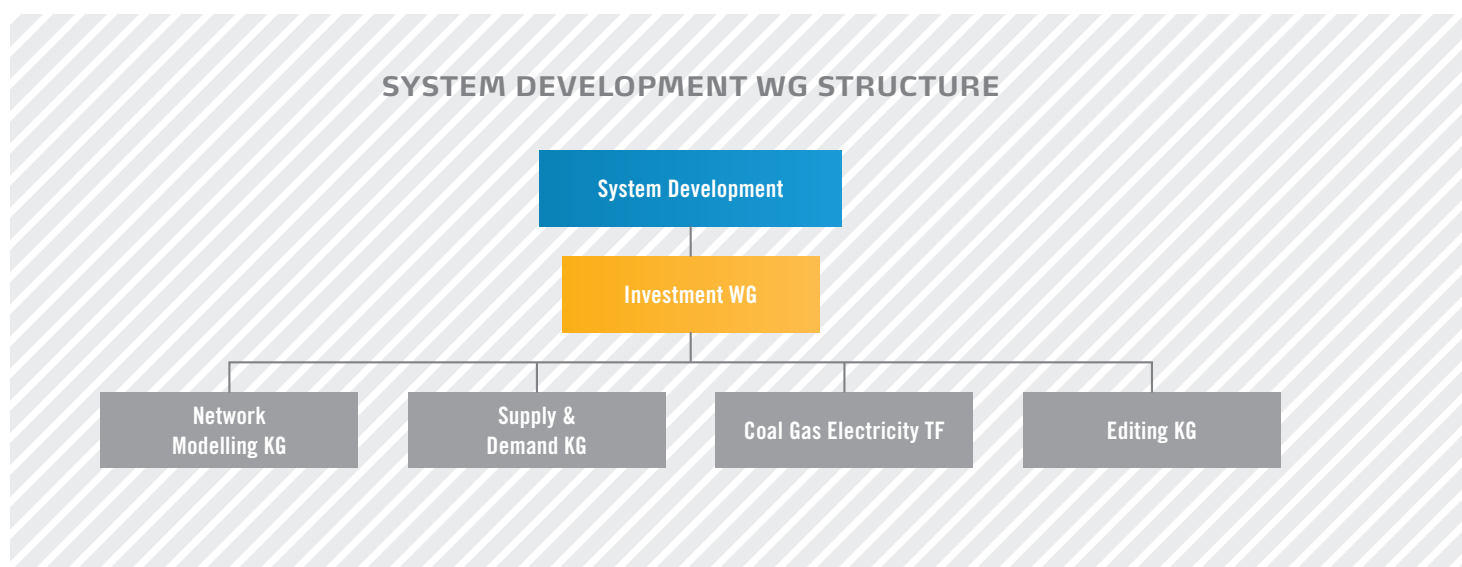
Tariff-related activities during 2016 will focus on the comitology process and, towards the end of the year, look at implementation considerations.

OTHER ACTIVITIES

The ENTSOG Market Team also contributed to industry developments such as the Gas Target Model revision and "The Bridge to 2025" paper conducted by ACER. The team also participated in the EU-Russia dialogue and has been cooperating with the Energy Community.

System Development Area

The System Development business area covers all ENTSOG activities related to gas supply, demand and infrastructures. The deliverables are short and medium-to-long-term assessments such as the Ten-Year Network Development Plan (TYNDP) and Supply Outlooks. 2015 was marked by the publication of the first TYNDP edition developed under Regulation (EU) 347/2013 and by the support provided to Regional Groups for the 2nd selection of Projects of Common Interest.



AREA STRUCTURE

The Investment Working Group (INV WG) is responsible for all activities of the System Development Business Area.

INV WG is supported in its mission by four Kernel Groups (KGs), each of which focuses on specific areas:

- ▲ Network Modelling Kernel Group (NeMo KG): developing and enhancing ENTSOG's network modelling tool and performing simulations in accordance with defined scenarios
- ▲ Supply & Demand Kernel Group (S&D KG): developing S&D approach for ENTSOG deliverables based on analysis of current situation and alternative scenarios; particular focus is given to analysis of S&D data for increased understanding of S&D development, identifying trends and outlining approaches to defining and studying future scenarios
- ▲ Energy Infrastructure Priorities Kernel Group (EIP KG): adaptation of cost-benefit analysis methodology under new TEN-E Regulation
- ▲ Editing Kernel Group: TYNDP editing and maintaining terminological and stylistic consistency in reports

SUMMER/WINTER SUPPLY OUTLOOKS AND REVIEWS

Supply Outlooks assess the season-ahead flexibility offered by gas infrastructure in consideration of previous supply-and-demand trends.

Summer Supply Outlook explores the extent to which the market could reach high storage levels at the end of the season based on the actual storage level at the beginning of that injection period. The report has benefited from the modelling improvements developed for TYNDP 2015 and Winter Supply Outlook 2014/2015 such as the use of improved temporal optimisation and the introduction of a market layer. The robustness of the report is ensured through the use of sensitivity analysis on different targeted stock levels at summer's end. Summer Supply Outlook 2015 identified sufficient flexibility in all parts of Europe.

Winter Supply Outlook explores both the evolution of underground storage inventory throughout the winter and the supply-and-demand balance in situations of high daily demand.

Based on the feedback received for TYNDP 2015, the modelling approach has been improved to enable a more accurate modelling of UGS and LNG terminals under high-demand situations. Robustness of the report is ensured through the use of sensitivity analysis in two areas:

- ▲ Two climatic profiles of the winter
- ▲ Potential disruption of transit through Ukraine

Winter Supply Outlook 2015/16 confirmed the robustness of the gas infrastructure in most parts of Europe when facing brief disruption under severe climatic conditions. South-East Europe still remains strongly dependent on the Ukraine transit route. The European infrastructures enable significant export of gas toward Ukraine.

The publication of Seasonal Reviews is an ENTSOG initiative based on internal supply-and-demand analyses carried out within the framework of TYNDP and Supply Outlooks. ENTSOG publishes these analyses and thus shares the results with stakeholders to gather feedback. This initiative will help to establish a strong basis when defining the input data and methodology of subsequent reports. After having focused on the supply-and-demand balance, the reviews now go further in the understanding of the role of gas demand for power generation and give a view on gas prices and the quantities traded at European hubs.

Reviews from Summer 2014 and Winter 2014/15 confirmed that the surge in coal power generation limited the role of natural gas in this sector. This has had a negative impact on Europe's CO₂ emissions compared to the usage of natural gas.

METHODOLOGY OF COST-BENEFIT ANALYSES

In August 2014 ENTSOG submitted the adapted Cost-Benefit Analysis (CBA) methodology to the European Commission. It was approved by the European Commission on 4 February 2015 and published by ENTSOG on 13 February. This methodology has been used to develop TYNDP 2015.

In November 2013, ENTSOG published the initial CBA methodology for the assessment of candidates for Projects of Common Interest (PCI). In line with Regulation (EU) 347/2013, ENTSOG has adapted a methodology based on

the formal opinions of ACER, European Commission and Member States. The TYNDP Stakeholder Joint Working Sessions were used to ensure that adaptation matched market expectations. The main improvements consisted of further integrating the methodology to be implemented by ENTSOG in TYNDP and a project-specific part to be carried out by promoters.

ENTSOG submitted an adapted methodology to the European Commission in August 2014. It has been used to develop TYNDP 2015.

TYNDP 2015

The fourth edition of the Ten-Year Network Development plan was published on 16 March 2015. It was the first report developed within the joint Third Energy Package and new TEN-E Regulation.

The adapted CBA methodology was fully implemented to develop TYNDP 2015. Compared to the previous edition, the time horizon was extended from 10 to 21 years, price information was included and a second demand scenario was introduced. These changes have increased the amount of information available in TYNDP and lead to a more complex report.

TYNDP was updated early in 2015 – at a late stage in its development process – to reflect the announced cancellation of the South Stream project. ENTSOG’s reaction allowed the TYNDP report to be published on 16 March 2015, with only a few weeks’ delay and in time to serve as the basis for the second PCI selection. On 1 April 2015, following a request from the European Commission, ENTSOG launched an exceptional call for projects in South-East Europe to mitigate the cancellation of South Stream. An addendum of TYNDP 2015, including the projects collected during this call, was published on 29 June 2015.

Following the release of the report, ENTSOG held public consultation from 31 March to 5 June 2015 and organised a public workshop from 19 to 20 May 2015 to collect stakeholders’ views on TYNDP 2015. On 23 July, ENTSOG published the analysis of the public consultation feedback and submitted TYNDP to ACER. ACER published its opinion on TYNDP 2015 on 20 October 2015. ENTSOG has built on ACER opinion and stakeholders feedback to propose improvements for the next edition of TYNDP.

