

Annual  
Work Programme  
2017

**implementing the internal  
market for gas**

**ENTSOG – A FAIR  
PARTNER TO ALL!**



Image courtesy of Reganosa

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# 1

# Introduction

**Background**

**ENTSOG's Primary Objectives for 2017**

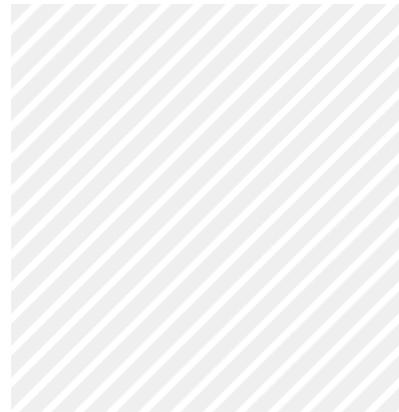
# Background

ENTSOG was created in December 2009 and entrusted with preparatory work prior to the implementation of the European Union's Third Energy Package.

On 3 March 2011 ENTSOG formally submitted its articles, rules and list of members to the European Commission (EC) and Agency for the Cooperation of Energy Regulators (ACER). The final Articles of Association and Rules of Procedure were approved by the General Assembly on 6 March 2012 and submitted to ACER and EC.

This document represents the 2017 edition of the Annual Work Programme (AWP) as a part of the EU's Three-Year Plan agreed upon by EC, ACER and ENTSOG and based on consultation between stakeholders.

The Three-Year Plan will be subject to continuous development and will provide stakeholders with a plan of actions to be performed over the upcoming years. This allows all interested parties to plan for and secure the resources required to implement the actions given in the plan and to finalise the internal market.





# ENTSOG's Primary Objectives for 2017

All EU Member States with unbundled gas transmission networks are now members of ENTSOG. However, ENTSOG is still growing by allowing third countries to attend as observers. This is in line with ENTSOG's continuous process of discussions and cooperation with all of the neighbouring third countries and is in the spirit of cooperation with all of the neighbouring countries.

ENTSOG will closely follow the development of renewable energy sources and the implications for natural gas in terms of positioning gas as the preferred back-up fuel thus also supporting the EU environmental targets.

In 2017 ENTSOG will continue working on its strategy. After years of drafting the requested gas network codes, the work of ENTSOG is changing. With the expertise of its members on board ENTSOG will further develop its role as a proactive and trusted adviser in relation to relevant EU-institutions as well as stakeholders.

AWP 2017 is oriented towards the support for the post-comitology process of the Tariff NC and the monitoring of the Capacity Allocation Methodologies (CAM NC), Balancing (BAL NC) and Interoperability (INT NC). AWP 2017 also focusses on other key activities such as public consultation of the fifth Ten-Year Network Development Plan (TYNDP 2017 – 2037), Summer Supply Outlook and Winter Supply Outlook as well as the further development of the Transparency Platform. Based on the feedback from ACER, EC and stakeholders some refinement on the products and processes of ENTSOG might be done in 2017.

ENTSOG is striving for a good balance with regard to the need for internal resources in Brussels and member contributions to meet the challenges ahead, particularly those discussed in this edition of AWP.

ENTSOG will also cooperate with ENTSO-E, EC and ACER to prepare scenarios for the possible development of electricity and gas consumption and for the integration of renewables as well as the use of gas in power generation. ENTSOG will contribute to industry-fora (e.g. Madrid, Copenhagen) and will follow up on related activities.

**Also in 2017 ENTSOG will continue the well-established dialogue with its stakeholders in keeping with the motto:**

## A fair partner to all!

## **ENTSOG's work will focus on the following areas:**

### **▲ ENTSOG processes and procedures**

ENTSOG's Article of Association and Rules of Procedure will always be under review in order to maximise any opportunity for streamlining the current processes in line with the experience of activity carried out in the past years.

Still a possible enlargement of the number of members in ENTSOG could be foreseen and the number of observers could presumably also increase.

### **▲ Third Package code development process**

After the comitology process in 2016, a validation of the code by the EU Parliament and the EU Council is expected. ENTSOG will keep on providing support during all processes and the ensuing implementation period.

ENTSOG has continuously proven to have well organised work with regard to its network codes. The Project Plans have been successful both in timing and in the organisation of the Stakeholders Joint Working Sessions which provide opportunities for discussion and debate on all aspects of the network codes. This approach is therefore a cornerstone of the organisation of ENTSOG's activities.

In 2017, the Functionality process will continue to focus on ensuring that the network codes work properly across all borders. This process will be conducted in close cooperation with ACER and of course still with a broad stakeholder involvement.

For 2017 and based on the second TYNDP with an integrated Cost Benefit Assessment methodologies ENTSOG will work on the definition of the third PCI list.

### **▲ Third package code implementation and monitoring projects**

ENTSOG will continue to monitor CMP Guidelines, Capacity Allocation Methodologies (CAM NC), Balancing (BAL NC) and Interoperability (INT NC).

To avoid duplicating tasks and overlapping activities, close cooperation with ACER will be essential during the preparatory phase. Monitoring will increase the cooperation between stakeholders and provide better results for the internal market



ENTSOG Project Plan

# 2 General Area

**General ENTSOG Activity**





# General ENTSOG Activity

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## BACKGROUND

Among the key activities at ENTSOG is the continuous fine tuning of our structure in light of the experiences we gather and with a view towards future requirements. The implementation and particularly the operation of our work codes belong to our essential services.

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## OBJECTIVES

- ▲ ENTSOG focusses on fulfilling its role of promoting cooperation between TSOs and progressing towards a single European energy market.
- ▲ ENTSOG will ensure that its team has the necessary competence and ability to optimally allocate resources in performing its required tasks.

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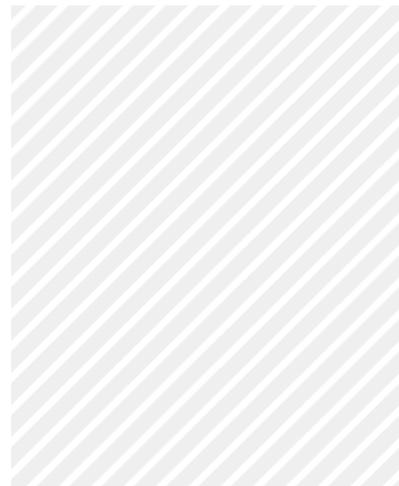
## ENTSOG ACTIVITIES FOR 2017

The activities of ENTSOG in 2017 will be in line with the Three-Year-Plan for gas. Based on a significantly improved TYNDP, ENTSOG will work on defining Projects of Common Interest. Seasonal supply outlooks will assess the flexibility offered by the gas infrastructure. The upcoming gas quality amendment of the INT NC and a related value chain analysis represent another part of the upcoming challenges. With the publication of the newly proposed Security of Supply regulation, ENTSOG commenced an analysis of the potential impact of its work. Together with its members and GIE, ENTSOG will perform an EU-wide assessment analysis.

These examples demonstrate that the work at ENTSOG is changing. After having developed most of the requested gas network codes and initially concentrating on monitoring their implementation, ENTSOG in the future will have to focus on monitoring the effects and whether the goals have been achieved.

The established Joint Functionality Process will reveal potential adjustments to the implementation of network codes and possible issues which might require future adaptations.

And finally, in 2017, ENTSOG will work on making its strategy of becoming a proactive, trusted adviser more noticeable. The structure of ENTSOG with the embedded expertise of its members is also expected to become more pro-active in relation to the topics similar to ENTSOG's current activities.



## ENTSOG RECRUITMENT PLAN FOR 2017

ENTSOG is committed to delivering the documents foreseen by the Three-Year Plan for gas and to actively promoting stakeholders to pursue the targets stipulated by the Third Energy Package. But this requires a well-prepared recruitment pipeline so that ENTSOG will be able to have on board the relevant resources and competences to perform the requested activities.

By the end of 2016, the ENTSOG Team in Brussels consisted of thirty-five persons and a replacement plan commenced the previous year to replace seconded persons whose contracts had expired. It became necessary to hold several ad hoc consultations and draft positions on a number of issues. Most of this work was done in the Market Area, but in the years to come more work load can be expected in the technical areas, System Development and System Operation. Based on this experience, ENTSOG will keep almost the same staff size in 2017 but with an expanded skill set in order to best cope with upcoming activities.

ENTSOG STAFF	31 DEC 2016	31 DEC 2017
General Manager	1	1
Business Area Managers	3	3
Advisers	27	28
Senior Assistants	3	3
Junior Assistant	1	1
Total	35	36



## PUBLICATIONS OF GENERAL AREA IN 2017

- ▲ In Q2 ENTSOG will publish an Annual Report on the work done in 2016. It will also contain the main results of the monitoring reports.
- ▲ The Annual Work Programme 2018 will be published in Q3 for public consultation.

