

# Annual work programme 2016

**implementing the internal  
market for gas**

**ENTSO-G – A FAIR  
PARTNER TO ALL!**



Image courtesy of National Grid

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# 1

# Introduction

**Executive Summary**

**ENTSOG's primary objectives for 2016**



# Executive Summary

ENTSO-G was created in December 2009 to start work prior to the implementation of the Third Energy Package.

On March 3<sup>rd</sup> 2011 ENTSOG formally submitted its Articles, Rules and list of members to the Commission and the Agency. The final Article of Association and Rules of Procedure were approved by the General Assembly on March 6<sup>th</sup> 2012 and submitted to ACER and EC.

This 2016 Annual Work Programme (AWP) is based on the agreement found between EC, ACER and ENTSOG on the Three Year Plan and on the results of the consultation amongst stakeholders run by the European Commission.

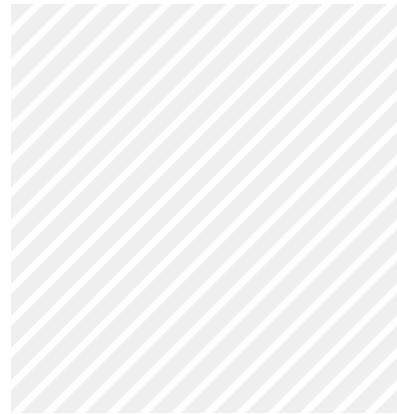
The Three Year Plan will be continuously developed in the future to deliver a plan of activity for the following years to Stakeholders in order to allow all the interested parties to find the necessary resources needed for the development of the plan and the finalisation of the internal market.

The Annual Work Programme is based on Network Codes development and the monitoring of the implementation of three network codes (Capacity Allocation Methodologies, Balancing and from May 2016 Interoperability) and on other important activities such as the development and publication of the Ten Year Network Development Plan (2017–2037), Gas Regional Investment Plans, Summer Supply Outlook and Winter Supply Outlook.

ENTSO-G has found a good balance with regard to the need for internal resources and the contribution from the members to meet the challenges ahead, particularly those defined in this drafted 2016 AWP.

Close attention will be given to the development of renewables and to the possible replacement in the near future of nuclear power in order to prepare solutions for the future in cooperation with all the other relevant organisations (ACER/EC/ENTSO-E).

Feedback is sought from stakeholders to assist the finalisation of the 2016 AWP.



# ENTSOG's primary objectives for 2016

ENTSOG now has all of the EU member States in its membership, but it is still growing in terms of the attendance of Third Countries as Observers to the association. This in line with ENTSOG continuous process of discussion with the 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 becoming the preferred back up fuel thus also helping to achieve the targets for the EC environmental policies.

ENTSOG will also work in cooperation with ENTSO-E, EC and ACER to prepare possible scenarios for the replacement of nuclear power plants and for the integration of renewables as well as the possible use of gas in power generation.

During 2016, the Brussels based staff will work together with the Members in order to ensure ENTSOG can deliver all of its obligations as defined in the Third Package as well as from the growing expectations of further inputs to other processes and activities

Image courtesy of bayernets



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

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

ENTSOG's Article of Association and Roles 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. A possible enlargement of the number of Members in ENTSOG could be foreseen and the number of observers will presumably also increase.

### **▲ Trialling of the Third Package code development process**

During 2015 ENTSOG has worked on the network code on Harmonised Transmission Tariff Structures for Gas in order to deliver a final draft of the network code for the Gas Committee evaluation through ACER. The final version of the network code on Tariff has been delivered to ACER in August 2015.

As in previous years, ENTSOG will continue to keep up the spirit of cooperation with all the stakeholders and therefore will enhance the activity connected to the Functionality Network Codes workshops.

ENTSOG has continuously proven to have well organised work with regard to all 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 aspects of the network codes.

This approach is therefore a cornerstone of the organisation of the activity of ENTSOG.

It is important to mention for 2016 that the second TYNDP integrated with the Cost Benefit Assessment methodologies will be available at the end of 2016 for the definition of the third PCI list in 2017.

### **▲ Specific ENTSOG projects**

Activity in CAM, Balancing and Interoperability Network Codes:

- The early implementation of these network codes has simplified the final implementation.
- Following the early implementation, the monitoring of the final implementation of these three network codes will 2016 be in the focus of ENTSOG in order to analyse the market with the application of the network codes.
- The strict cooperation with ACER, in order to avoid duplication of tasks and overlapping of activities, will be essential for the preparation of this activity.
- The early implementation of the Network Code for Interoperability, presumably done by the end 2015 and at the beginning of 2016, will also become part of the monitoring activities from May 2016 onwards.
- Also for this network code, cooperation and coordination with ACER is necessary to streamline the processes.
- The fifth phase of the Gas Regional Investment Plans and the report on the Transparency guidelines will produce new documents which will increase co-operation with all the Stakeholders and provide better results for the internal market.





ENTSOG Project Plan

# 2 General Area

General ENTSOG Activity

Image courtesy of Snam Rete Gas







# General ENTSG Activity

## BACKGROUND

This project is necessary to fine tune the structure of ENTSG in the light of the experience gathered in the previous years and to deal with the implementation phase of the network codes.

## OBJECTIVE

- ▲ To confirm ENTSG's formal functioning as the organisation envisaged to promote TSOs' co-operation and progress towards a single European energy market
- ▲ To enhance the ENTSG team to be able to ensure appropriate resourcing to deliver all requirements placed upon ENTSG

## ENTSG ACTIVITIES FOR 2016

ENTSG activities for 2016 will be in line with the Three Year Plan and the consultation launched by the European Commission to the stakeholders.