Support for Regional Groups

On behalf of promoters, ENTSOG committed to a second selection to handle the modelling part of the project-specific CBA for project candidates to the PCI label. This ensured a streamlined and consistent delivery of the project assessment.

In addition, ENTSOG has actively participated in the regional groups and supported their work in selecting PCIs.



Image courtesy of National Grid Gas plc

The reserves of gas that we already know exist in conventional reservoirs will provide enough to meet more than 120 years of demand at today’s consumption rates.

GAS REGIONAL INVESTMENT PLANS MAP



GRIP NORTH-WEST



GRIP BEMIP



GRIP SOUTH



GRIP SOUTH-NORTH
CORRIDOR



GRIP CENTRAL
EASTERN EUROPE



GRIP SOUTHERN
CORRIDOR



SUPPORT FOR 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, which also provides support on data collection and modelling. 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 second edition of the GRIP reports was published between November 2013 and August 2014.

In 2015, member TSOs chose to develop the third edition of GRIPs in a joint development process with TYNDP 2017. This process will ensure the use of a common dataset for GRIPs and TYNDP and complementarity between the reports. The third edition of GRIPs will consequently be published at the end of 2016 or beginning of 2017.

ENTSOG Maps

In 2015, ENTSOG maintained the publication of its well-known Transmission Capacity Map 2015 and System Development Map 2014, the latter in collaboration with GIE.

Both maps benefited from ENTSOG's commitment to continuously improve its deliverables.

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 2015 edition was published in May.

The System Development Map produced in collaboration with Gas Infrastructure Europe focuses on the previous year's supply and demand trends. It also provides an overview of the existing gas infrastructure and an outlook for its development. The 2015 edition covering the year 2014 was published in July.

SUPPORT FOR GAS COORDINATION GROUP

The Gas Coordination Group (GCG) is a platform established by Regulation (EU) 994/2010 that introduces measures of safeguarding the security of gas supply.

The role of GCG is to exchange information and best practices, to facilitate Security of Supply (SoS) standards and to support supply-and-demand balance especially in critical situations. Members include the European Commission,

representatives of EU Member States, ENTSOG, and other international organisations as well as the industry.

ENTSOG is responsible for coordinating TSO expertise with respect to assessing the interconnected gas infrastructure, especially through modelling analyses. As part of its regular contributions, ENTSOG published Summer Supply Outlook 2015 and Winter Supply Outlook 2015/16.

COOPERATION WITH ENTSO-E

Both associations have continuously reinforced their collaboration over the recent years.

The development of a methodology to assess the gas demand for power generation as part of TYNDP 2015 and CBA methodology was made possible through the close cooperation of the System Development areas of both associations. The methodology describes the possible evolution of the power generation mix in each European country.

Cooperation between both associations on System Development takes place under the umbrella of the common ENTSO-E/ENTSOG CoGasEI Task Force created in 2014.

The Task Force was very active in 2015. It worked on the concept to fulfil Regulation (EU) 347/2013 requirement of a “consistent and interlinked gas and electricity model”. By 31 December 2016, both ENTSGs will jointly submit their proposal for a “consistent and interlinked gas and electricity model” to the European Commission and ACER.

Both associations also cooperated on their Winter Outlooks, which allowed them to reflect on the ability to mitigate gas security-of-supply issues by substituting gas-fired generation by other generation means as part of ENTSO-E Winter Outlook. The two ENTSGs organised a joint webinar on their Winter Outlooks on 16 December 2015.

In addition, ENTSO-E and ENTSOG cooperated on the alignment between ENTSO-E’s TYNDP 2016 visions and ENTSOG’s TYNDP 2017 demand scenarios and on the consequent use of ENTSO-E’s TYNDP 2016 serves as a basis for gas demand for power generation in TYNDP 2017.

Since November 2015, ENTSOG has participated in ENTSO-E’s TF Scenario.

Order your copy of our maps on <http://maps.entsog.eu>



Natural gas has a higher conversion-efficiency than other fossil fuels when producing electricity or heat, meaning less energy is lost in the process.



Image: Adobe Stock

RESEARCH AND DEVELOPMENT PLAN (R&D PLAN)

ENTSOG methodologies, tools and data scenarios are being continuously improved. In 2014, ENTSOG finalised many deliverables planned in previous years' AWP. Altogether it enabled cost-benefit analysis methodology to be implemented. The resulting improvements were also implemented in other deliverables such as the Supply Outlooks.

The Supply and Demand (S&D) and Network Modelling (NeMo) Kernel Groups form the core of the Investment Working Group in charge of developing innovative approaches and tools.

Supply and Demand Kernel Group

S&D KG performs research to expand knowledge of the supply and demand aspects of European gas. This knowledge is used to develop an improved definition of the assumptions and approaches used in the seasonal outlooks and TYNDP.

In 2015, S&D KG deepened its knowledge of ENTSO-E TYNDP input data and results and consequently improved the approach to gas demand for power generation for TYNDP 2017. In addition, the Kernel Group defined rationales for three demand scenarios to be used by TSOs when providing demand data for TYNDP 2017.

ENTSOG's R&D activity also includes other matters such as evaluating the impact of demand-side measures. Consideration of these issues is underway and will continue throughout 2016. In 2015, ENTSOG and ENTSO-E already cooperated on their Winter Outlooks, which allowed them to reflect on the ability to mitigate gas security-of-supply issues by substituting gas-fired generation means by other generation means as part of ENTSO-E Winter Outlook.

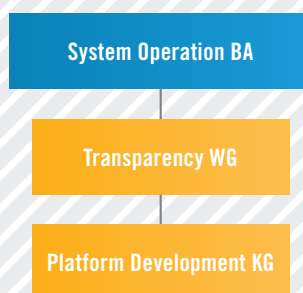
Network Modelling Kernel Group

In 2015, ENTSOG factored in feedback from TYNDP 2015 and, consequently, began to improve its modelling approach. One such improvement is the modelling of high-demand situations (making use of average climatic year modelling results) independently from the rest of the year. This was tested successfully within Winter Outlook 2015/2016. ENTSOG also initiated a change in the programming language which will allow for faster simulations.

System Operation Area

The System Operations business area is mainly in charge of developing technical network codes, evaluating all activities related to gas quality standardisation, developing and maintaining existent Common Network Operation Tools (CNOT), and the performance of ENTSOG's Transparency Platform (TP). At present, System Operations comprises two main working groups: Interoperability (INT WG) and Transparency (TRA WG).

TRANSPARENCY WG STRUCTURE



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 have been 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 requirements for data publication.

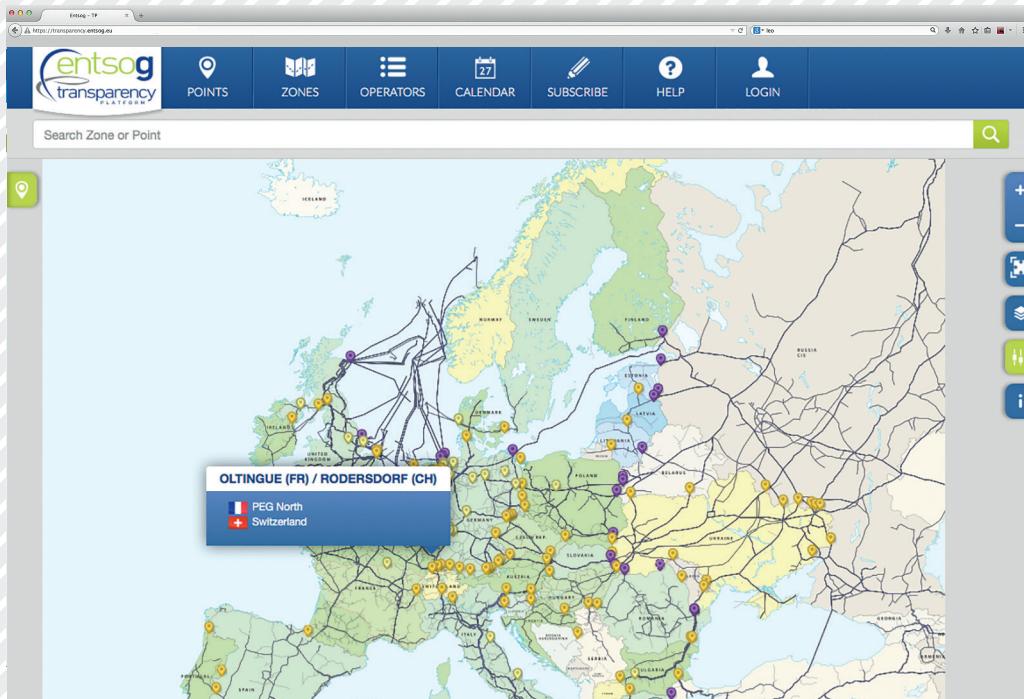
Regulation (EU) No 1227/2011 and its Commission Implementing Regulation (EU) No 1348/2014 introduced additional publication and reporting obligations to the market participants, aimed at supporting market monitoring, to foster open and fair competition in wholesale energy markets and the completion of a fully functioning, interconnected and integrated internal energy market.