## ANNUAL REPORT

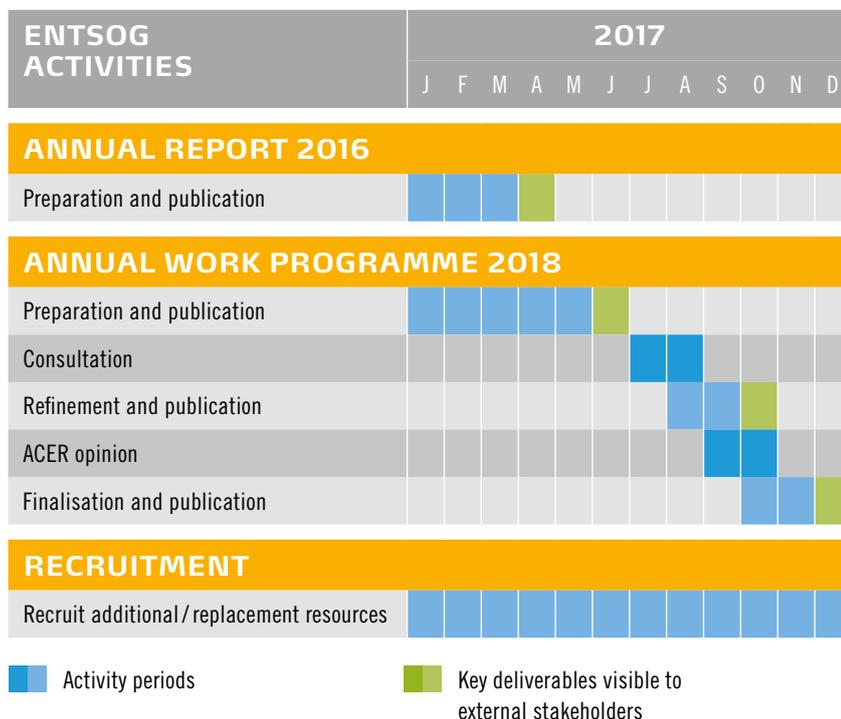
The Annual Report assesses ENTSOG's work and achievements for each given year. It also provides an opportunity for comparing the delivered results against the 2016 AWP.

## ANNUAL WORK PROGRAMME

An ENTSOG Annual Work Programme is required by the Third Package: It is aligned with the Commission's Three Year Plan and allows all the interested stakeholders to prepare their activities. Thereby, ENTSOG also fulfils its requirements prescribed by the Third Energy Package.

This plan features a possible timeline that will need to be confirmed once the EC's timeline for the Three-Year Plan is finalised.

The following table shows the expected timeline and key activities for the projects:



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ENTSOG Project Plan

# 3 Market Business Area

**Capacity Activity**

**Balancing Activity**

**Tariff Activity**



## OBJECTIVES

- ▲ To support the implementation and application of the Capacity Allocation Mechanisms network code (CAM NC) and the Congestion Management Procedures (CMP)
- ▲ To support and assist during the process towards adoption of the Incremental Proposal (INC)
- ▲ To monitor and analyse the implementation of CAM NC and CMP and their effect on the harmonisation of applicable rules aimed at facilitating market integration
- ▲ To facilitate activities to promote the functionality of CAM NC and CMP in close dialogue with stakeholders
- ▲ To propose and assist the development of modification proposals that may be necessary on the implemented NC
- ▲ To support and assist in the implementation of CAM NC and CMP as well as knowledge sharing and best-practices dissemination which might include assisting the Energy Community in implementing CAM NC and CMP

## BACKGROUND

CMP have entered into force and most aspects of the rules are implemented by October 2013, some by July 2016.

CAM NC entered into force November 2013. The implementation deadline was November 2015.

The Incremental Proposal, consisting out of the CAM NC amendment and a chapter of TAR NC, is expected to enter in to force by the first half of 2017.

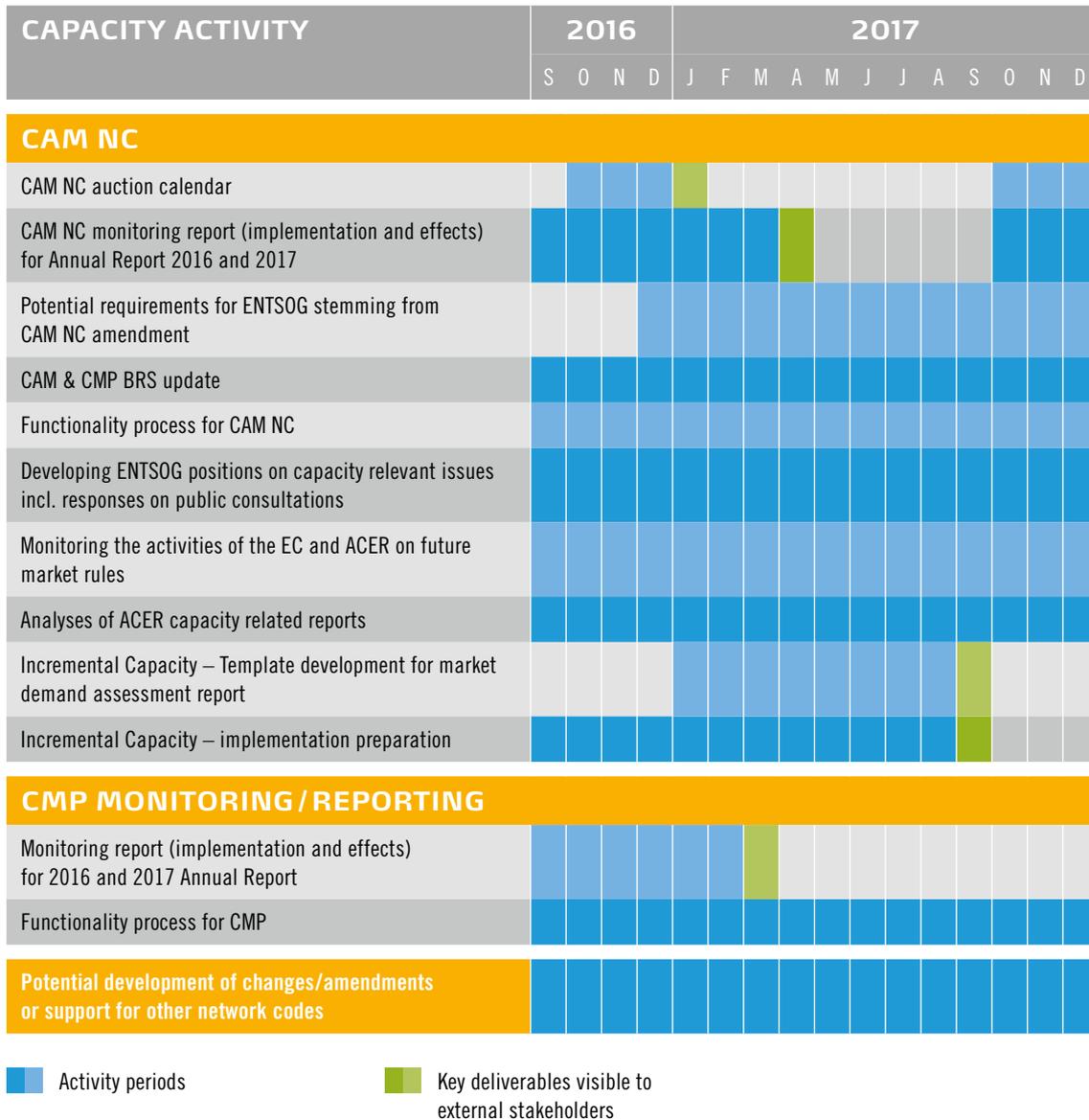
The Capacity workgroup will support these activities and will continue to provide assistance to other ENTSOG streams, in order to ensure a consistent approach regarding capacity issues when designing future network codes or amendment proposals covering different but interlinked areas.

## KEY DELIVERABLES FOR 2017

- ▲ CAM NC Monitoring/Reporting
- ▲ CMP Monitoring/Reporting
- ▲ CAM NC Auction Calendar
- ▲ INC adoption process – template for market demand assessment report in INC process
- ▲ Potential requirements for ENTSOG stemming from CAM NC amendment
- ▲ Update of Business Requirements Specification (BRS) CAM/CMP, if requested by TSO/Stakeholders
- ▲ Joint ACER and ENTSOG functionality process involving stakeholders (CAM NC, CMP, BAL NC, TAR NC and Network Code on Interoperability and Data Exchange [INT NC] jointly)

## PLAN

The following diagram shows the expected timeline and key activities on Capacity-CMP related issues:





# Balancing Activity

## OBJECTIVES

- ▲ To monitor and analyse the implementation of the Balancing Network Code (BAL NC) and its effect on the harmonisation of applicable rules aimed at facilitating market integration
- ▲ To support and assist in the implementation of BAL NC as well as knowledge sharing and best-practices dissemination which might include assisting the Energy Community in implementing BAL NC.
- ▲ To propose or assist the development of any modification proposals or Business Requirement Specifications (BRS) to BAL NC that may be necessary

## BACKGROUND

BAL NC was published in the Official Journal of the European Union on 26 March 2014. The code entered into force on 16 April 2014 providing a deadline for implementation on 1 October 2015.