ENTSG will be deeply involved in the monitoring of the implementation of the three network codes CAM, BAL, INT and the guidelines on CMP. It will also be heavily involved supporting the EC with regard to the preparation of the final documents for the Gas Committee process related to the network code on the Harmonised Transmission Tariff Structures for Gas.

The work on the Ten Year Network Development Plan 2017 started in middle of 2015 after the workshops dedicated to gathering all the comments from the stakeholders held in autumn 2015.

A new TYNDP will be finalised in December 2016 and published right afterwards.

**More detailed information can be found in the relevant sections of this document.**

## MONITORING

NETWORK CODES / GUIDELINES	2015				2016											
	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
CMP (Firm day-ahead Use-It-or-Lose-It) <sup>1)</sup>																
CAM																
BAL																
INT																


<sup>1)</sup> Implementation of most CMP-rules already since October 2013

Mandatory implementation

Delayed implementation

## OTHER ACTIVITIES

OVERVIEW (SELECTION ONLY)	2016											
	J	F	M	A	M	J	J	A	S	O	N	D
Summer Supply Outlook												
Winter Supply Outlook												
TYNDP												
GRIPs												
CAM auction calendar												

 Key deliverables visible to external stakeholders

## ENTSOG RECRUITMENT PLAN FOR 2016

ENTSOG commitment to deliver the documents foreseen by the three year plan and to actively promote with all the Stakeholders all the action needed to achieve the targets embedded in the Third Energy Package requires a well prepared recruitment plan in order to enable ENTSOG to be able to deliver all the requested activity.

ENTSOG Team in Brussels has thirty five persons on duty on December 2015 and a replacement plan started in the previous year to replace the seconded persons whose contract came to the end.

In year 2016 the number of people necessary to ENTSOG will be the same as for the previous year but with a different skill of the resources in order to cope with some different activities foreseen.

ENTSOG STAFF	31.12.2015	31.12.2016
General Manager	1	1
Business Area Managers	3	3
Advisers	27	27
Senior Assistants	3	3
Junior Assistant	1	1
<b>Total</b>	<b>35</b>	<b>35</b>

## PUBLICATIONS OF GENERAL AREA IN 2016

- ▲ ENTSOG will publish an Annual Report on its 2015 activities in Q2 2016
- ▲ ENTSOG will deliver the Annual Work Programme (AWP) for 2017 by the end 2016

## ANNUAL REPORT

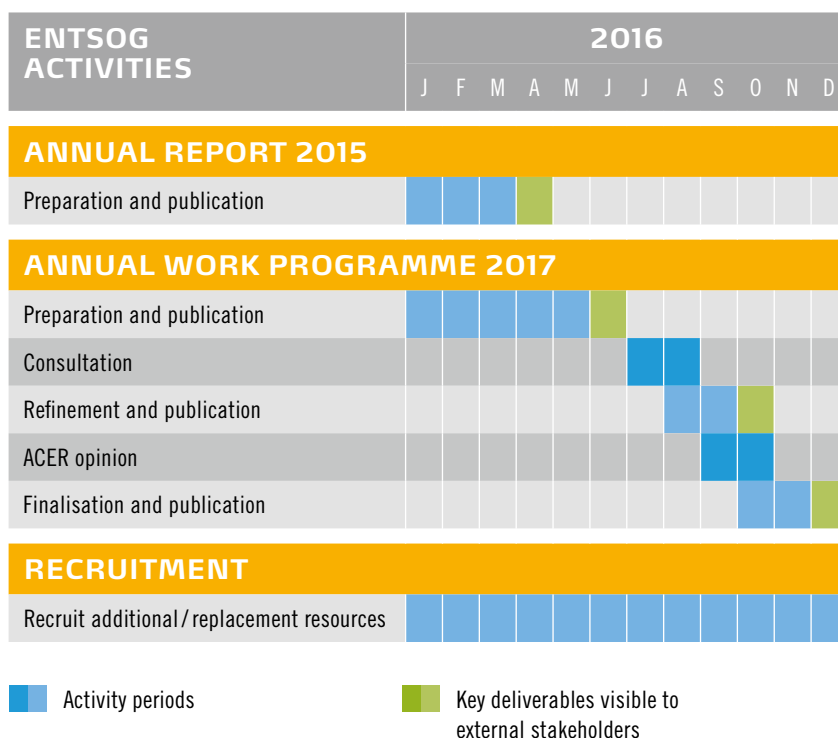
This will provide an annual update on ENTSOG's work and achievements. It will also feature an opportunity to include an assessment of delivery against the 2015 AWP.

## 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 for the activity in the following years. Thereby, ENTSOG also fulfils its requirements prescribed by the Third Energy Package.

This plan features a possible timeline which will need to be confirmed once the Commission's timeline for the Three Year Plan is finalized.

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







# 3 Market Business Area

ENTSOE Project Plan

Capacity Activity  
Balancing Activity  
Tariff Activity





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## OBJECTIVE

- ▲ To support the implementation and application of the Capacity Allocation Mechanisms network code (CAM) 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 the CAM 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 and CMP in close dialogue with stakeholders
- ▲ To propose and assist the development of modification proposals that may be necessary on the implemented NC

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## BACKGROUND

The EC's guidelines on Congestion Management Procedures have entered into force and most aspects of the rules are implemented by October 2013, some by July 2016.