GROUP STRUCTURE

The Transparency Working Group (TRA WG) is supported by the Platform Development Kernel Group.

TRA WG is responsible for facilitating and coordinating the following processes:

- ▲ Fulfilling transparency requirements of TSOs
- ▲ Implementing REMIT reporting obligations of ENTSOG and TSOs
- ▲ Maintaining ENTSOG Transparency Platform



ENTSOG TRANSPARENCY PLATFORM (ENTSOG TP)

ENTSOG TP provides technical and commercial data on gas transmission systems, which include interconnection points and connections with storages, 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 gas TSOs to fulfil their data publication obligations (see Chapter 3, Annex I, Regulation (EU) No 715/2009). ENTSOG received strong support from many stakeholders with regard to TP functionality and the information provided therein.

Link to the Transparency Platform:
<https://transparency.entso.eu/>

New Functionality

In order to improve the usability of ENTSOG TP, ENTSOG deployed the following features in 2015:

- ▲ Tool to easily recognise virtualised physical points, and easy access to historical data published before virtualisation
- ▲ Tool to detect competing points in context of CAM NC requirements

- ▲ Functionalities for recognising exemptions or non-applicability of TSOs' data publications due to policy or operational reasons. Through so-called "NA functionality" and "Minus sign functionality", TP informs users on reasons for absence of data and helps them differentiate between publication exemptions and real missing data
- ▲ Possibility to publish Within-Day capacity information in line with CAM NC requirements
- ▲ TP Monitoring tool providing detailed statistical information on TP usage to ENTSOG

Data publication

ENTSOG and TSOs work closely together on a daily basis 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.

REGULATION ON ENERGY MARKET INTEGRITY AND TRANSPARENCY (REMIT)

Regulation (EU) No 1227/2011 (REMIT) establishes rules prohibiting abusive practices affecting wholesale energy markets. 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 manipula-

tions 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.

ENTSOG'S IMPLEMENTATION OF REMIT

On behalf of gas TSOs, ENTSOG shall share information with 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.

In compliance with the requirements of REMIT and the requirements of ACER, ENTSOG passed the registration process and was officially announced as Registered Reporting Mechanism on 5 August 2015.

ENTSOG developed its reporting system based on the provisions of Commission Implementing Regulation (EU) No 1348/2014 and other supportive documentation issued by the Agency with regard to REMIT.

As of 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 Transparency Platform:

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

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

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 the files reported to ACER

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

- ▲ Submitting data to ARIS
- ▲ Rectifying and submitting data in case of technical issues on the reports

The TSOs are responsible for carrying out the following:

- ▲ Performing complete, high-quality and timely data publications on ENTSOG Transparency Platform
- ▲ 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 Transparency Platform. It will then be transmitted to ACER through the ENTSOG Reporting System



Image courtesy of Ontras Gastransport GmbH

Global proven gas reserves have more than doubled since 1980, reaching 190 trillion cubic metres at the beginning of 2010.

TSOs’ IMPLEMENTATION OF REMIT

Commission Implementing Regulation (EU) No 1348/2014 stipulates that the 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 commence 7 April 2016.

In order to facilitate the TSOs REMIT implementation process, ENTSOG has established the following:

- ▲ Regular REMIT panels during monthly Transparency Working Group Meetings
- ▲ TSO REMIT Implementation Task Force group
- ▲ Regular discussion sessions between the ENTSOG Transparency Team, TSO REMIT Implementation Task Force and ACER REMIT Team. The aim is to provide clarity on various technical and policy questions, lead the TSOs through the RRM registration, and resolve issues related to data reporting

During 2015, ENTSOG Transparency Team and Transparency Working Group participated in the following events:

- ▲ ACER REMIT Expert Group meeting
- ▲ ACER REMIT Public Workshop
- ▲ ACER RRM Expert Group meetings
- ▲ ACER Public Consultation on the Common Schema for the Disclosure of Inside Information

ANNUAL PUBLIC TRANSPARENCY WORKSHOP

ENTSOG Ninth Annual Public Transparency Workshop was held on 4 February 2016. The workshop was organised in three sessions dedicated to the following topics:

- ▲ ENTSOG Transparency Platform
- ▲ REMIT Implementation Process
- ▲ Upcoming TARIFF Network Code Requirements on Transparency

As part of the workshop, ENTSOG demonstrated the new functionalities of the Transparency Platform through a live demo and shared the plans for its future development. ACER presented its feedback on the platform and suggested improvements in some functional and data publication areas.

ENTSOG and TSOs shared their experiences and provided feedback on the REMIT implementation process. The workshop participants had the chance to receive practical advice on the RRM registration and REMIT reporting process directly from the ACER REMIT Team.

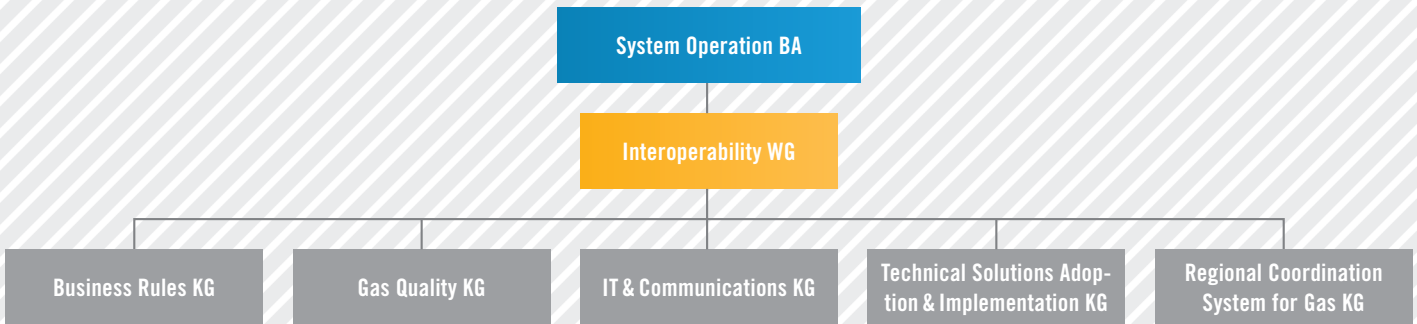
During the session dedicated to the upcoming TAR NC, ENTSOG informed the audience about performed and upcoming activities relating to Network Code development as well as current discussions regarding the content of the transparency requirements in TAR NC.

Gas transport through underground pipelines and gas storage does not impact people or the environment.



Image courtesy of Enagás S.A.

INTEROPERABILITY WG STRUCTURE



Interoperability & Data Exchange

As part of the workshop, ENTSOG demonstrated the new functionalities of the Transparency Platform through a live demo and shared the plans for its future development. ACER presented its feedback on the platform and suggested improvements in some functional and data publication areas.

ENTSOG and TSOs shared their experiences and provided feedback of the REMIT implementation process. The work-

shop participants had the chance to receive practical advice on the RRM registration and REMIT reporting process directly from the ACER REMIT Team.

During the session dedicated to the upcoming TAR NC, ENTSOG informed the audience about performed and upcoming activities relating to Network Code development as well as current discussions regarding the content of the transparency requirements in TAR NC.

GROUP STRUCTURE

The following KGs support INT WG:

- ▲ **Business Rules KG:** responsible for development of harmonised rules related to technical cooperation between TSOs including interconnection agreements
- ▲ **Gas Quality (GQ) KG:** responsible for issues related to gas quality specifications and odourisation practises
- ▲ **IT & Communications (ITC) KG:** responsible for issues related to streamlining communication solutions for data exchange
- ▲ **Technical Solutions Adoption & Implementation (TSAIG) KG:** responsible for developing the Business Requirement Specifications (BRS) part of CNOTs; required for data exchange in the implementation of already developed network codes
- ▲ **Regional Coordination System for Gas (RCSG) KG:** responsible for developing proposals for a regional coordination system in case of a gas supply crisis (formerly Early Warning System – EWS)



Based on state-of-the-art technologies, efficiencies of up to 60% can be achieved using electricity generated with natural gas.

Image courtesy of GASCADE Gastransport GmbH

NETWORK CODE INTEROPERABILITY & DATA EXCHANGE

Final Comitology

The Gas Committee approved the INT Network Code (INT NC) at the second comitology meeting, held 3–4 November 2014. For several months, INT NC was subjected to scrutiny and then published in the Official Journal of the European Union on 30 April 2015. It subsequently came into force on 20 May 2015. It shall apply from 1 May 2016 onwards without prejudice to Article 5 (see next section on IA Template).

IA template

ENTSOG developed a draft interconnection agreement template (as required by Article 5 of INT NC) that was published in June 2015. It covers the default terms and conditions set out in Articles 6 to 10 of the network code which define key technical and operational areas of interconnection points.