TSOs can apply for a one-year extension until 1 October 2016. For those TSOs applying for interim measures, the deadline for full implementation is April 2019.

In 2017, ENTSOG will be involved in supporting the implementation and monitoring of BAL NC.

## KEY DELIVERABLES FOR 2017

- ▲ BAL Monitoring/ Reporting
- ▲ Joint ACER and ENTSOG Functionality process involving stakeholders (CAM NC, CMP, BAL NC, TAR NC and INT NC jointly)
- ▲ Update of BAL Business Requirements Specification (BRS) if requested by TSO/Stakeholders

## PLAN

The following diagram shows the expected timeline and key activities for the project:

BALANCING ACTIVITY	2016				2017												
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
BAL NC monitoring report (implementation and effects) for Annual Report 2017																	
Functionality process for BAL NC																	
BAL BRS update																	
Support and assistance of TSOs for implementation of BAL NC																	
Follow-up to ACER reports – implementation monitoring, and other BAL related topics)																	
Developing ENTSOG positions on balancing relevant issues incl. responses to public consultations																	

Activity periods

Key deliverables visible to external stakeholders

# Tariff Activity

## OBJECTIVES

- ▲ To provide support for the post-comitology process for the Network Code on Tariffs (TAR NC) before its entry into force
- ▲ To provide support to members for the implementation of TAR NC after entry into force
- ▲ To start the stakeholders' process on TAR NC implementation monitoring and functionality
- ▲ To respond to consultations and queries from stakeholders as part of the future strategy on tariffs

## BACKGROUND

TAR NC was submitted to ACER at the end of December 2014 and ACER published their reasoned opinion in March 2015. Intensive trilateral talks between the EC, ACER and ENTSOG resulted in a revised TAR NC from ENTSOG re-submitted in summer 2015. Further talks took place in autumn/winter 2015. Due to the lack of an ACER decision recommending TAR NC for the adoption by the EC, the EC took over the process and re-drafted the code with the support of ACER and ENTSOG.

Informal Member States meetings took place in March and April 2016, and the formal comitology process is expected to last until early autumn 2016, followed by the expected validation of the code by the EU Parliament and the EU Council. Entry into force of TAR NC is expected for April 2017. ENTSOG will continue to provide support during the comitology process for the TAR NC, and during the ensuing implementation period, which is currently scheduled for the period between April 2017 and spring 2019.



## KEY DELIVERABLES FOR 2017

- ▲ Support for EC during the post-comitology process before entry into force
- ▲ Support of members during implementation of TAR NC after it has entered into force
- ▲ Prepare and apply implementation, monitoring and Functionality processes for TAR NC
- ▲ Respond to consultations and queries from stakeholders on tariffs

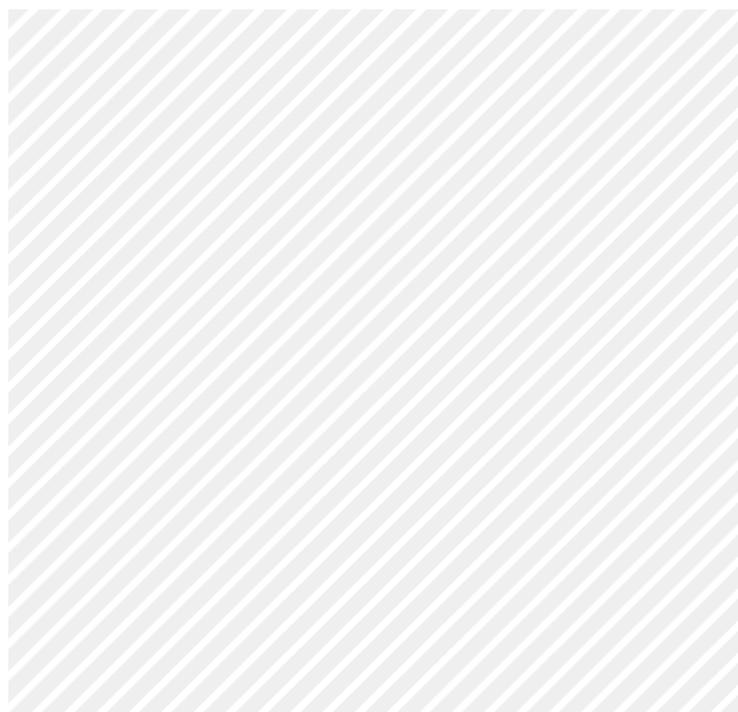
## PLAN

TARIFF ACTIVITY	2017											
	J	F	M	A	M	J	J	A	S	O	N	D
Support for EC during the post-comitology process before entry into force	■	■	■	■								
Member support throughout implementation of TAR NC	■	■	■	■	■	■	■	■	■	■	■	■
Prepare and apply monitoring and Functionality processes for TAR NC	■	■	■	■	■	■	■	■	■	■	■	■
Respond to consultations and queries from stakeholders on tariffs	■	■	■	■	■	■	■	■	■	■	■	■

■ Activity periods



Image courtesy of Snam Rete Gas





ENTSOG Project Plan

# 4 System Development Business Area

**Investment Activity**

Image courtesy of Gascade





# Investment Activity

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## OBJECTIVES

- ▲ To meet expectations of market participants regarding the assessment of infrastructure-related market integration and its contribution to meeting the pillars of the European Energy Policy (competition, sustainability and security of supply), as well as the assessment of the European supply adequacy outlook through modelling of the integrated network and development of supply and demand scenarios.
- ▲ To support the investment process starting from gap identification through to the coming on-stream of the respective infrastructure remedies.
- ▲ To support Commission and Member States through the Gas Coordination Group in the assessment of European Security of Supply.
- ▲ To support the Regional Groups, established by the Commission, in the process of selecting Projects of Common Interest by providing the technical background and methodologies.
- ▲ To provide support to institutions and stakeholders in the understanding of gas infrastructure, and demand and supply development.
- ▲ To develop ENTSOG skills and tools to sustain the achievement of the above objectives.
- ▲ To continuously improve the quality of these activities and to provide high added value to all stakeholders.
- ▲ To maintain the internal analysis tools, the Professional Data Warehouse System (PDWS), owned by ENTSOG, and to provide technical support for the evolution of the PDWS' Transparency Platform.

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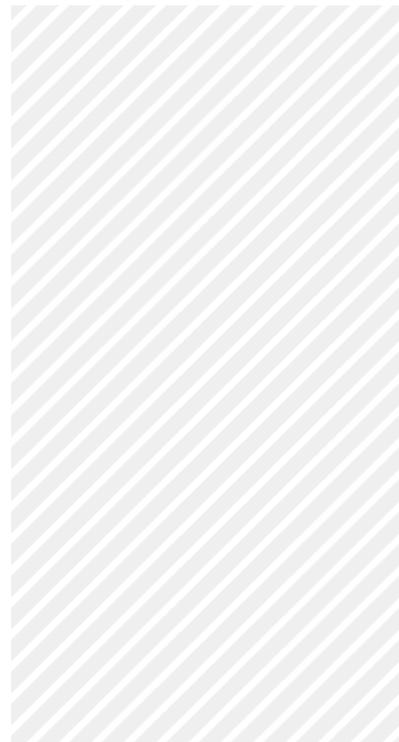
## KEY ENTSOG DELIVERABLES FOR 2017

- ▲ Public consultation on Union-wide Ten Year Network Development Plan 2017
- ▲ Summer Supply Outlook 2017 and Summer 2016 Review
- ▲ Winter Supply Outlook 2017–2018 and Winter 2016–2017 Review
- ▲ Capacity Map 2017 and System Development Map 2016/2017
- ▲ Adapted ENTSO-E/ENTSOG consistent and interlinked model
- ▲ Preparation of Union-wide Ten Year Network Development Plan 2018
- ▲ Updated CBA methodology
- ▲ Union-wide simulation (subject to revised Regulation (EU) 994/2010)

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## KEY TSO DELIVERABLES UNDER REGIONAL COOPERATION WITHIN ENTSOG

- ▲ Third edition of Gas Regional Investment Plans (GRIPs)



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## BACKGROUND

The above mentioned deliverables reflect ENTSOG obligations under Regulations (EC) No 715/2009 (3<sup>rd</sup> Energy Package), (EU) No 994/2010 (Security of Supply), (EU) No 347/2013 (Energy Infrastructure Guidelines) and EU 2015/703 (Interoperability & Data Exchange Network Code). The maps demonstrate ENTSOG's commitment to transparency and to providing stakeholders with easily accessible information with high added value. In addition, the seasonal reviews provide market participants with an analysis of the current situation and help to identify European trends.