The Capacity Allocation Mechanisms network code entered into force November 2013. The implementation deadline is November 2015.

The Incremental Proposal, consisting out of the CAM NC amendment and a section of the Tariff NC, is expected to enter comitology by the end of 2015.

ENTSOG is involved in the development of the legislative documents and in supporting (early) implementation as well as monitoring.

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.

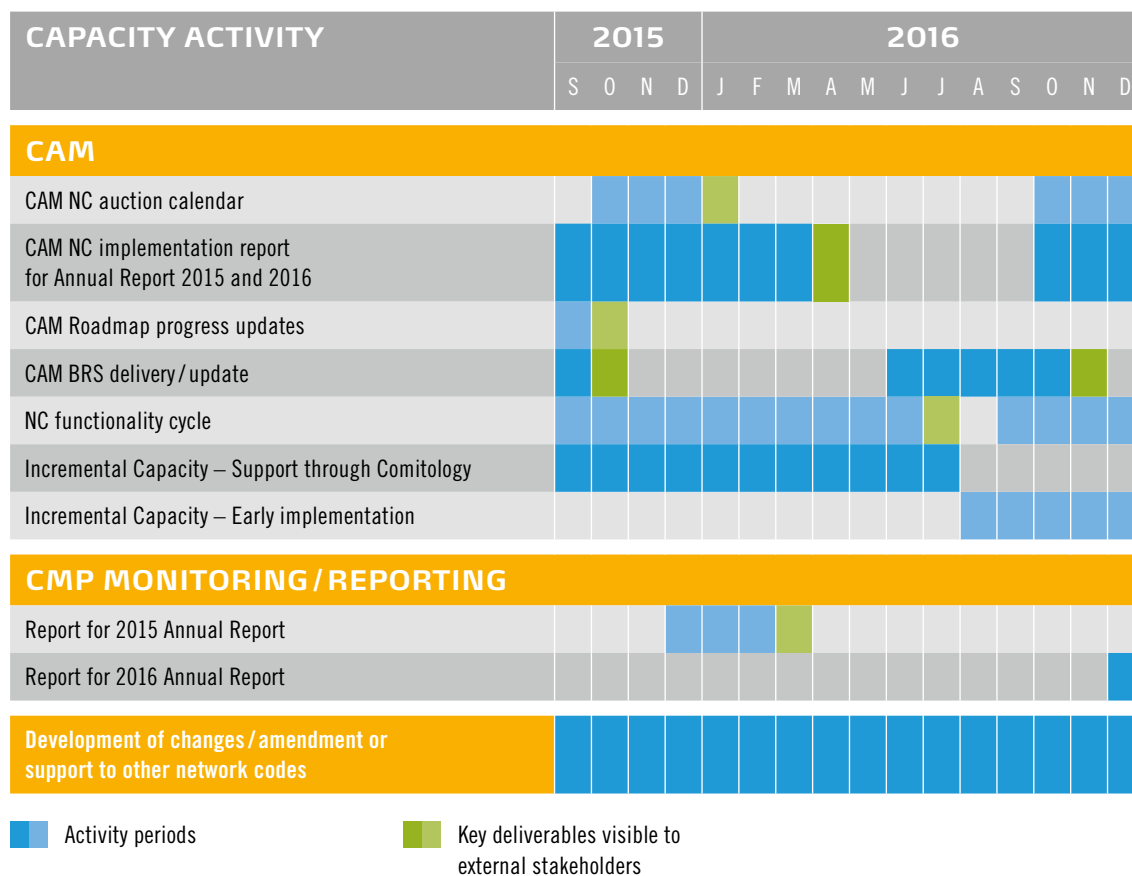
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## KEY DELIVERABLES FOR 2016

- ▲ CAM Monitoring/Reporting
- ▲ CMP Monitoring/Reporting
- ▲ CAM NC Auction Calendar
- ▲ Incremental Proposal (INC) adoption process
- ▲ Functionality process with stakeholders (CAM, CMP and BAL jointly)

## PLAN

The following diagram shows the expected timeline and key activities for the work within the ENTSOG Capacity stream in 2016:







# Balancing Activity

## OBJECTIVE

- ▲ To monitor the implementation of the BAL NC
- ▲ To support and assist in the implementation of the BAL NC
- ▲ To propose or assist the development of any modification proposals or Business Requirement Specifications (BRS) to the Balancing Network Code (BAL NC) that may be necessary

## BACKGROUND

The BAL NC was approved by the European Parliament in early 2014 and was published in the European Journal on 26 March 2014. The code entered into force on 16 April 2014 providing a deadline for implementation on the 1 October 2015.