In October, ACER provided its opinion welcoming the publication of the draft and made two recommendations. Firstly, the Agency suggested presenting the default rules (i.e., the minimum mandatory content of an agreement) separately from the guidance on their application. This should bring the template closer to the format of an agreement or an addition to one. Secondly, ACER recommended complementing the separated guidance document on default rules with samples from existing interconnection agreements.

In December 2015, ENTSG published the final version of the template addressing the document structure recommendations from ACER and proposing to publish the samples by 1 May 2016. This would allow the existing agreements to be duly revised and ready for the applicability of INT NC.

Long-Term Gas Quality Outlook

Article 18 of INT NC assigns ENTSG the task of publishing the long-term gas quality monitoring outlook for transmission systems. The forecast will identify the potential trends of gas quality parameters and respective potential variability within the next ten years and will be published along with TYNDP 2017.

In the second half of 2015, System Operation and System Development teams began an intense cooperation to fulfil this new requirement by developing a robust methodology that yields a meaningful outcome.

The first version of the Long-Term Gas Quality Outlook model gives a range of the gas quality forecasts per region, only the Gross Calorific Value and Wobbe Index parameters are taken into consideration.

GAS QUALITY STANDARDISATION PROCESS – FOLLOW-UP

CEN Gas Quality Standard

Following the M/400 mandate¹⁾, the CEN Technical Committee 234 finalised and approved EN 16726 on gas quality. This European standard specifies gas quality characteristics, parameters and their limits for gas classified as group H to be transmitted, moved into and from storage, distributed and utilised.

However, an agreement could not be reached for the Wobbe index, which is the most relevant parameter for interchangeability. EC wishes to pursue this matter over the next years as a continuation of the CEN M/400 mandate.

As announced at the 28th Madrid Forum, EC invited ENTSOG on 18 December 2015 to carry out an impact analysis of the whole gas value chain and subsequently draft an amendment to the INTNC on gas quality. The planned submission date is 30 June 2017.

On 10 February 2016, ENTSOG accepted an EC invitation that underlines the importance of an inclusive process that allows stakeholders across the entire gas value chain in all relevant Member States to provide fundamental input, particularly on issues outside our TSOs' field of expertise.

Pilot study on Wobbe Index and GCV

On 18 November 2015, CEN kicked off the so-called Gas Quality Harmonisation Project II in Brussels by hosting an open brainstorming session on reaching an agreement for Wobbe Index and other parameters not covered in the

standard. At the meeting, stakeholders from across the gas value chain share their views on possible objectives, subjects, methodologies, and structures of such an initiative.

The conclusions drafted afterwards point to CEN as the organisation leading the initiative, with monitoring and support from EC which will extend mandate M/400. The project will be placed within CEN as a working group under the umbrella of the Sector Forums Gas Utilisation and Gas Infrastructure. A call for experts will be made by CEN to which ENTSOG will contribute as an observer.

Biomethane

By October 2015, CEN/TC 408 decided to proceed to a formal vote for part 1 of the standard prEN 16723 covering specifications for biomethane for injection in the natural gas network.

At the same time, CEN/TC 408 has requested a nine-month postponement for part 2 addressing automotive fuel specifications, in order to allow related research projects to be completed.

Related to biomethane but not in the field of standardisation, it is worth mentioning that, in late 2015, the European Biogas Association circulated a proposal 'to establish a documentation system which enables the cross-border trade of biomethane (by means of the European natural gas network) with the exclusion of double sale and double counting'.

REGIONAL COORDINATION SYSTEM FOR GAS

In 2014, ENTSOG established the Early Warning System (EWS), with an Early Warning Team East (EWTE) in place from 1 October 2014. The EWTE (17 TSOs including Ukrtransgaz) can provide expert knowledge on short notice in the event of a security of gas supply crisis in the Russian supply corridor, in order to mitigate or to eliminate the consequences of such a crisis.

In 2015, ENTSOG expanded the EWS with an additional Early Warning Team North-West (in place since 1 July 2015 with 11 TSOs on-board including GASSCO). The team was established to cover the second main supply corridor, namely the gas flowing from the Norwegian offshore fields.

The ENTSOG Board decided to further develop the EWS towards becoming the Regional Coordination System for Gas (RCSG). The main tasks for the RCSG are:

- ▲ Preventing and operating SoS crises
- ▲ Facilitating regional activities on Regulation (EU) 994/2010
- ▲ Providing expertise to Gas Coordination Group
- ▲ Providing maintenance information if required

RCSG is responsible for developing specifications for an operational map in 2016. RCSG intends to make this map available upon completion to all relevant TSO dispatching centres.

1) M/400 Mandate to CEN for standardisation in the field of gas qualities

UKRAINIAN MONITORING MISSION

In November 2014, EC formally asked ENTSOG for support in establishing a Ukrainian Monitoring Mission (in accordance with Regulation (EU) 994/2010 Article 11 Para. 7 and the “Rules of procedure for the Gas Coordination Group” Article 5 and 6). Consequently, ENTSOG supported EC in setting up the Mission’s terms of reference; an ENTSOG representative travelled to Ukrtransgaz headquarters on 22 December 2014. This represented a first high-level visit aiming at building confidence and starting to examine data exchange needs.

The next meeting took place in January 2015. Representatives from Ukrtransgaz met with ENTSOG and agreed on the data provisions and formats for the daily data reports.

Ukrtransgaz started to provide EC and ENTSOG with the daily data report on 3 February 2015.

A number of meetings between Ukrtransgaz, EC and ENTSOG were held throughout 2015. The daily report was further improved. At the end of 2015, ENTSOG and the EC had gained a full understanding of the gas flows into, within and out of Ukraine.

It must be emphasised that Ukrtransgaz has made the daily reports available without fail and that the talks between the involved parties were characterised by a high level of trust and constructive solutions.

COOPERATION WITH ENERGY COMMUNITY AND THIRD-COUNTRY TSOs

During a workshop, ENTSOG presented the final version of INT NC and how to apply the rules defined in the code. ENTSOG’s TSO members and contracting parties to EnC TSOs demonstrated how they apply the technical rules of INT NC. In addition, “Europe Maghreb Pipeline Limited” (empl) demonstrated the difficulties they encounter at IPs when transporting gas from Algeria via Morocco to Spain. These examples demonstrated

how important it is to streamline and harmonise the rules along the whole gas value chain. Furthermore, ENTSOG presented the latest developments of RCSG (former Early Warning System). ENTSOG again invited all non-Member State TSOs to join the Early Warning System teams and promised to reinforce its efforts in this area in 2016 (in line with Annex IV of Regulation (EU) 994/2010).



Image courtesy of Reganosa S.A.

COMMON NETWORK OPERATION TOOLS FOR DATA EXCHANGE

ITC/TSAIG KGs supported the Capacity and Balancing WG in developing the CAM/CMP Business Requirement Specification (BRS) and the Implementation Guidelines (IG).

CAM/CMP BRS and Implementation Guidelines

On 2 March 2015, ENTSOG published BRS for CAM & CMP and launched a stakeholder consultation which closed on 31 March 2015. Public consultation was carried out in conjunction with a Stakeholder Workshop on BRS held on 16 March 2015. The external stakeholders considered the overall document as sufficient, and further improvements of the BRS for CAM & CMP are not necessary. However, following the first functionality cycle facilitated by ENTSOG between April and July 2015, the solutions proposed on issues related to CAM Network Code and/or CMP guideline were included in the BRS for CAM & CMP in July 2015.

ENTSOG asked the market to provide their opinion on the documents during the aforementioned public consultation. This was to ensure that BRS for CAM & CMP contains not only sufficient enumeration of all relevant processes derived from Commission Regulation (EU) No 984/2013 (CAM NC) and Commission Decision (EU) No 490/2012 (CMP guidelines) but also a full description of the detailed message requirements used to develop the Implementation Guideline based on BRS.

ENTSOG delivered the approved CAM/CMP BRS documents to EASEE-gas in August 2015 to develop the necessary IG based on Edigas-XML data exchange formats. EASEE-gas has delivered these IG by Q1 2016.

NOMINATIONS & MATCHING

BRS for nominations and matching was updated to support single-sided nominations and to introduce “Active” and “Passive” Network Users and TSO-side nominations. The approved Nom&Mat BRS documents were sent to EASEE-gas in August 2015 to include the single-sided nom-

inations in IG and adapt the Edigas-XML data exchange formats. In September 2015, ENTSOG Board approved the updated IG, ENTSOG and EASEE-gas published them on their websites.

DATA EXCHANGE IMPLEMENTATION SUPPORT

Document-Based Data Exchange

Early in 2015, ITC KG further refined the ENTSOG AS4 profile to provide clarity on the requirements for Message Headers, which the group agreed upon and subsequently published in the ENTSOG AS4 Header Table. ITC KG further clarified the “How to Set up an AS4 System” document.