All these deliverables aim at developing an integrated vision of the European gas market and in particular its infrastructure component. This integration is of particular importance when short-term and long-term trends seem to contradict each other (e.g., current predominance of coal in power generation) or when the pillars of the European Energy Policy are perceived to be in competition with each other rather than synergistic.

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## ASSUMPTIONS

Reports published by ENTSOG since 2010 have enjoyed continuous improvement recognized by the market, in line with stakeholders' rising expectations and new regulatory requirements.

ENTSOG is committed to further improvement by always taking stakeholders input into consideration.

Getting an in-depth understanding of stakeholders' expectations and accessing data beyond TSOs' remit is key to developing high-quality reports. Thanks to stakeholder feedback ENTSOG proposals, many improvements have been acknowledged over time such as the assessment of the role of infrastructure in market integration and a refined approach to gas imports and project maturity.



Image courtesy of Elering

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## DELIVERABLES

### **Deliverable 1: Union-Wide Ten Year Network Development Plan 2017**

During 2016, ENTSOG will develop TYNDP 2017 – its fifth TYNDP – covering the time horizon of 2017–2037.

TYNDP 2017 is based on a concept established through deep engagement with stakeholders.

The report will identify the infrastructure gap, namely priority areas lacking market integration, security of supply, competition or sustainability. The report will also assess where and to which extent the level of development of gas infrastructure could improve the infrastructure-related market integration, security of supply, competition and sustainability. Different from TYNDP 2015, this assessment also looks at what advanced projects will allow.

TYNDP provides a comprehensive list of infrastructure projects as well as identifying and analysing infrastructural projects that will be candidates for the third selection of Projects of Common Interest.

In accordance with Regulation (EU) 2015/703, TYNDP 2017 will be published together with the first long-term monitoring on gas quality in transmission systems.

The report's release in December 2016 enables it to be used efficiently as a basis for selecting the third list of Projects of Common Interest (PCI), both to assist Regional Groups in identifying investment needs, and to serve as the basis for project-specific cost-benefit analyses of PCI candidates.

Early 2017, ENTSOG will launch a two-month public consultation, followed by the formal submission of the report together with the analysis of the public consultation to ACER for opinion.

### **Deliverable 2: Elaboration of Summer Supply Outlook 2017 and Summer 2016 Review**

ENTSOG aims to publish its Summer Supply Outlook 2017 in April so that stakeholders are informed very early in the injection season.

To establish this report, ENTSOG will build on experience gathered since 2010 taking due account of ACER opinions and stakeholder feedback. The report will benefit from the latest development of IT/R&D activities in the fields of modelling and supply-and-demand approaches. It will assess the ability of the European gas infrastructure to provide sufficient flexibility to allow shippers to fill their storage facilities in preparation for winter. This report assesses the level of service provided by infrastructures considering the latest trends in supply and demand and does not intend to forecast market behaviour.

As with all Supply Outlooks since 2013, Commission and Member States will – through the Gas Coordination Group – ask ENTSOG to outline the specific situations to be assessed.

Along with the Summer Outlook 2017, ENTSOG will also voluntarily deliver the Summer 2016 Review: a description of the behaviour of the gas market during the summer months of 2016 on the basis of the observed daily gas flows and prices. It will provide the opportunity to investigate the short term demand and supply trends and especially the dynamic of the gas demand for power generation. The Review will cover any relevant event taking place during the period.

The results of this analysis will be factored into the R&D Plan for further improvement of ENTSOG's approach on future deliverables.

### **Deliverable 3: Elaboration of Winter Supply Outlook 2017–2018 and Winter 2016–2017 Review**

ENTSO-G aims to publish its Winter Supply Outlook 2017–2018 in October 2017, in order for stakeholders to be informed very early in the withdrawal season.

To establish this report, ENTSOG will build on experiences gathered since 2010 taking due account of ACER opinions and stakeholder feedback. The report will benefit from the latest development of IT/R&D activities in the fields of modelling and supply-and-demand approaches. It will assess both the possible evolution of UGS inventory in different winter cases as well as the resilience of the European gas infrastructures under peak conditions. This report assesses the level of service provided by infrastructures considering the latest trends in supply and demand and does not intend to forecast market behaviour.

As with all Supply Outlooks since 2013, Commission and Member States will – through the Gas Coordination Group – ask ENTSOG to outline the specific situations to be assessed.

Upon adoption of revised Regulation (EU) No 994/2010 on gas Security of Supply, ENTSOG will further consider the potential interactions between the Union-wide simulation currently foreseen to be run by ENTSOG by November 2017, and the Winter Outlook exercise.

Along with the Winter Supply Outlook 2017–2018 ENTSOG will also deliver on a voluntary basis the Winter 2016–2017 Review: a description of the behaviour of the gas market during the winter months of 2016–2017 on the basis of the observed daily gas flows and prices. It will provide an opportunity to investigate the short-term demand and supply trends and especially the dynamic of the gas demand for power generation. The Review will cover any relevant event taking place during the period.

The results of this analysis will be factored into the R&D Plan for further improvement of ENTSOG's approach on future deliverables.

### **Deliverable 4: Capacity Map 2017 and System Development Map 2016/2017**

Since its creation, ENTSOG has voluntarily developed two different maps on an annual basis: Capacity Map and, in cooperation with GIE, System Development Map. These maps are welcomed by institutions and stakeholders as a highly useful overview.

As in previous years, ENTSOG will also create these maps in 2017 so that they can be consulted or purchased from the ENTSOG website.

### **Deliverable 5: Adapted ENTSO-E / ENTSOG “model” under Article 11(8) of Regulation (EU) No 347/2013**

In accordance with Article 11(8) of Regulation (EU) 347/2013, both ENTSOs will deliver a “consistent and interlinked electricity and gas network and market model” to the European Commission and Agency by 31 December 2016.

The Agency and the Commission should provide their respective opinion on this model respectively by March 2017 and June 2017. If these opinions make it apparent that changes are required, the ENTSOs will have three months to adapt this model. The adapted version will subsequently be submitted to the Commission for approval.

### **Deliverable 6: Preparation of Union-wide Ten-Year Network Development Plan 2018**

ENTSOG intends to release its sixth TYNDP edition in the third quarter of 2018. This edition will accordingly be labelled TYNDP 2018. Following the report's release, ENTSOG will open it for public consultation and subsequently submit it to the Agency. This TYNDP 2018 will support the 4<sup>th</sup> PCI selection process.

Since TYNDP 2015, ENTSOG has continuously improved the consistency between its own TYNDP and ENTSO-E's TYNDP. For their TYNDPs 2018, ENTSOG and ENTSO-E will further strengthen their cooperation in line with the approach developed for the "consistent and interlinked model". In this view, the ENTSGOs have already initiated the scenario development phase of TYNDP 2018. By mid-2016, both ENTSGOs will have jointly interacted with stakeholders on scenario story lines and assumptions by running a public consultation and holding a stakeholder's workshop. During the second part of 2016 and year 2017 ENTSOG will take further steps in the scenario development process of TYNDP 2018, in close cooperation with ENTSO-E.

ENTSOG intends to develop TYNDP 2018 based on an updated CBA methodology.

### **Deliverable 7: Updated CBA methodology**

The CBA methodology currently in force is the one approved by the Commission in February 2015. This methodology has been applied to develop TYNDP 2015 as well as TYNDP 2017. For this latest edition, ENTSOG has complemented the CBA methodology with additional elements on a voluntary basis.

Based on the experience of TYNDP 2015 and 2017, ENTSOG sees benefits in updating and improving the CBA methodology to be applied for the preparation of its TYNDP 2018, as foreseen in Article 11(6) of Regulation (EU) 347/2013.

During 2017, ENTSOG intends to work on an updated and improved methodology by:

- ▲ Consulting stakeholders on possible improvements;
- ▲ Developing the proposal for an updated methodology subject to the Agency's and Commission's opinions;
- ▲ Adapting the methodology upon receipt of the Agency's and Commission's opinions, and submitting it to the Commission for approval

Application of the updated CBA methodology for the preparation of TYNDP 2018 will require that the Commission can approve it by the end of 2017

### **Deliverable 8: Union-wide simulation under revised Regulation (EU) No 994/2010**

The draft Revised Regulation (EU) No 994/2010 released by the Commission on 16 February 2016 concerns measures to safeguard the security of gas supply and repealing. This draft version assigns ENTSOG with the new task of developing and performing a Union-wide simulation of supply and infrastructure disruption scenarios. This will represent a Union-wide risk assessment, whose results should be taken into account by competent authorities for the preparation of risk assessments, preventive action plans and emergency plans. This task is foreseen to be carried out every four years, and for the first time by 1 November 2017.