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

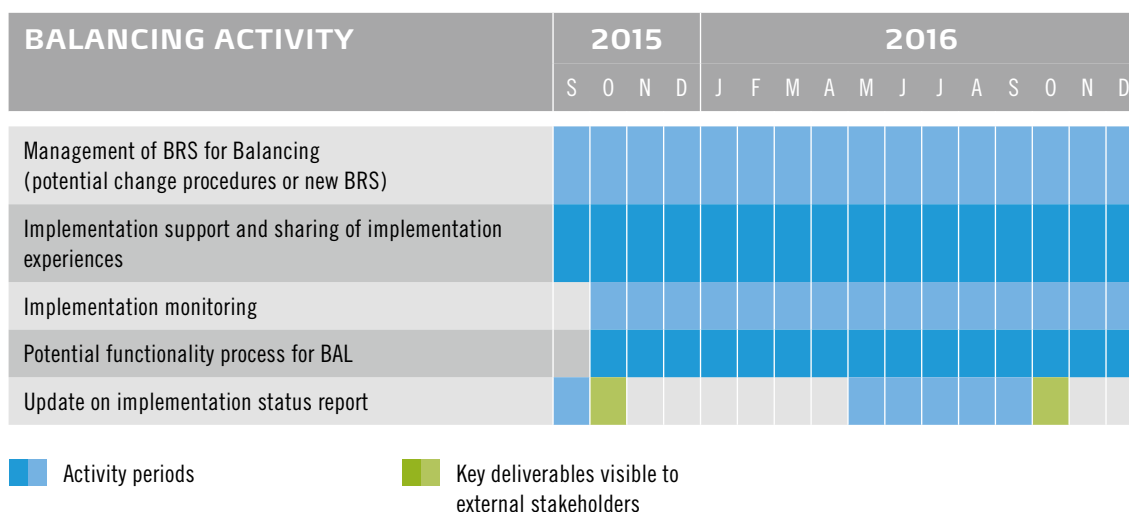
In 2016, ENTSG will be involved in supporting the implementation and monitoring of the BAL NC.

## KEY DELIVERABLES FOR 2016

- ▲ Balancing Business Requirements Specification and Message Implementation Guidelines
- ▲ Update of report on implementation status (potentially in cooperation with ACER)
- ▲ Monitoring of the implementation of the Balancing Network Code
- ▲ Functionality process with stakeholders (CAM, CMP and BAL jointly)

## PLAN

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



# Tariff Activity

## **OBJECTIVE**

- ▲ To provide support for the comitology process for the Network Code on Tariffs (TAR NC)
- ▲ To discuss possible amendment of the TAR NC and produce a TAR NC for resubmission if needed
- ▲ To discuss any implementation questions raised by members included those related to the economic test for incremental and new capacity
- ▲ To work with ACER, members and stakeholders on the possibility of early implementation
- ▲ To prepare for functionality process to facilitate and resolve early identification of issues/challenges

## **BACKGROUND**

The TAR NC was submitted to ACER by end of December 2014 and ACER published their reasoned opinion in March 2015. Intensive trilateral talks between EC, ACER and ENTSOG resulted in summer 2015 in a revised TAR NC proposal from ENTSOG.

The TAR NC is expected to enter comitology by the end of 2015. Main part of the comitology process will take place in 2016. ENTSOG will provide support during the comitology process for the TAR NC.



## KEY DELIVERABLES FOR 2016

- ▲ Providing support for the Tariff comitology process
- ▲ Provide support to members in terms of preparing for the implementation of the TAR NC
- ▲ Setting up stakeholders process on TAR NC functionality
- ▲ Initiate work on the TAR Roadmap

## PLAN

TARIFF ACTIVITY	2016											
	J	F	M	A	M	J	J	A	S	O	N	D
Early implementation discussion												
Develop initial TAR Roadmap / implementation monitoring												
Support during the TAR NC comitology period (the timing of the Comitology period is uncertain)												
Setting up stakeholder process for TAR FuNC												

■ Activity periods

■ Key deliverables visible to external stakeholders



Image courtesy of Open Grid Europe





# 4

ENTSOG Project Plan

# System Development Business Area

**Investment Activity**

Image courtesy of Gascade



# Investment Activity

## 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 selection of 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

## KEY ENTSOG DELIVERABLES FOR 2016

- ▲ Union-Wide Ten Year Network Development Plan 2017
- ▲ Summer Supply Outlook 2016
- ▲ Summer 2015 Review
- ▲ Winter Supply Outlook 2016–2017
- ▲ Winter 2015–2016 Review
- ▲ ENTSO-E/ENTSOG consistent and interlinked modelling approach

## 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) 715/2009 (3<sup>rd</sup> Energy Package), (EU) 994/2010 (Security of Supply), (EU) 347/2013 (Energy Infrastructure Guidelines) and EU 2015/703 (Interoperability & Data Exchange Network Code). The seasonal Reviews show ENTSOG commitment to transparency while providing market participants with analysis of actual situation and helping 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 in competition rather than in synergy.

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## ASSUMPTIONS

Reports published by ENTSOG since 2010 have enjoyed continuous improvement recognized by the market. Stakeholders' expectations have nevertheless been rising together with new requirements coming from new legislation.

ENTSOG is committed to further improvement and will consult stakeholders on how to best address this.

ENTSOG notes that to be able to develop high-quality reports, it is essential to get an in-depth understanding of stakeholders' expectations and to have access to data beyond TSOs' remit. Thanks to stakeholders feedback on ENTSOG proposals some acknowledged improvements were implemented such as assessment of the infrastructure role in market integration and the approach to gas imports.

The development of the CBA methodology and associated data set was largely based on stakeholders' support in order to provide a robust framework to the second PCI selection. It will be particularly important to check with involved parties the adequacy of the methodology and data with the purpose of the Regulation.



Image courtesy of Snam Rete Gas



## DELIVERABLES

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

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

In order to ensure a widely shared approach to the development of TYNDP, the definition of the TYNDP concept will be based on:

- ▲ a Stakeholder Joint Working Session process that will take place during the first months of 2016
- ▲ consideration of public consultation and ACER opinion on the 2015 edition
- ▲ European Commission Guidelines on the inclusion of projects in TYNDP, as foreseen in Annex III 2(5), provided these Guidelines are issued by European Commission in a timeframe consistent with the TYNDP 2017–2037 development process

The SJWSs timeline will be discussed with stakeholders during the autumn 2015 public workshop on TYNDP and CBA. A second public workshop will be organized during spring 2016 to present:

- ▲ the updated TYNDP concept
- ▲ the updated CBA methodology
- ▲ the identification of required data and the associated source

The workshop will also be the kick-off for the data collection process.