Work started on an AS4 specification that will provide a solution to the very manual task of encryption certificate renewal. This specification was released for public consultation late in 2015 and is now nearing completion. ITC KG expects to finalise the specification in 2016, which will reduce manual intervention for all users of AS4.

On 20 October 2015, ITC KG held a workshop for stakeholders and vendors to discuss the AS4 protocol, to give our members the opportunity to discuss experiences and to meet vendors. Based on the feedback received from the workshop, ITC KG produced a Q&A document to support the implementation of AS4 systems. All documents can be found on the ENTSOG website.

Integrated Data Exchange

Following further development of BRS and IG for CAM and the emerging use cases, ITC KG started to work on potential profiles for web services or HTTPS Soap data transfers. This work will progress throughout 2016.

OPERATION AND MANAGEMENT OF LIO FOR EIC

The Local Issuing Office (LIO) manages the Energy Identification Coding (EIC) through weekly updates to the Central Issuing Office (CIO) and the ENTSOG website. Final responses to requests are delivered within a maximum of ten days.

Operation of LIO Office

EIC is standardised and maintained by ENTSO-E and provides a unique identification of the market participants and other entities active within the European Internal 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 2015 and ENTSOG is now managing 1056 EIC codes. As part of this, the ENTSOG LIO website was redeveloped to make the request forms easier to use and to bring them up to date with the new EIC Reference Manual.

In 2015, ENTSOG attended joint CIO/LIO meetings and contributed to upgrading the EIC Reference Manual. In addition, ENTSOG presented a newly developed LIO software application tool for managing the EIC codes at the CIO/LIO meeting in Bled, Slovenia.

LIO Tool Development

After specifying the LIO tool in 2014, ENTSOG received three proposals to develop the software. ENTSOG selected a developer based in Ireland and worked with him to develop a Microsoft Access-based LIO EIC Tool. The supplier delivered the tool in September 2015 and it is working very well within ENTSOG. An installation programme which can be used to deliver the tool to any interested LIO office was delivered in December 2015.

During 2016, we will provide support and work with other LIO Offices to make improvements to the LIO EIC tool, which will include an updated data scheme.

Role Model

The Role Model is an initiative of EASEE-gas to develop a document representing relations between the different market participants in the gas industry. The project focusses mainly on information exchange between market participants. While the document will not be legally binding, the aim is to provide common terminology for the roles that are used among EU countries. ENTSOG has contributed to the Role Model project on an advisory basis. EASEE-gas will present it at the Madrid Forum in October 2016.



Image courtesy of TIGF SA

General Area

GENERAL AREA



The gas industry provides around 305,000 jobs in the European Union.

AREA STRUCTURE

The General Area serves as a support team for the ENTSOG Management. The General Assembly, Board, and General Manager and all three Business Areas are the “internal customers” of the small team. The functions of the General Area comprise of Communications, IT, Finance, HR, Legal and the Administrative Support.



Implementation Reports

REPORT ON IMPLEMENTATION OF BALANCING NETWORK CODE (BAL NC)

Commission Regulation (EU) 312/2014 from 26 March 2014 established a Network Code on Gas Balancing of Transmission Networks (BAL NC) and came into force on 16 April 2014. This regulation applies to balancing zones within the borders of the EU. It establishes rules for natural gas balancing, including network-related rules on nomination procedures, imbalance charges, settlement processes associated with daily imbalance charges, and provisions on operational balancing.

After the Forum request to follow up on the early implementation status of BAL NC at the 25th Madrid Forum (6–7 May 2014), ENTSOG and ACER cooperated on and published two joint ACER/ENTSOG reports outlining the early implementation status. In its first implementation report, ENTSOG reported on its monitoring of the implementation of the BAL NC as of 1 October 2015, following Article 8 (8) of Regulation (EC) No 715/2009.

BAL NC is applicable as of 1 October 2015 with the possibility to postpone its application until 1 October 2016. Instead of full implementation, interim measures can be implemented for up to five years (i.e., until 16 April 2019) from the Code's entry into force. Such measures would have to be consistent with the options laid down in Chapter X of the Code and with the Code's general principles. All of the other provisions in BAL NC shall be implemented by 1 October 2015.

The ENTSOG report reflects the individual implementation practices of respective countries, including indicative timelines for implementing provisions of the BAL NC.

Seven out of ten countries reported implementing the BAL NC by a deadline of 1 October 2015. Three countries reported having most of the provisions in place.

Seven out of 11 countries that had applied for putting interim measures in place until no later than April 2019 reported implementing them; two respondents partially implemented the planned interim measures by 1 October 2015 while two other countries are planning to implement them in 2016.

Five respondents stated all other provisions are in place while six other countries reported partial implementation as of 1 October 2015.

The five countries applying for a transitory period as of 1 October 2016 have partially implemented the BAL NC provisions, and the implementation process is on-going. One country indicated an earlier implementation date of 1 July 2016.

TSOs and NRAs have made implementation progress regardless of the fact that some countries still face low market liquidity and will require time to create a functioning wholesale market that enables network users and TSOs to achieve balance in a market-based manner.



Image courtesy of Fluxys Belgium S.A.



REPORT ON IMPLEMENTATION OF CAM NC

The Network Code for Capacity Allocation Mechanisms (CAM NC) was developed by ENTSOG based on the Framework Guideline on Capacity Allocation Mechanisms by ACER in the years 2011 and 2012.

The Network Code was approved by the EU Gas Committee on 14 October 2013 as Commission Regulation (EU) No 984/2013.

The implementation date was 1 November 2015 with exception of Article 6 which had to be implemented by 4 February 2015.

Pursuant to Article 8(8) of Regulation (EC) No 715/2009, ENTSOG monitors the implementation of the CAM NC.

ENTSOG launched the monitoring process in December 2015 to ensure the timely publication of the results in the 2016 Annual Report.

As a novelty, ENTSOG and ACER decided to develop a joint process for facilitating the collection of the data for CAM implementation monitoring purposes, which is also applied for Commission Regulation (EU) No 312/2014 (BAL NC).

For the report on implementation monitoring of CAM NC, the data is based on information provided by 41 TSOs. The data consists of two main parts: information from each TSO on how CAM NC has been applied and how CAM NC has been applied at each relevant side of an Interconnection Point (IP).

Thus, this report on implementation monitoring of CAM NC presents an overview of the implementation of the various Articles of CAM NC by TSOs and for IP sides in the European Union. Conclusions are also drawn on the implementation status and potential obstacles.

Overview of Implementation status

The focus of this report is to monitor the implementation of CAM NC requirements that are obligatory for TSOs. The report shows that out of the 41 TSOs for whom the application of the CAM NC is mandatory, 30 TSOs have developed and applied all or at least all mandatory measures required by the CAM NC, which means that they fully comply with the obligations defined in the CAM NC. 11 TSOs mentioned that they partially implemented the CAM NC requirements, while five TSOs are under derogation under Article 49 of the Gas Directive as granted by the European Commission. Nonetheless, one of these TSOs has partially implemented CAM NC. Furthermore, three TSOs operate only IPs that are not CAM NC relevant.

The results of implementing CAM NC by TSOs is also reflected by the results of the IP survey, which included 330 IPs relevant to CAM NC. Generally it was shown that CAM NC has already been implemented at the majority of IPs polled. At a small number of IPs, some Articles of CAM NC had yet to be applied (maximum 10% of IPs).

One obstacle for TSOs regarding the implementation of CAM NC is the necessity of offering all their bundled capacity at one IP on one capacity platform. Some TSOs were not able to reach an agreement on which capacity booking platform to use. Other TSOs have applied interim measures from BAL NC wherein certain provisions of CAM NC are not applicable such as the introduction of over-nomination procedures or the offer of within-day interruptible capacity. Other TSOs face delays since their auc-

tion platform is not yet equipped to deal with competing capacity situations where they compete with adjacent TSOs at one or more IPs in offering capacity.

Moreover, it is not currently possible to apply all articles of CAM NC at some IPs where their technical capacity has been booked in advance on a long-term basis. Hence, no auctions can take place and it is not possible to bundle the available capacity for neighbouring TSOs.

REPORT ON IMPLEMENTATION OF CMP

The guidelines for Congestion Management Procedures (CMP) were developed by the European Commission in 2010–2011 and approved by the EU Gas Committee on 24 August 2012 as the Commission Decision on amending Annex I to Regulation (EC) No 715/2009. The implementation date was 1 October 2013.

Under Article 8 (8) of the Gas Regulation, ENTSG monitors the implementation of the CMP guidelines. ENTSG launched its annual monitoring process in December 2015 to ensure the timely publication of results in the 2016 Annual Report.

For the implementation monitoring of Congestion Management Procedures the same questionnaire was used as in the previous year and was only updated for those TSOs that had not yet fully implemented all mandatory measures according to last year's report.