Subject to the legal process of adopting the new regulation, ENTSOG foresees the below tasks:

- ▲ Defining the scenarios in consultation with the Gas Coordination Group;
- ▲ Collecting the necessary data from the competent authorities;
- ▲ Performing the risk assessment, including possibly along Emergency Supply Corridors, editing the report gathering the results and submitting this report to the relevant parties.

To be able to meet the 1 November 2017, ENTSOG would need to dedicate most of 2017 to the task, to start interacting with the Gas Coordination Group and competent authorities early enough [according to current timeline, that would have to be before the regulation enters into force] and to get the necessary feedback and data from these parties in due time.

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## SUPPORTING ACTIVITIES

### Supporting activity 1: Gas Coordination Group (GCG)

ENTSOG will keep the European Commission and Member States updated about all ENTSOG activities related to security of gas supplies. ENTSOG will also follow upon any tasks given to it by GCG.

Through this channel and when preparing Supply Outlooks, ENTSOG will continue to encourage Member States to propose particular cases to be considered.

In view of the Union-Wide Risk Assessment foreseen in the draft Revised Regulation (EU) No 994/2010, ENTSOG will interact with the GCG for the preparation of this assessment, in particular by submitting to the GCG a proposal on simulation cases to be assessed.

### Supporting activity 2: Regional Groups under the Energy Infrastructure Guidelines

ENTSOG will participate in and support the work of the Regional Groups established by the Commission in the tasks of running the 3<sup>rd</sup> PCI selection process and monitoring PCIs.

ENTSOG will also support promoters of projects candidates to the PCI label, as for the 2nd PCI selection process. Upon invitation by the Commission, and under the mandates of promoters, ENTSOG will handle the modelling part of the Project-Specific cost-benefit analysis.

### Supporting activity 3: GRIPs: TSOs regional cooperation within ENTSOG

This third edition of Gas Regional Investment Plans (GRIPs) will be developed in a joint process with the development of TYNDP 2017. This joint process will ensure the use of a common dataset for GRIPs and TYNDP and complementarity between the reports.

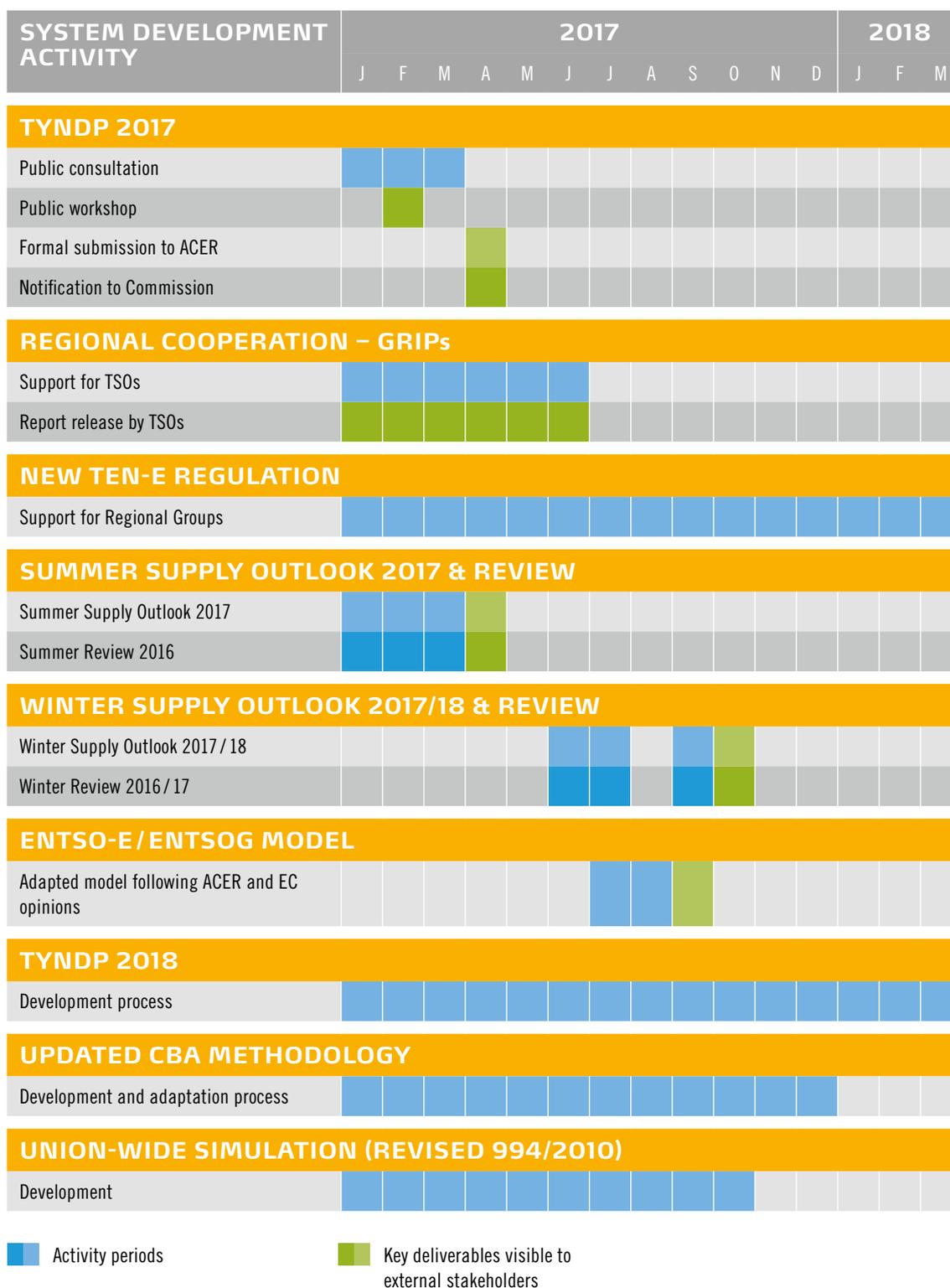
ENTSOG will support TSOs in the development of this third edition. ENTSOG's support will cover the centralisation of data processing, the modelling of the European gas system and the common layout of the reports.

GRIPs will subsequently be published at the end of 2016 or first half of 2017.



## PLAN

The following diagram shows the expected timeline and key activities for the project:





ENTSOG Project Plan

# 5 System Operation Business Area

**Transparency Activity**  
**Interoperability Activity**

Image courtesy of GAZ-SYSTEM



# Transparency Activity

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## OBJECTIVE

- ▲ To enhance the transparency of TSO activities in Europe

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## KEY DELIVERABLES FOR 2017

- ▲ To further enhance ENTSOG Transparency Platform with functionalities improving the usability and user-friendliness of the published data, as well as further support the TSOs in improving data consistency.
- ▲ To support the TSOs in implementing REMIT requirements.
- ▲ To support the ENTSOG strategy for any potential deliverables relating to the transparency area.
- ▲ Follow and implement the transparency requirements coming from the Network Codes

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## BACKGROUND

In line with AWP 2016, ENTSOG continues to update and improve the ENTSOG Transparency Platform to the benefit of all users and stakeholders. The Transparency Platform provides technical and commercial data on the TSOs' transmission-relevant points, showing all of them on an interactive map. The information is available free of charge, provided by the TSOs.

ENTSOG continues to work closely with the TSOs to follow up on the implementation of regulation provisions, including the transparency requirements coming from the Network Codes, amendments to Network Codes and REMIT.

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## ACHIEVEMENTS AND ISSUES ARISING TO DATE

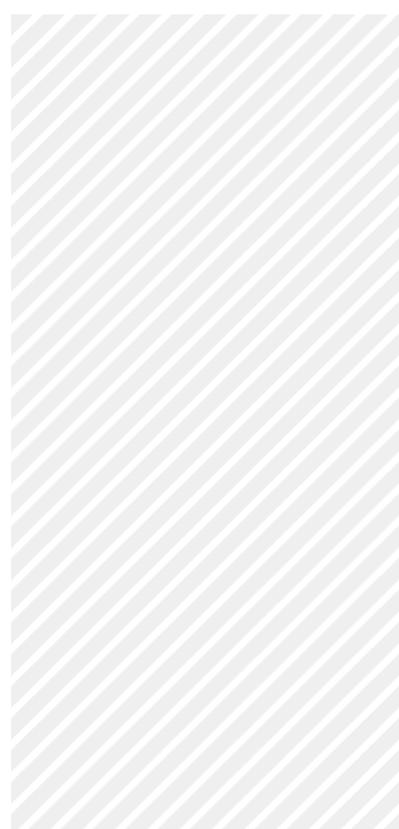
ENTSOG and its members have worked together continuously to improve the functionalities, the user-friendliness and the data quality of ENTSOG Transparency Platform. Several new functionalities have been deployed after the launch of the platform in its present version, supporting this goal. These also include new functionalities related to transparency requirements from new and amended Network Codes.