The report will assess in which extent the level of development of gas infrastructure will contribute to infrastructure-related market integration, security of supply, competition and sustainability. It will also provide the most comprehensive catalogue of infrastructure projects including the identification and analysis of infrastructure barriers met by promoters.

The TYNDP report will include all infrastructure projects that will be candidate for the third selection of Projects of Common Interest.

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

The report will be released by December 2016 in order to enable its efficient use in the selection of the third list of Projects of Common Interest. ENTSOG will then launch a 3-month public consultation, followed by formal submission of the report together with the analysis of the public consultation to ACER for opinion.

### Deliverable 2: Elaboration of Summer Supply Outlook 2016

ENTSOG will build on the 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, supply and demand approaches. It will assess the ability of the European gas infrastructures to provide flexibility while enabling shippers to fill storage in preparation of the winter. This report does not intend to forecast market behaviour but to assess the level of service provided by infrastructures considering the latest trends in supply and demand.

As for all Supply Outlooks since 2013, ENTSOG will ask Commission and Member States through the Gas Coordination Group which specific situations they would want to be assessed.

### Deliverable 3: Elaboration of Winter Supply Outlook 2016–2017

ENTSOG will build on the 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, supply and demand approaches. It will assess both the possible evolution of UGS inventory along different winter cases as well as the resilience of the European gas infrastructures under peak conditions. This report does not intend to forecast market behaviour but to assess

the level of service provided by infrastructures considering the latest trends in supply and demand.

As for all Supply Outlooks since 2013, ENTSOG will ask Commission and Member States through the Gas Coordination Group which specific situations they would want to be assessed.

#### **Deliverable 4: Elaboration of Summer 2015 Review**

ENTSOG will deliver a description of the behaviour of the gas market during the summer months of 2015 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 analysis will cover any relevant event taking place during the period.

This analysis will then be factored in the R&D plan for further improvement of ENTSOG approach for future deliverables.

#### **Deliverable 5: Elaboration of Winter 2015–2016 Review**

ENTSOG will deliver a description of the behaviour of the gas market during the winter months of 2015-2016 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 analysis will cover any relevant event taking place during the period.

This analysis will then be factored in the R&D plan for further improvement of ENTSOG approach for future deliverables.

#### **Deliverable 6: ENTSO-E/ENTSOG consistent and interlinked modelling approach**

Regulation (EU) 347/2013 defines the obligation for both ENTSOs to deliver a consistent and interlinked modelling approach by 31 December 2016. ENTSOG and ENTSO-E have established a specific joint task force (Cogasel TF) in 2014. This task force will actively work on defining the most efficient approach to meet regulatory requirements. By 31 December 2016, both ENTSOs will jointly submit their proposition for a consistent and interlinked modelling approach to the European Commission and ACER.

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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.

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

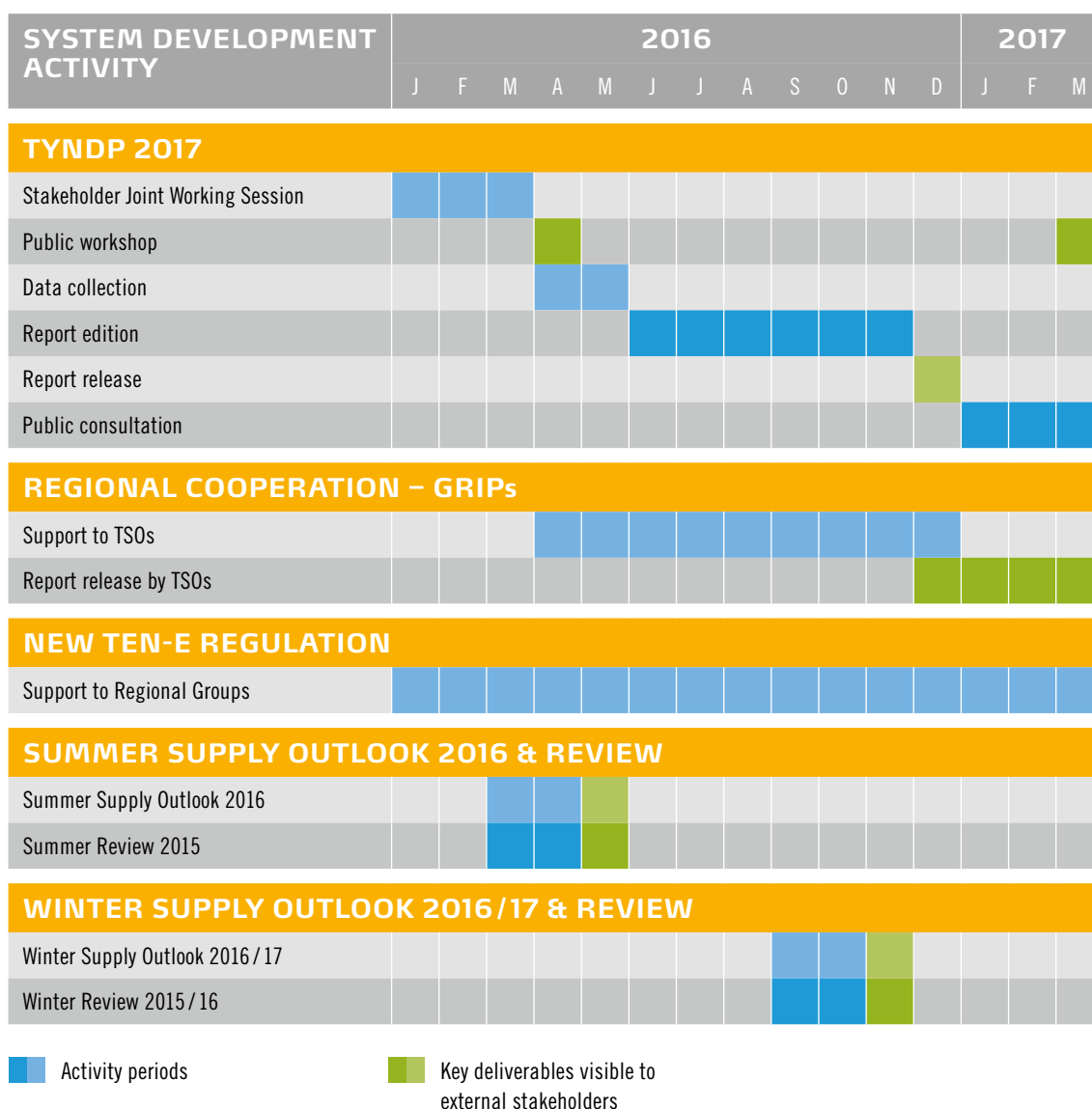
ENTSOG will participate in and support the work of the Regional Groups established by the Commission in the task of selecting and monitoring PCIs.