Overview of Implementation Status

NUMBER OF TSOs	OVERSUBSCRIPTION AND BUY-BACK SCHEME OR FIRM DAY-AHEAD UIOLI MECHANISM (FDA UIOLI) ¹⁾	SURRENDER OF CONTRACTED CAPACITY	LONG-TERM UIOLI (LT UIOLI)	COMMENTS
33	Implemented	Implemented	Implemented	Including exemption as per NRA decision under section 2.2.3(6) ¹⁾
6	In process of implementation (NRA decision pending)	Implemented	Implemented	OS+BB: The NRA has not approved the proposed scheme yet. Including exemption as per NRA decision under section 2.2.3(6) ¹⁾ Derogation applicable ²⁾
1	In process of implementation (NRA decision pending)	Implemented	Implemented	The NRA has not decided between OS+BB and FDA UIOLI
2	In process of implementation (NRA decision pending)	In process of implementation (NRA decision pending)	In process of implementation (NRA decision pending)	Implementation in 2016
7	Not applicable, as regards scope, implementation date or derogation under Article 49 of Gas Directive	Not applicable, as regards scope, implementation date or derogation under Article 49 of Gas Directive	Not applicable, as regards scope, implementation date or derogation under Article 49 of Gas Directive	No IPs/Derogation

■ Implemented
 ■ In process of implementation (NRA decision pending)
 ■ Not applicable, as regards scope, implementation date or derogation under Article 49 of Gas Directive
 ■ Not implemented

1) The firm day-ahead UIOLI mechanism should be implemented by 1 July 2016, where ACER's congestion monitoring report shows that there is excessive demand for firm capacity products offered in the next three years or where no firm capacity is offered at all.

2) The derogation has been granted for 5 countries, nonetheless one of the TSOs in these Member States, (Amber Grid, Lithuania), implemented the CMP measures during 2015.

The survey conducted by ENTSOG regarding the implementation of the CMP measures shows that 33 of 49 TSOs (45 ENTSOG members, two associated partners and two non-ENTSOG TSOs) have implemented Surrender, Long-Term UIOLI (LT UIOLI) and Oversubscription and Buy-Back (OS&BB) or Firm Day-Ahead UIOLI (FDA UIOLI). OS&BB and FDA UIOLI are interchangeable. The National Regulatory Authority (NRA) of each country has to decide to replace the Oversubscription and Buy-Back scheme with a Firm Day-Ahead UIOLI mechanism.

In most cases, delays in implementation by some TSOs are due to missing or delayed approvals for their implementation proposals from their respective NRAs. Seven of eight TSOs with implementation delays were in this particular situation at the time of the questionnaire.

Conclusions

Most ENTSOG members have already fully implemented the CMP Guidelines. Only a few members are still in the process of implementing some of the congestion management mechanisms. Most of the delays experienced in the application of the CMP Guidelines are not within the TSOs responsibility. The affected TSOs have already raised their proposals to implement the missing congestion management procedures and are currently waiting for a final decision from their NRA. This means that 40

Currently five of seven TSOs are awaiting approval from NRAs for OS&BB or FDA UIOLI mechanisms.

The perspectives for receiving final approval from their respective NRAs are good and expected during 2016. Two other TSOs are also not applying Surrender and Long-term UIOLI mechanisms in addition to the Oversubscription and Buy-Back schemes or the Firm day-ahead UIOLI mechanisms. However, these two TSOs are optimistic that they will be able to implement all the required measures within the year, and one of them is only waiting NRA approval for implementation.

Thus, eight of the TSOs are expected to fully implement the CMP Guidelines during 2016.

And although the CMP guidelines are not applicable for eight TSOs (some Member States have been granted derogation by the European Commission under Article 49 of the Gas Directive), one of these TSOs has nonetheless implemented the CMP Guidelines.

out of 48 TSOs are applying all relevant congestion management procedures, taking into account that seven TSOs (out of these TSOs that are not fully compliant with the CMP Guidelines yet) are still in the process of receiving regulatory approval to apply the proposals they have submitted to their NRAs.

From today's perspective it can be said that all TSOs will become compliant during the year 2016.

REPORT ON THE EARLY IMPLEMENTATION OF INT NC

Following AWP 2015 and in preparation of the monitoring obligations envisaged by Article 25 of INT NC, ENTSOG members participated in a voluntary exercise to evaluate the implementation status of INT NC provisions by the end of 2015.

The exercise demonstrated that, among the participating TSOs representing 75% percent of ENTSOG, more than half of the interconnection points (IPs) already have an interconnection agreement in place. Results indicate a high degree of compliance with the mandatory terms of INT NC. The vast majority of agreements implement the “lesser rule” as the matching rule and the “operational balancing account” is widely used as the allocation rule. According to the results, there are no apparent cross-border barriers related to gas quality.

Gas quality data publication and data exchange require the most effort before INT NC is fully applied in May 2016. Regarding data exchange, TSOs are actively working towards achieving compliance with the provisions of the INT NC. In conclusion, the report indicates that TSOs are on track to fully implement INT NC by May 2016.

Replacing an old coal-fired power plant with a CCGT plant can reduce CO₂ emissions by up to 70%.



Image courtesy of E-ON SE

Joint Functionality Process for Gas Network Codes

A number of gas network codes required by Regulation (EU) No 715/2009 have been and are being established with the aim of providing and managing effective and transparent access to the transmission networks across borders. These will also ensure coordinated and sufficiently forward-looking planning as well as sound technical evolution of the Union's gas transmission system.

Aside from establishing and implementing network codes, it is also necessary to monitor and analyse network codes in order to achieve the overall objective of establishing the internal gas market. It has been recognised that it can be helpful and necessary to have a process in place that ensures that network codes function effectively across borders.

The first initiative to address issues during the implementation and operation of CAM NC and BAL NC was started in 2014 by ENTSOG and EFET. This initiative – referred to as Functionality of Network Codes (FUNC) – was broadly supported by stakeholders.

In mid-2015, EC, ACER and ENTSOG agreed to set up a more formalised and cooperative process involving all relevant parties. This was to ensure that NRAs and ACER would agree with the resulting solutions so that they could consequently be implemented. The separate steps, organisation and further details of the Joint Functionality Process, including cooperation agreements as well as the web-based Gas Network Codes Functionality Platform, have been established in close cooperation between ACER and ENTSOG in the second half of 2015 and beginning of 2016. During the establishment phase, extensive discussions took place not only in the bilateral meetings between ACER and ENTSOG but also internally within the different Working

Groups of ENTSOG (CAP WG, INT WG, Liaison Group etc.). The final proposal has been approved by the ENTSOG Board as well as the ACER Board of Regulators.

The established Joint Functionality Process, co-managed by ENTSOG and ACER and supported by the Commission, is aimed at reaching commonly recommended solution(s) on implementation and operational issues within the existing Gas Network Codes (NCs) and Guidelines (GLs). It also provides stakeholders with a platform where they can raise and discuss issues and propose solutions. This ultimately achieves a guidance that is non-binding but agreed upon by all parties.

The central tool of the process is the Gas Network Codes Functionality Platform (www.gasncfunc.eu) launched in February 2016. This platform allows stakeholders to raise implementation and operational issues via the web interface.

ACER and ENTSOG will jointly validate, categorise and prioritise the raised issues and develop solutions while accounting for stakeholders' ideas.

The Joint Functionality Process and the web-based platform will initially be considered a pilot project to be evaluated in 2016 by ACER and ENTSOG after a trial period.

Current Year and Upcoming Targets

After having developed most of the requested gas network codes, our work at ENTSOG is changing. We are already in the second or third phase of our activities. The significantly improved TYNDP and widely accepted Transparency Platform – already in its second generation – will both continue to develop. Also, the gas quality amendment of INT NC is representing the upcoming challenges.

While the first phase of ENTSOG's activities was oriented on setting up the organisation and drafting network codes, the second phase is now highly focused on their implementation. Our 2014 Annual Report included, for the first time, reports on early implementation. This 2015 edition reports on the findings from the implementation of some codes.

Soon even this will undergo further development. After initially concentrating on monitoring implementation, we will move our focus instead to monitoring the effects. In other words, to what extent network codes are delivering the requested results. The newly established Joint Functionality Process will address potential adjustments to the implementation of network codes and possible issues which might require future adaptations.

To learn more about the functionality of the network codes, ENTSOG will have more dialogue and interaction with its stakeholders and market participants. This could result in even smaller and more frequent workshops on specific topics or engaging ENTSOG in other initiatives which can promote the functionality and consistent implementation of the network codes.

We will continue to fine-tune the necessary internal processes and our way of dealing with the feedback from our members to maintain a consistently professional standard.

Current and unexpected developments require more flexibility and internal resources. The discussion on gas quality in the context of INT NC serves as a good example. When the gas quality amendment was suggested, it was a new type of task for ENTSOG to perform value chain analysis as a consequence of applying the CEN standards. It will be a substantial challenge in a highly disputed area with many different opinions.