ENTSOG has continued to facilitate public and internal workshops, focusing on the implementation of the transparency guidelines coming from Regulation No. (EC) 715/2009, the above-mentioned continuous improvement of the Transparency Platform functionalities and the implementation of REMIT requirements.

The usage statistics for the Transparency Platform continue to increase. Checking up on the impact of our latest public workshop, we have compared the usage statistics for March and April 2016 with the same months in 2015, and we have noticed the following positive trends:

- ▲ 47 % increase in unique visitors
- ▲ 83 % increase in actions of visitors
- ▲ 133 % increase in number of page views AND a decrease in the duration of 3 %
- ▲ 66 % increase in downloads

It is very satisfactory to see these positive trends for the usage of the ENTSOG TP, and we consider the decrease in duration time, coupled with the increase in actions and page views, as a sign of increased user friendliness.



## ACTIVITIES

### Activity 1

Implement new functionalities on the Transparency Platform that will improve the usability and user-friendliness of the published data, as well as further support the TSOs in improving data consistency in line with legal obligations.

### Activity 2

Follow-up on reporting provisions as well as data collection processes for TSOs and ENTSOG under REMIT obligations. ENTSOG will support TSOs during the implementation of further reporting obligations.

### Activity 3

Analyse legal transparency requirements coming from EU legislation such as Regulation (EC) No. 715/2009, Regulation (EU) No. 1227/2011, Regulation (EU) No. 1348/2014, Regulation (EU) No. 984/2013, Regulation (EU) No. 2015/703, NC Tariff, etc.

### Activity 4

Cooperate with ENTSOG business areas in order to fulfil transparency requirements coming from relevant network codes and liaise with relevant ENTSOG WG to identify synergies in fulfilling these obligations, including facilitation of the 2016 CMP report.

### Activity 5

Cooperate with other ENTSOG business areas to support those areas, if needs for new platform features are identified and agreed upon. Continued facilitation and support to develop an internal operational map for the information provision related to the concept for the Regional Coordination System for Gas (based on existing TP data and functionalities).

### Activity 6

Run a stakeholder survey and organise the 11<sup>th</sup> Transparency Workshop in order to receive feedback from stakeholders.

## PLAN

TRANSPARENCY ACTIVITY	2017											
	J	F	M	A	M	J	J	A	S	O	N	D
Continuous platform improvements from Activity 1												
Follow-up REMIT requirements, incl. UMM update												
Analyse legal transparency requirements coming from EU legislation												
Cooperate with ENTSOG business areas to fulfil transparency requirements coming from relevant network codes incl. ACER CMP Monitoring Report												
Facilitate and support other areas with projects concerning TP, incl. operational map												
Stakeholder survey on Transparency Platform												
Public workshop on Transparency												
Support ENTSOG strategy for any potential deliverables relating to transparency area.												

 Activity periods

 Key deliverables visible to external stakeholders



# Interoperability Activity

## OBJECTIVES

The main objectives of ENTSOG Interoperability Working Group (INT WG) for 2017 are:

- ▲ To monitor the implementation and functioning of the Network Code on Interoperability and Data Exchange rules (INT NC)
- ▲ The follow-up of on-going processes related to gas quality standardisation
- ▲ To finalise the impact analysis of a binding reference to the CEN standard EN 16726:2015 in the INT NC and, subject to the result, submit an amendment proposal to ACER
- ▲ To review and update existing common network operation tools (CNOTs) to support the implementation of the Data Exchange rules developed in the Network Codes, if required
- ▲ To support the transparency WG (if requested) in the development and maintenance of data exchange requirements for Market Integrity and Transparency.
- ▲ To develop recommendations relating to the coordination of technical cooperation between Member States, Energy Community and third-country transmission system operators (Art 8 (3) c) Regulation (EC) No. 715/2009)
- ▲ Within the framework of the revised SoS regulation, to facilitate the functioning of the Regional Coordination System for Gas (RCSG) as CNOT for emergency conditions (Art 8 (3) c) Regulation (EC) No. 715/2009).
- ▲ To fulfil ENTSOG's tasks regarding the (revised) SoS regulation in liaison with the GIE SoS TF and System Development
- ▲ To operate the Local Issuing Office for Energy Identification Coding scheme

Furthermore, the Interoperability Working Group is assisting other ENTSOG Working Groups, in order to ensure a consistent approach towards interoperability and data exchange when designing, implementing and monitoring the functionality of network codes covering different but interlinked areas.

## KEY DELIVERABLES FOR 2017

The following deliverables will be provided during 2017:

- ▲ Report on the implementation monitoring of INT NC (see activity 1)
- ▲ Support the System Development Area to include the first Long-Term Gas Quality Outlook in TYNDP 2019 (see activity 2)
- ▲ If required, amendment proposal for the INT NC in connection with the CEN gas quality standard (see activity 2)
- ▲ Support the TRA WG in updating of the Transparency Platform regarding gas quality (see activity 2)
- ▲ Completion of early warning system mechanism for gas supply crises, including a regional collaboration tool (see activity 3)
- ▲ Workshops for supporting the implementation of INT NC rules and expanding regional cooperation with Energy Community and third country TSOs (see activity 3)
- ▲ Any necessary updates of Business Requirement Specifications and Implementation Guidelines for data exchange related to the implementation of capacity allocation mechanisms network code, congestion management procedures guidelines (see activity 4)
- ▲ Workshop related to the implementation of AS4 protocol (see activity 4)
- ▲ Management of EIC Codes by weekly updates to CIO and ENTSOG website and by delivering final responses to requests within max 10 days (see activity 5)



Image courtesy of GRTgaz

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## BACKGROUND

The lack of harmonisation in technical, operational and communication areas could create barriers to the free flow of gas in the Union, thus hampering market integration. Union interoperability and data exchange rules should allow the necessary harmonisation in those areas, therefore leading to effective market integration. For that purpose and for facilitating commercial and operational cooperation between adjacent transmission system operators, ENTSOG provides assistance for the harmonized implementation of the INT NC and develops CNOT for the technical implementation of Network Codes and Guidelines.

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## ACHIEVEMENTS AND ISSUES ARISING TO DATE

ENTSOG was invited by the European Commission to develop a Network Code on Interoperability and Data Exchange rules (INT NC) on 11 September 2012. Following an open process, ENTSOG developed and proposed a draft INT NC. This draft was then revised taking into account ACER's reasoned opinion and was sent to European Commission and ACER on 18 Dec 2013. The revised draft was also recommended by ACER for adoption and it passed successfully through the comitology process by November 2014. The Network Code was adopted on 30 April 2015, entered into force at 21 May 2015 and applies from 1 May 2016.

The CNOTs for the implementation of CAM NC/CMP and BAL NC were first published in 2015 comprising Business Requirement Specifications and Implementation Guidelines for the common Data Exchange solutions. In 2016, the CNOTs were updated with the selection of the common data exchange solutions.

In line with obligations arising from Art. 5 of INT NC, ENTSOG developed and published in 2015 an interconnection agreement template covering the default terms and conditions together with a guidance document on interconnection agreements.

On 18 December 2015, EC invited ENTSOG to carry out an impact analysis and subsequently draft an amendment to the network code on interoperability and data exchange in conjunction with CEN standard EN 16726:2015. A proposal to ACER is expected by 30 June 2017. In order to achieve this, workshops and public consultations will be organised during the whole development process.

Fostering the regional cooperation, the Early Warning System was established in 2014 and 2015 facilitating a coordinated reaction to potential supply crises on short notice. In 2016, it was further developed into the current Regional Coordination System for Gas (RCSG) in the context of the revised SoS regulation.

In addition, following the request of the EC, an on-going monitoring report for gas transit flows in Ukraine was developed and established in 2014 and 2015.