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

ENTSG will continue to support TSOs in the drafting of third edition of Gas Regional Investment Plans (GRIPs) to be published at the end of 2016 or beginning of 2017. Third edition of GRIPs will be developed in a joint process with development of TYNDP 2017-2037. This joint process will ensure the use of a common dataset for GRIPs and TYNDP and complementarity between the reports. ENTSG's support will cover the centralization of data processing, the modelling of the European gas system and the common layout of the reports.

## PLAN

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





# 5 System Operation Business Area

ENTSOG Project Plan

Transparency Activity

Interoperability Activity

Image courtesy of National Grid





# Transparency Activity

## OBJECTIVE

- ▲ To contribute to enhanced transparency regarding the activities of transmission system operators in Europe

## KEY DELIVERABLES FOR 2016

- ▲ To further enhance ENTSG's New Transparency Platform with functionalities for providing and presenting data to market participants/stakeholders as requested by Reg. 715 as well as to further improve data quality provided by TSOs and the frequency of data uploads. To implement REMIT requirements for ENTSG and support the process for the TSOs

## BACKGROUND

In line with AWP 2014, ENTSG has introduced a new Platform offering more flexibility for data uploading to TSOs and enhance user-friendliness to stakeholders. The Transparency Platform is providing technical and commercial data on transmission points and their interconnection with storage, LNG, distribution, final consumers and production and it shows all the identified relevant points in a new map. The use of the Platform is free of charge for market participants and all information are provided by the TSOs directly.

## ACHIEVEMENTS AND ISSUES ARISING TO DATE

ENTSG, together with its Members, worked in order to increase the provision of information to market participants and to enhance the user-friendliness of the Platform.

Furthermore, ENTSG has been organising public and internal workshops on Transparency. The workshops focus on the transparency guidelines and their implementation, further development of ENTSG's Transparency Platform functionalities and REMIT implementation.

The Transparency Platform statistics for 2015, compared to these for 2014, show a remarkable increase of the use of the Platform by market participants/stakeholders: the number of visitors has been two times higher than during 2014.

## ASSUMPTIONS

ENTSG's Transparency Platform is considered as useful source for information by stakeholders and market participants. Since 1st October 2013 all TSOs are obliged to publish the data foreseen in the Transparency Guidelines in the Platform. ENTSG, by the new Transparency Platform, has fulfilled the ACER recommendations (ACER report 'Monitoring of Gas Transparency requirements' of 9 April 2013) in order to improve TSOs' transparency.

## ACTIVITIES

### Activity 1

Implementing new functionalities in the New Transparency Platform that can provide additional information to market participants/stakeholders as well as improve data quality and frequency of uploads.

### Activity 2

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

### Activity 3

Follow-up and implementation of transparency obligations arising from NC BAL, NC INT, NC CAM, NC TAR and liaison with relevant ENTSOG WG in order to identify synergies in fulfilling these obligations.