With the publication of the newly proposed Security of Supply (SoS) regulation, ENTSOG commenced an analysis of the potential impact of its work. Most importantly, ENTSOG is going to perform an EU-wide risk assessment analysis. Together with our members and GIE, we are taking up the new task.

Our Regional Coordination System for Gas (a further development of the former Early Warning System) also plays a role for SoS. It makes it possible, in a pragmatic way, to handle high-risk situations on short notice through rapid mobilisation and fast communication channels between TSOs.

As a consequence of the EU-Russia Dialogue, ENTSOG will continue working on Incremental Amendment issues together with Gazprom and other stakeholders. We will also look into the possibilities for improving data flows for Russian gas exports to Europe so that accurate gas flow information is continuously accessible as a vital component of the SoS puzzle.

In the future, ENTSOG will continue our well-established dialogue with our stakeholders in keeping with our motto:

A FAIR PARTNER TO ALL.



Complete Setting

Organisation | Team

Financial Statements | Press Releases

Stakeholder Consultations & Workshops

Organisation

In 2015, our Members, Associated Partners, Observers and Management Board underwent the following changes:

- ▲ The General Assembly endorsed the replacement of Walter Peeraer with Pascal De Buck (Fluxys Belgium S.A.) as a Board Member as of October 2015
- ▲ The General Assembly endorsed the membership of Amber Grid (Lithuania) as of 1 November 2015
- ▲ The General Assembly endorsed the membership of Società Gasdotti Italia S.p.A. (Italy) as of 1 January 2016
- ▲ The ENTSOG General Assembly on 16 December 2016 unanimously appointed the following:
 - Mr S. Kamphues as President of ENTSOG for the term 1 January 2016 to 31 December 2018
 - ENTSOG Board Members for the term 1 January 2016 to 31 December 2018 as pictured below
- ▲ The General Assembly designated Mr. Jan Ingwersen unanimously as General Manager for the term 1 January 2016 to 31 December 2018, adopting the recommendation from the ENTSOG Board



ENTSOG Board, from left to right: **Miroslav Bodnár** (eustream, Slovakia), **Zoltán Gellényi** (FGSZ, Hungary), **Georgi Gegov** (Bulgartransgaz, Bulgaria), **Pascal De Buck** (Fluxys, Belgium), **Marjan Eberlinc** (Plinovodi, Slovenia), **Nicola Pitts** (National Grid, Great Britain), **Christoph von dem Bussche** (GASCADE, Germany), **Francisco Pablo de la Flor García** (Enagás, Spain), **Gabriela Mares** (Transgaz, Romania), **Thierry Trouvé** (GRTgaz, France), **Gaetano Mazzitelli** (Snam Rete Gas, Italy), **Stephan Kamphues** (ENTSOG President, Open Grid Europe, Germany), **Annie Krist** (Gasunie Transport Service, Netherlands)

MANAGEMENT
SUPPORT
TEAM



From left to right: Agata Musial, Laura Bordin, Maria Dhénin, Leonida Giunta, Armin Teichert, Jan Ingwersen, Nicolas van der Maren

MARKET
TEAM



From left to right: Mihai Goage, Irina Oshchepkova, Pedro Miras, Laurent Percebois, Maria Jost, Áine Spillane, Veronika Herter, Peter Hlusek, Ksenia Berezina, Alexandra Kiss, Jan Vitovský. Left: Malcolm Arthur



SYSTEM
DEVELOPMENT
TEAM

From left to right: Mirsada Spaho, James Gudge, Céline Heidreich, Stefan Greulich, Ádám Balogh.
Right above Arturo de Onís, below Vincent Scherrer



SYSTEM
OPERATION
TEAM

From left to right: Mirsada Spaho, Hendrik Pollex, Katherine Stannov, Maria Gerova, Jackie Manning,
Antonio Gómez Bruque, Jef De Keyser

Financial Statements 2015

Values EUR	Note	2015	2014
ASSETS			
FIXED ASSETS	20/28	429,121.35	509,651.22
I. Formation expenses	20		
II. Intangible assets (note I, A)	21		
III. Tangible assets (note I, B)	22/27	429,121.35	509,651.22
A. Land and buildings	22		
B. Fixtures, machinery and equipment	23		
C. Furniture and vehicles	24	124,999.63	134,337.56
D. Leasing and similar rights	25		
E. Other tangible assets	26	304,121.72	375,313.66
F. Assets under construction and advance payments	27		
IV. Financial fixed assets (notes I, C and II)	28		
CURRENT ASSETS	29/58	1,572,894.87	1,120,399.14
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		
B. Orders in progress	37		
VII. Amounts receivable within one year	40/41	85,154.75	115,443.21
A. Trade debtors	40	12,932.76	50,626.72
B. Other amounts receivable	41	72,221.99	64,816.49
VIII. Short-term investments (Note II)	50/53		
IX. Cash at bank and in hand	54/58	1,484,055.12	986,555.67
X. Deferred charges and accrued income	490/1	3,685.00	18,400.26
TOTAL ASSETS		2,002,016.22	1,630,050.36

Values EUR	Note	2015	2014
LIABILITIES AND OWNERS' EQUITY			
CAPITAL AND RESERVES	10/15	1,363,509.17	1,138,756.15
I. Capital (note III)	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	443,617.17	218,864.15
Loss carried forward	141		
VI. Investment grants	15		
PROVISIONS AND DEFERRED TAXATION	16		
VII. A. Provisions for liabilities and charges (note IV)	160/5		
B. Deferred taxation	168		
CREDITORS	17/49	638,507.05	491,294.21
VIII. Amounts payable after more than one year (note V)	17		
A. Financial debts	170/4		
1. Credit institution, leasings and similar obligations	172/3		
2. Other loans	174/0		
B. Trade debts	175		
C. Advances received on orders in progress	176		
D. Other amounts payable	178/9		
IX. Amounts payable within one year (note V)	42/48	638,507.05	488,794.21
A. Current portion of amounts payable after one year	42		
B. Financial debts	43		
1. Credit institution	430/8		
2. Other loans	439		
C. Trade debts	44	599,563.51	435,321.68
1. Suppliers	440/4	599,563.51	435,321.68
2. Bills of exchange payable	441		
D. Advances received on orders in progress	46		
E. Taxes, salaries and social security	45	38,943.54	53,472.53
1. Income taxes	450/3		
2. Salaries and social security charges	454/9	38,943.54	53,472.53
F. Other amounts payable	47/48		
X. Accrued charges and deferred income	492/3		2,500.00
TOTAL LIABILITIES		2,002,016.22	1,630,050.36