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## ACTIVITIES

### **Activity 1: Monitoring of the implementation and functioning of the Network Code on Interoperability and Data Exchange Rules**

- ▲ Monitor and analyse how transmission system operators have implemented the INT NC
- ▲ Analyse proposals arising from the Joint Functionality Process
- ▲ Support the TSOs of Member States, Energy Community and third countries in the implementation of the NC

### **Activity 2: Gas quality**

- ▲ Collaborate with System Development Area in the preparation of TYNDP 2019 in order to include the second Long-Term Gas Quality Outlook
- ▲ Support the TRA WG in any data publication related to gas quality
- ▲ Finalisation of detailed impact analysis of a binding reference to the EN16726:2015 based on the impact gathered through the public consultation carried out in 2016.
- ▲ Subject to the results, preparation, public consultation and submission to ACER of an INT NC amendment proposal.
- ▲ Monitoring of CEN complementary standardisation work for harmonisation of Wobbe Index

### **Activity 3: Facilitate regional cooperation**

- ▲ Support of the RCSG with Regional Coordination Teams East and North-West and possible further extension to the southern region. This activity also includes an operational map and support of the implementation of the revised SoS regulation
- ▲ Support Energy Community contracting parties and third countries transmission system operators concerning security of supply
- ▲ Development of recommendations relating to the coordination of technical cooperation between Member States, Energy Community and third-country transmission system operators
- ▲ Further support the EC in their activities concerning gas flows monitoring in Ukraine as well as in the EU-Russian WS3 energy dialog

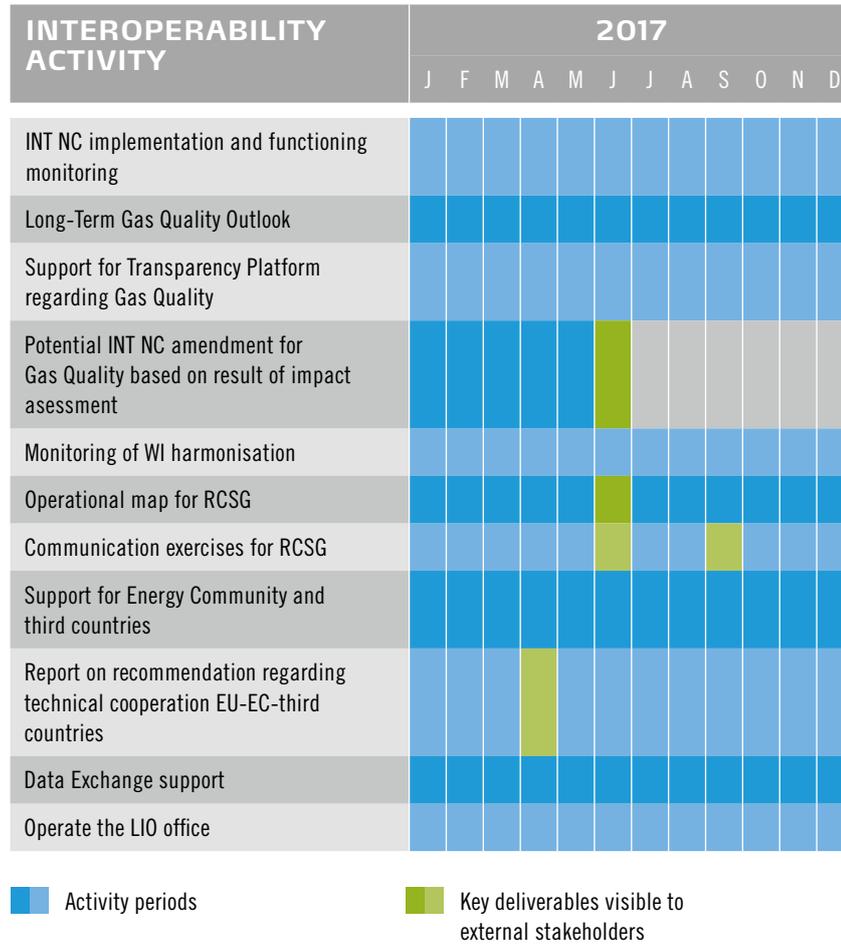
### **Activity 4: Development, support and maintenance of CNOTs**

- ▲ Monitor the implementation and functionality of published CNOTs for CAM/ CMP and Nominations and matching procedures, including the related Business Requirement Specifications and the selected common solutions for Data Exchange
- ▲ Cooperate with EASEE-gas in the development and release management of the Implementation Guideline in the framework of the common agreement
- ▲ Follow up EASEE-gas developments in the field of data exchange related to network codes

### **Activity 5: Operate the Local Issuing Office for Energy Identification Coding scheme**

## PLAN

The diagram shows the expected timeline and key activities for the project:





ENTSOG Project Plan

# 6 IT and Research & Development Activity

IT and Research & Development Activity



# IT and Research & Development Activity

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## **IT/R&D 1: FURTHER ANALYSIS OF GAS DEMAND**

Since TYNDP 2015, ENTSOG has developed of an approach to model gas demand for power generation in relation to elements of ENTSO-E TYNDP visions as well as gas, coal and CO<sub>2</sub> emission prices. For the TYNDP 2017, the cooperation with ENTSO-E has been reinforced, to accurately reflect elements such as the foreseen installed capacities, the share of RES in electricity generation and the intermittency of their load.

For the preparation of TYNDP 2018 and in view of the ENTSO-E/ENTSOG consistent and interlinked model, ENTSO-E and ENTSOG are working towards an aligned scenario development process. This aims at ensure high consistency on TYNDPs scenarios, both in regard to the power sector and sectors where both energies are increasingly competing.

ENTSOG aims at developing a holistic approach to energy demand drawing the link between high-level political orientations and gas demand figures that form the basis of the assessment of European gas infrastructures.

ENTSOG will continue working on the evaluation of the impact of demand-side measures in the assessment of European gas infrastructures.

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## **IT/R&D 2: FURTHER ANALYSIS OF SUPPLY FLEXIBILITY**

The flexibility required by intermittent power generation is mainly provided daily or intra-daily by fast-reacting flexibility sources, while the longer term fluctuations are covered by a wider range of supply sources.

Therefore, a better understanding of the daily modulation performed by the different sources in relation with their specific features – particularly the storage component – during the last years will facilitate the evaluation of the ability of the gas infrastructures to adapt to supply patterns following the changing demand requirements in the future.

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## **IT/R&D 3: FURTHER IMPROVEMENT OF ENTSOG MODELLING TOOL**

Since 2010, ENTSOG has developed an expertise in linear flow modelling of the European gas system. This approach has been improved on a continuous basis in order to meet stakeholders' expectations.

ENTSOG's experience in the modelling of the gas market and network has strongly developed since 2013 with the enhancement required for the development of CBA methodology under Regulation (EU) 347/2013. It is now interfaced with a data warehouse enabling a more robust and agile definition of cases to be modelled. The modelling approach is very valuable in providing results consistent with market structure.

Additional improvements have been made in the light of the TYNDP 2015 experience.

The ENTSOG modelling tool is used to develop the Union-wide TYNDP as well as Supply Outlooks. It has also supported the stress test run by the Commission in 2014.

ENTSOG will consider additional improvements in the light of TYNDP 2017 experience or if deemed valuable in view of the Union-wide simulation under revised Regulation (EU) No.994/2010, or related to the electricity and gas consistent and interlinked model.

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#### **IT/R&D 4: LONG-TERM MONITORING ON GAS QUALITY IN TRANSMISSION SYSTEMS**

In accordance with Regulation (EU) No. 2015/703, ENTSOG will have published the first Long-Term Gas Quality Monitoring Outlook in transmission systems together with TYNDP 2017.

In the light of this experience, ENTSOG will consider if further improvements should be made for the outlook accompanying TYNDP 2018.

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#### **IT/R&D 5: EVOLUTIVE MAINTENANCE OF THE PDWS AND TP**

ENTSOG now owns an IT system (Professional Data Warehouse System, or PDWS). This system should facilitate the activities of System Development, as well as potentially other areas of ENTSOG. The system will be gradually adapted to cover the needs of its users, which will include development of reports and automated extracts.

The Transparency Platform (TP) is part of the PDWS, and falls under the same administration rules. Enhancement requests originating from the TP users will be analysed and potential improvements will be investigated.

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#### **IT/R&D 6: DATA COLLECTION PORTAL IMPROVEMENT**