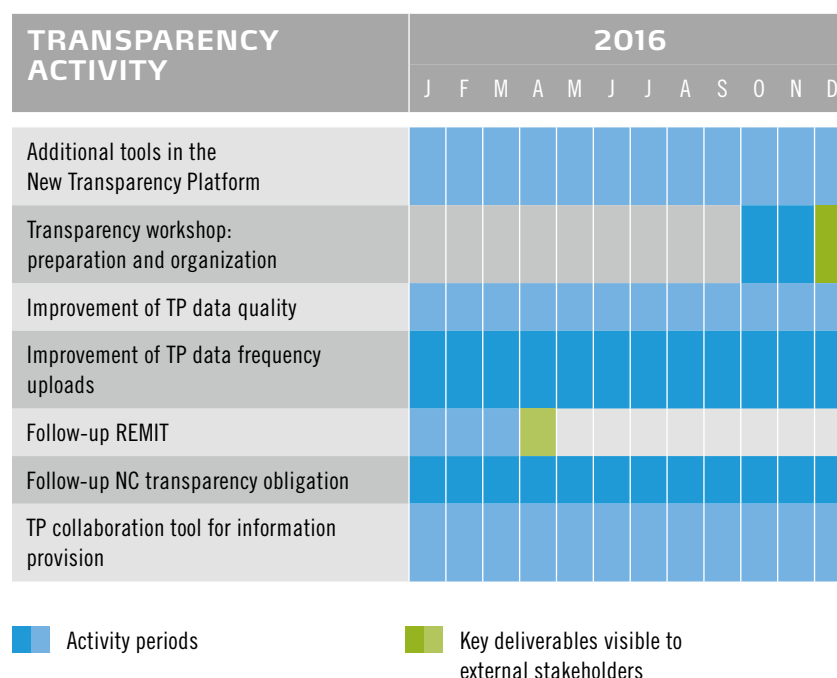
### Activity 4

Public Transparency Workshop to be organised in 2016 in order to receive feedback from Stakeholders.

### Activity 5

Support to Interoperability Team for the development of a collaboration tool for information provision.

## PLAN





# Interoperability Activity

## OBJECTIVE

The main objectives for the ENTSOG Interoperability Working Group (INT WG) for 2015 are:

- ▲ To support the Members in the implementation of the Network Code on Interoperability and Data Exchange rules (INT NC)
- ▲ To follow-up of processes related to gas quality standardization and their potential incorporation into the INT NC
- ▲ To develop and maintain existing common network operation tools (CNOTs) to support the implementation of the Data Exchange rules developed in the Network Codes
- ▲ To facilitate regional cooperation by providing technical and operational support to the EC and to TSOs of Member States, Energy Community and Third Countries
- ▲ To operate the Local Issuing Office for Energy Identification Coding scheme

The Interoperability Working Group is furthermore providing assistance to other ENTSOG Working Groups, in order to ensure a consistent approach regarding interoperability and data exchange issues when designing, implementing and monitoring the functioning of network codes covering different but interlinked areas.

## KEY DELIVERABLES FOR 2016

The following deliverables will be produced during 2016:

- ▲ 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 2017 (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 the update 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 3rd 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)



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## BACKGROUND

Operational, technical, communication and business interoperability is a prerequisite for the well-functioning and the integration of the gas market and also for an enhanced regional cooperation. In gas transmission services, interoperability can be seen as a set of technical and operational rules that enhance cooperation among system operators and network users, thus facilitating the exchange of gas across networks. Network codes define new business processes. Interoperability and data exchange rules build the seamless interfaces between TSOs to make this a success.

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## ACHIEVEMENTS AND ISSUES ARISING TO DATE

ENTSOG received the invitation from 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 finally adopted and published on 30 April 2015 and shall apply from 1 May 2016.

The necessary CNOTs for the implementation of CAM and BAL NC were published in 2015 comprising Business Requirement Specifications as well as Message Implementation Guidelines for the selected common Data Exchange solution.

In relation to regional cooperation, the Early Warning System was established in 2014 and 2015 facilitating a coordinated reaction to potential supply crisis on very short notice. In addition, following the request of the EC, a monitoring report for gas transit flows in Ukraine was developed and established in 2014 and 2015.

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## ACTIVITIES

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

- ▲ Monitor and analyse how transmission system operators have implemented the INT NC
- ▲ 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 2017 in order to include the first Long Term Gas Quality Outlook
- ▲ Support the TRA WG in the update of the Transparency Platform to include a link to the relevant information on the websites of the transmission system operators regarding short term monitoring on gas quality
- ▲ If requested, participate in the preparation of the amendment of the INT NC in relation to CEN Gas Quality Standard in the framework of the ENTSOG–CEN MoU
- ▲ Collaboration with CEN within the pilot project for harmonisation of Wobbe Index

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

- ▲ Support of the Early Warning System with Early Warning Teams East and North-West and possible further extension to the southern region. This activity also includes a regional collaboration tool 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
- Further support the EC in their activities concerning gas flows monitoring in Ukraine

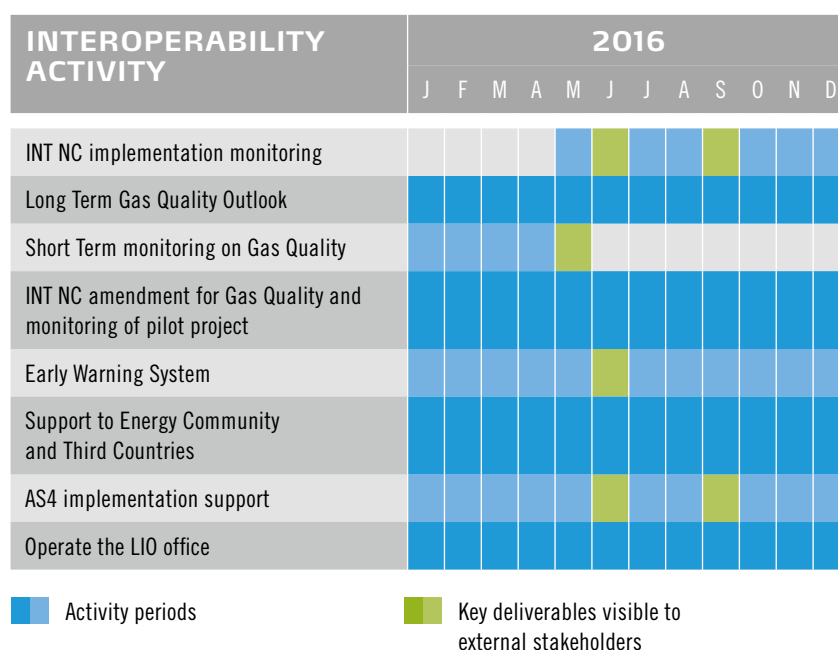
#### Activity 4: Development, support and maintenance of CNOTS

- Support the implementation of published CNOTS for CAM/CMP and Nominations and matching procedures, assisting members in the implementation of the related Business Requirement Specifications and the selected common solution for Data Exchange, in particular AS4.
- Cooperate with EASEE-gas in the development and release management of the Message Implementation Guideline in the framework of the common agreement.