Values EUR Note 2015 2014

2. INCOME STATEMENT

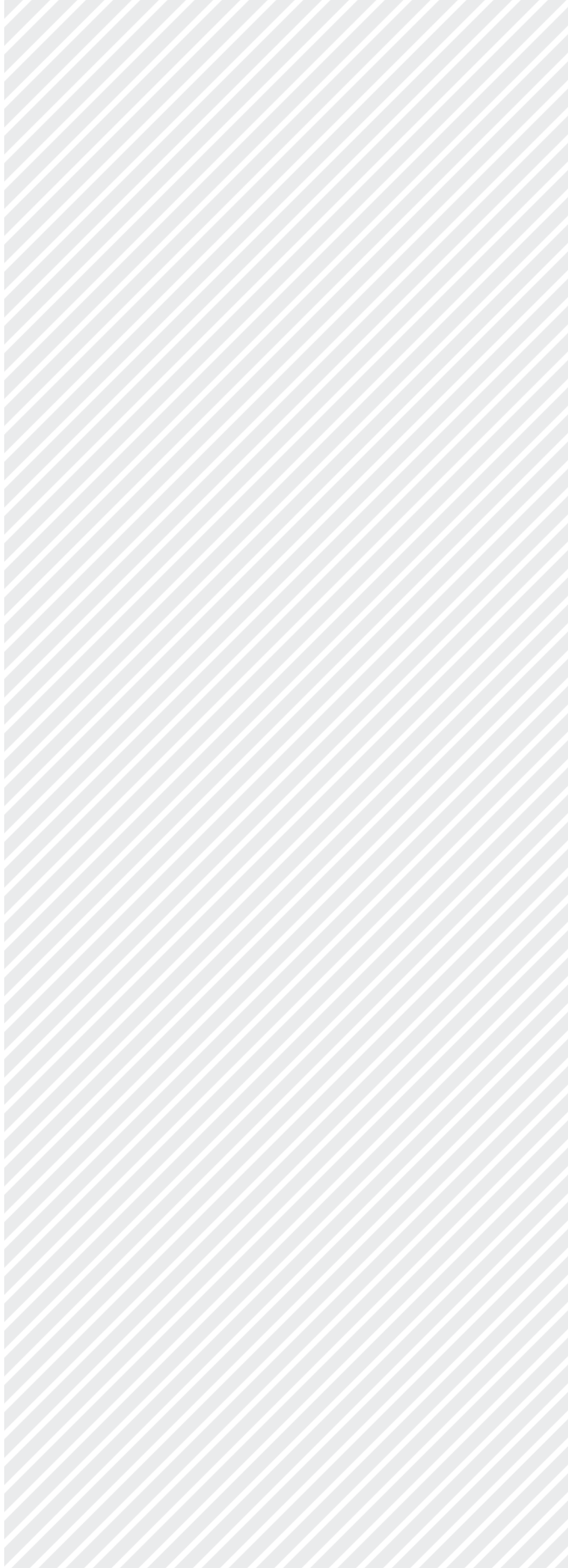
I. Operating revenues and expenses			
Turnover (optional mentions)	70	6,844,466.33	6,587,930.81
Other operating income	71/4	55,706.07	107,700.96
Raw materials, consumables and goods for resale; miscellaneous goods and services	60/61	5,990,698.18	6,057,784.89
A. Gross operating margin (positive balance)	70/61	909,474.22	637,846.88
B. Gross operating margin (negative balance)	61/70		
C. Salaries and wages, social security costs and pensions (note VI, 2)	62	(560,756.51)	(679,953.10)
D. Depreciations and amounts written down on formation expenses, intangible and tangible fixed	630	(118,286.87)	(132,918.50)
E. Amounts written down on stocks, orders in progress and on trade debtors (increase +, decrease -)	631/4		
F. Provisions for liabilities and charges (decrease -, increase +)	635/7		131,916.42
G. Other operating charges	640/8	(1,045.46)	(0.78)
H. Operating charges capitalised as reorganisation costs	649		
Operating profit	70/64	229,385.38	
Operating loss	64/70		(43,109.08)
II. Financial income	75	450.66	1,767.66
Financial charges	65	(4,942.05)	(5,162.08)
Profit on ordinary activities before taxes	70/65	224,893.99	
Loss on ordinary activities before taxes	65/70		(46,503.50)
III. Extraordinary income	76		
Extraordinary charges	66		
Profit for the period before taxes	70/66	224,893.99	
Loss for the period before taxes	66/70		(46,503.50)
IIIbis. Transfer from deferred taxation	780		
Transfer to deferred taxation	680		
IV. Income taxes	67/77	(140.97)	
Profit for the period	70/67	224,753.02	
Loss for the period	67/70		(46,503.50)
V. Transfer from non-taxable reserves	789		
Transfer to non-taxable reserves	689		
Profit for the period available for appropriation	(70/68)	224,753.02	
Loss for the period available for appropriation	(68/70)		(46,503.50)

Values EUR	Note	2015	2014
<hr/>			
A. Profit to be appropriated	70/69	443,617.17	518,864.15
Loss to be appropriated	69/70		
1. Profit for the period available for appropriation	70/64	224,753.02	
Loss for the period available for appropriation	68/70		(46,503.50)
2. Profit brought forward from preceding period	790	218,864.15	565,367.65
Loss brought forward from preceding period	690		
<hr/>			
B. Transfers from capital and reserves	791/2		
<hr/>			
C. Transfers to capital and reserves	691/2		(300,000.00)
1. to capital and share premium account	691		
2. to legal reserve	6920		
3. to other reserves	6921		300,000.00
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D.1. Profit to be carried forward	693	(443,617.17)	(218,864.15)
D.2. Loss to be carried forward	793		
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E. Shareholders' contribution against the loss	794		
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F. Profit to be distributed	694/6		
1. Dividends	694		
2. Directors' emoluments	695		
3. Other beneficiaries	696		



Press Releases 2015

13 February	Connecting EU energy markets – Commission adopts methodology
16 March	ENTSOG publishes TYNDP 2015
31 March	ENTSOG launches the public consultation on TYNDP 2015 and opens workshop registration
01 April	ENTSOG launches an exceptional call for information on infrastructure projects
02 April	ENTSOG and EFET invite to workshop on the bundling of capacities
29 May	ENTSOG publishes the Summer Supply Outlook 2015 and Summer Review 2014
01 June	ENTSOG publishes its Annual Report 2014
05 June	ENTSOG signs MoU with CEN and CENELEC in Riga
19 June	ENTSOG and EASEE-gas conclude agreement on the development of data exchange messages
26 June	ENTSOG publishes drafted Interconnection Agreement Template for default terms and conditions
29 June	ENTSOG publishes the Addendum to Annex A of TYNDP 2015
16 July	ENTSOG opens public stakeholder consultation on AWP 2016
20 July	ENTSOG and GIE publish the System Development Map 2014
31 July	ENTSOG resubmits the Network Code on Harmonised Transmission Tariff Structures for Gas to ACER
03 August	ENTSOG publishes recommendation paper on bundling of capacity
06 November	ENTSOG publishes Winter Supply Outlook 2015/2016 and Winter Review 2015
13 November	New REMIT obligations seamlessly added to ENTSOG Transparency Platform
16 December	ENTSOG GA announces Change of Management
29 December	ENTSOG publishes modified Interconnection Agreement Template for default terms and conditions
30 December	ENTSOG publishes 2016 edition of its AWP





Stakeholder Consultations & Workshops 2015

INTEROPERABILITY

- 18 June** Joint Workshop ENTSOG and Energy Community on Network Code on Interoperability and Data Exchange Rules and Early Warning System
- 20 October** 2nd AS4 Communication Protocol Workshop

TYNDP

- 19–20 May** 10th TYNDP/CBA Workshop

CAM/CMP/FUNCTIONALITY

- 16 March** Consultation Workshop on the Business Requirements Specifications for CAM/CMP and for Nomination and Matching Process
- 20 May** Workshop on issues related to bundling of capacities
- 30 June** Workshop on issues related to bundling of capacities

BALANCING

- 17 November** Joint ACER/ENTSOG Workshop on Gas Balancing



Abbreviations

ATSO KG	Adjacent TSO Kernel Group	EU	European Union
AUC KG	Auctions Kernel Group	FG	Framework Guidelines
ACER	Agency for the Cooperation of Energy Regulators	GCG	Gas Coordination Group
AWP	Annual Work Programme	GIE	Gas Infrastructure Europe
BAL NC	Network Code on Gas Balancing of Transmission Networks	GRIP	Gas Regional Investment Plan
BAL WG	Balancing Working Group	INC AKG	Incremental Advisory Kernel Group
BOA	ENTSOG Board	INT NC	Network Code on Interoperability and Data Exchange Rules
BRS	Business Requirement Specification	INT WG	Interoperability Working Group
CAM	Capacity Allocation Mechanisms	KG	Kernel Group(s)
CAM NC	Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems	LIO	Local Issuing Office
CAM WG	Capacity Allocation Working Group	MoU	Memorandum of Understanding
CARP KG	Cost Allocation and Reference Price Kernel Group	MW	Megawatt
CBA	Cost-Benefit Analysis	NeMo KG	Network Modelling Kernel Group
CEER	Council of European Energy Regulators	NRA	National Regulatory Authority
CEN	European Committee for Standardisation	PCI	Projects of Common Interest
CIO	Central Issuing Office	OS & BB	Oversubscription and Buy-Back
CMP	Congestion Management Procedures	OS KG	Open Seasons Kernel Group
CNOT	Common Network Operations Tools	REMIT	Regulation on Energy Market Integrity and Transparency
DSO	Distribution System Operator	RES	Renewable Energy Sources
EC	European Commission	ResDis KG	Reserve Prices and Discounts Kernel Group
EDS	European Dispatch Service	S & D KG	Supply & Demand Kernel Group
EASEE-gas	European Association for the Streamlining of Energy Exchange – gas	SoS	Security of Supply
EFET	European Federation of Energy Traders	STSP	Short-term Standardised Products
EFTA	European Free Trade Area	TAR NC	Network Code on Harmonised Transmission Tariff Structures for Gas
EIC	Energy Identification Coding	TEN-E	Trans-European Energy Networks
EIP	Energy Infrastructure Priorities	TP	Transparency Platform
EIP KG	Energy Infrastructure Priorities Kernel Group	TRA WG	Transparency Working Group
EnC	Energy Community	TReRe KG	Transparency and Revenue Directory Kernel Group
ENTSO-E	European Network of Transmission System Operators for Electricity	TSO	Transmission System Operator
ENTSOG	European Network of Transmission System Operators for Gas	TYNDP	Ten-Year Network Development Plan
ERGEG	European Regulator's Group for Electricity and Gas	UIOLI	Use it or lose it
		UGS	Underground Gas Storage
		WS	Workshop(s)

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Natural gas power generation can be switched on and off quickly, making natural gas-fired power generation the fuel of choice to accommodate sudden changes in electricity demand or supply.





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