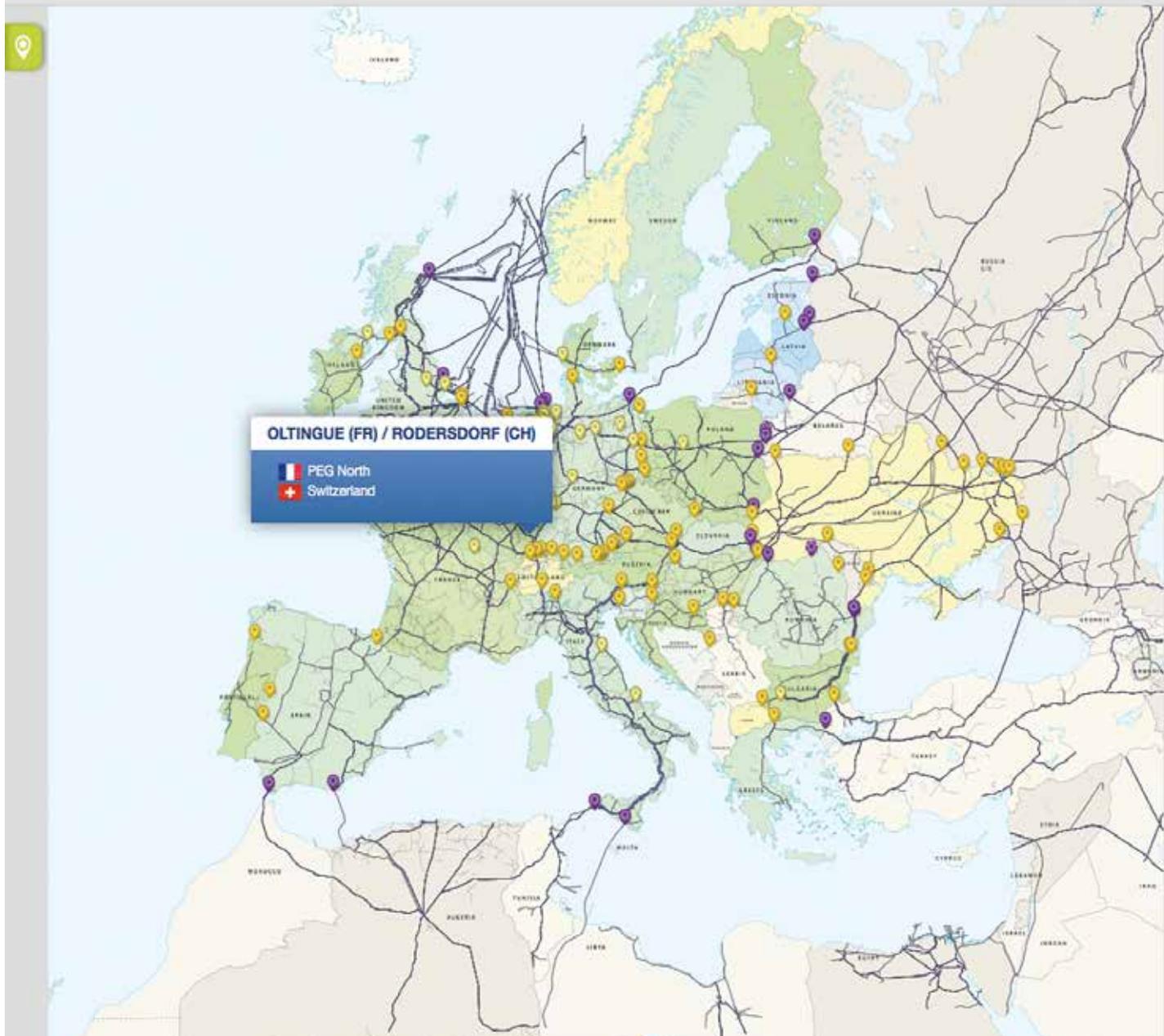
ENTSOG inaugurated an online data collection portal during the TYNDP 2015–2035 preparation process. The portal covers infrastructure projects but also demand data provided by TSOs. The portal will be upgraded in order to improve its user-friendliness and to cope with the evolution of the TYNDP's concept.

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#### **IT/R&D 7: STANDARDISATION AND AUTOMATION OF URGENT MARKET MESSAGES**

Urgent Market Messages (UMM) are foreseen under REMIT. ACER has undertaken to standardize the format of such messages across all platforms currently publishing them. The TP is one of such platforms. Two areas will be investigated: automation of UMM publication, so that ENTSOG members can automatically forward UMMs published in their internal systems to ENTSOG TP. The second area may consist in opening the TP's UMM Publication feature to external market participants.

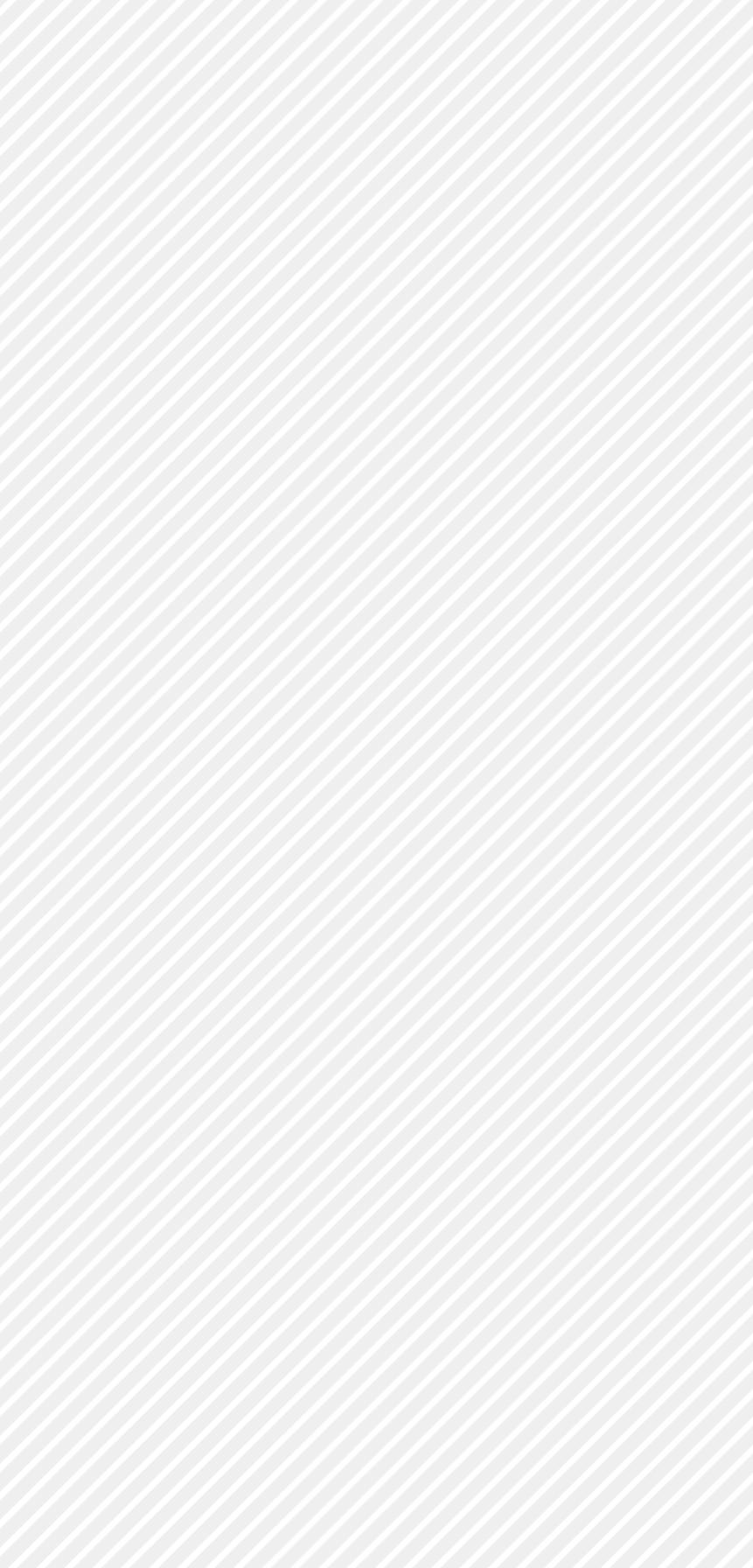
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# Abbreviations

<b>ACER</b>	Agency for the Cooperation of Energy Regulators
<b>AWP</b>	Annual Work Programme
<b>BAL NC</b>	Network Code on Gas Balancing of Transmission Networks
<b>BOA</b>	ENTSOG Board
<b>BRS</b>	Business Requirements Specifications
<b>CAM</b>	Capacity Allocation Mechanisms
<b>CAM NC</b>	Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems
<b>CBA</b>	Cost-Benefit Analysis
<b>CEN</b>	European Committee for Standardisation
<b>CMP</b>	Congestion Management Procedures
<b>CNOT</b>	Common Network Operations Tools
<b>EC</b>	European Commission
<b>ENTSO-E</b>	European Network of Transmission System Operators for Electricity
<b>ENTSOG</b>	European Network of Transmission System Operators for Gas
<b>EU</b>	European Union
<b>EWS</b>	Early Warning System
<b>FG</b>	Framework Guidelines
<b>GCG</b>	Gas Coordination Group
<b>GIE</b>	Gas Infrastructure Europe
<b>GRIP</b>	Gas Regional Investment Plan
<b>INT NC</b>	Network Code on Interoperability and Data Exchange Rules
<b>INT WG</b>	Interoperability Working Group
<b>LNG</b>	Liquefied Natural Gas
<b>MIG</b>	Message Implementation Guidelines
<b>PCI</b>	Projects of Common Interest
<b>R&amp;D</b>	Research and Development
<b>REMIT</b>	Regulation on Energy Market Integrity and Transparency
<b>RES</b>	Renewable Energy Sources
<b>TAR NC</b>	Network Code on Harmonised Transmission Tariff Structures for Gas
<b>TAR FG</b>	Framework Guidelines on Transmission Tariff Structures for Gas
<b>TEN-E</b>	Trans-European Energy Networks
<b>TSO</b>	Transmission System Operator
<b>TYNDP</b>	Ten-Year Network Development Plan
<b>UGS</b>	Underground Gas Storage

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