#### 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:



# 6

ENTSOG Project Plan

## IT and Research & Development Activity

IT and Research & Development Activity  
within System Development





# IT and Research & Development Activity within System Development

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

Since TYNDP 2013–2022, ENTSG has introduced some new climatic cases in order to better describe the various correlations between gas demand and weather conditions.

The development of the CBA methodology has resulted in the development of an approach to model gas demand for power generation in relation with gas, coal and CO<sub>2</sub> emission prices. Such method is considering various elements of ENTSG-E visions in particular the development of RES capacity and the intermittency of their load.

ENTSG will continue to develop its approach to gas demand and especially drawing the link between high-level political orientations and daily gas demand figures that form the basis of the assessment of European gas infrastructures.

ENTSG 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.

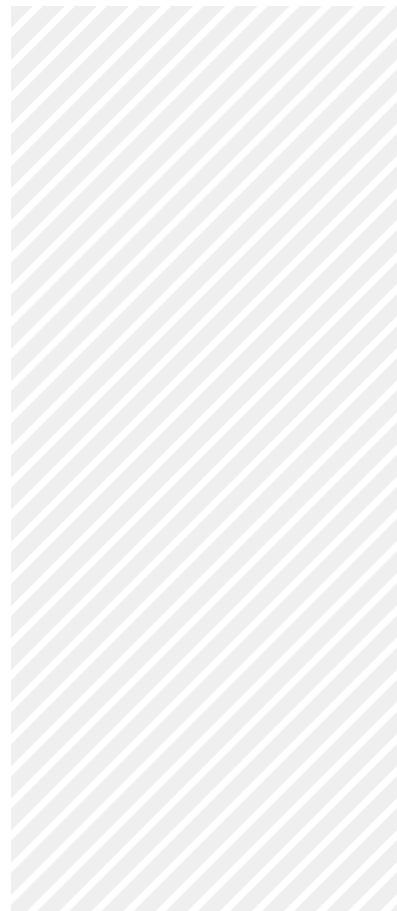
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## IT/R&D 3: FURTHER IMPROVEMENT OF ENTSG MODELLING TOOL

ENTSG has developed since 2010 an expertise in linear modelling of the European gas system which is backing Supply Outlooks and Union-wide TYNDP. This approach has been improved on a continuous basis in order to meet stakeholders' expectations.

ENTSG 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 REG (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 will be considered under the light of TYNDP 2015 experience.



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

In accordance with Regulation (EU) 2015/703, ENTSOG will publish the first Long-term monitoring on gas quality in transmission systems together with TYNDP 2017–2037. During 2016 ENTSOG will work on defining the most efficient approach to fulfil this new requirement.

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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 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.

## PLAN

The diagram shows the expected timeline and key activities:

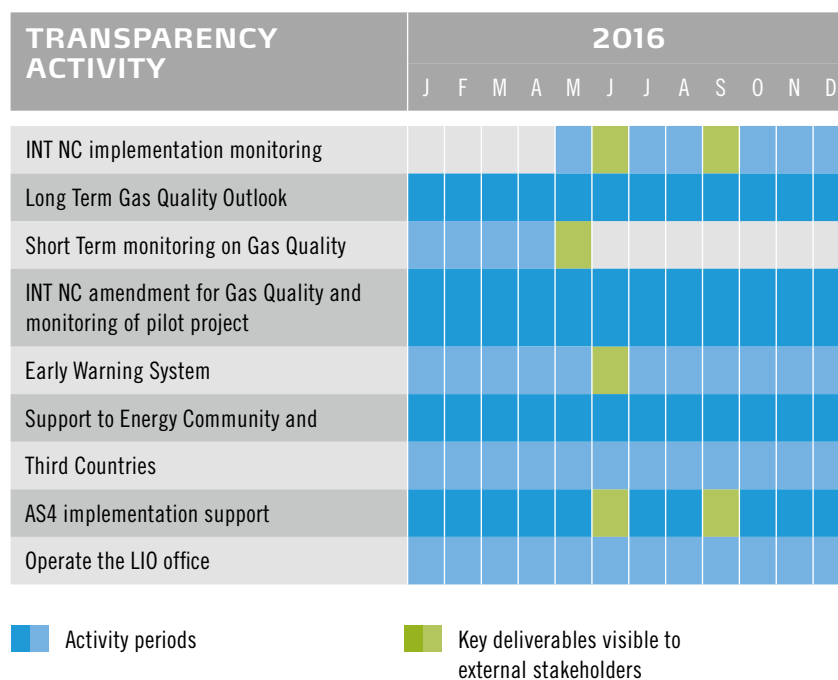


Image courtesy of Fluxys Belgium



# 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 Standardization
<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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