



ANNUAL WORK PROGRAMME

2020

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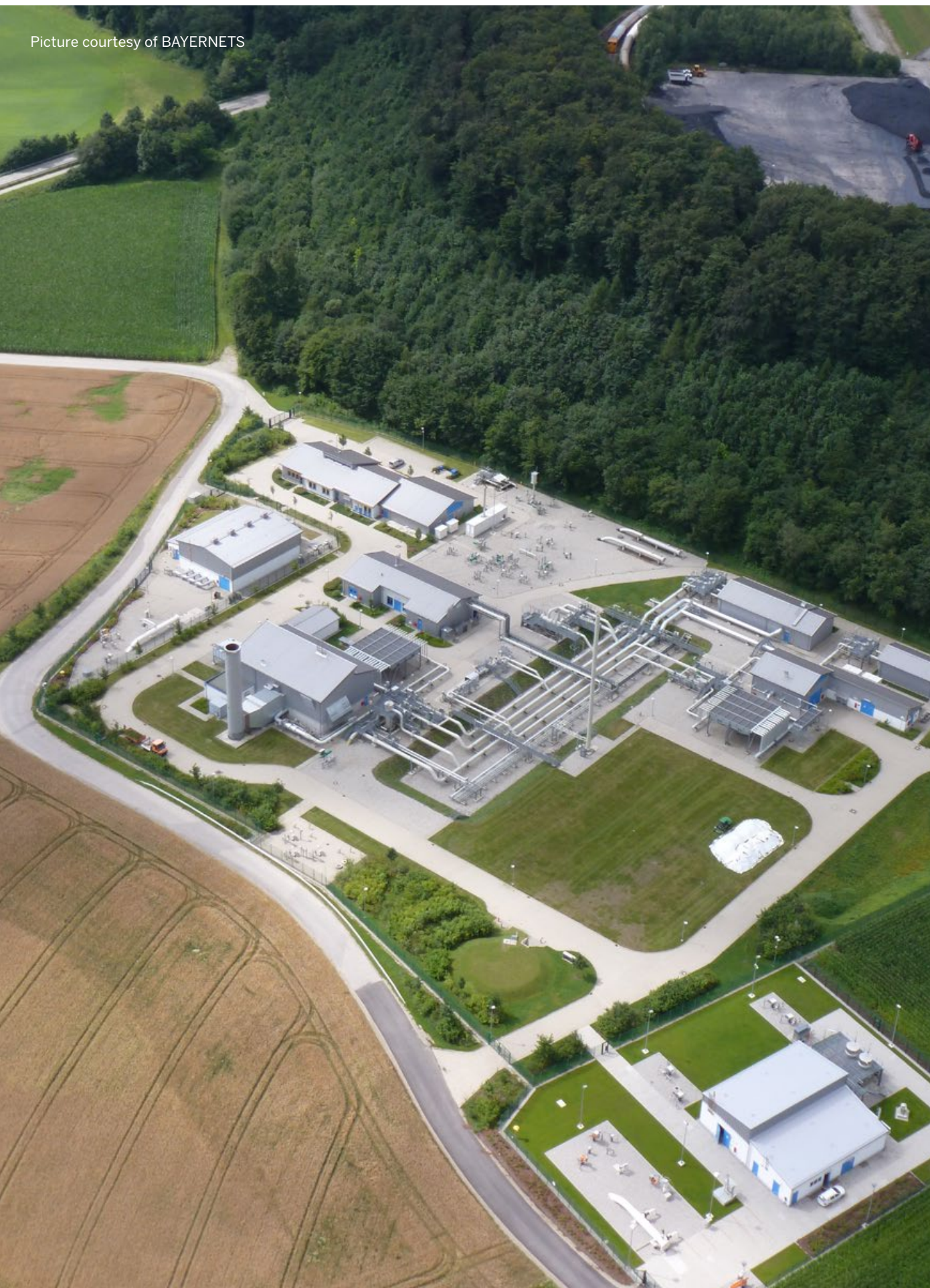


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INTRODUCTION



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 of Association, Rules of Procedure 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 EC¹.

This document is the 2020 edition of the Annual Work Programme (AWP), as required by Regulation (EC) 715/2009. An Annex has been included to provide an overview on the legal basis for ENTSOG's primary tasks.

In 2020, ENTSOG will continue to fulfil its regulatory tasks as well as addressing upcoming objectives resulting from EU Energy Union policy. ENTSOG will continue to provide support to its Members and other interested parties on Network Code and Guidelines implementation and will continue with monitoring activities. A summary of ENTSOG's other key regulatory activities are included in Section 1.1 of this document.

ENTSOG's work is continuing to evolve: designing the secondary legislation and fulfilment of conferred regulatory tasks, monitoring the effects of the agreed outcomes, building on achieved results and responding to future challenges. While its focus remains on monitoring Network Code implementation and other regulatory tasks, ENTSOG future activities will also include assessing the progress of the functionality of the European gas markets and looking at longer term horizons for European Scenarios. Work on the development of the TYNDP2020 will continue to go beyond the usual TYNDP frame and use a more visionary approach. The TYNDP2020 process also for the first time allows for energy transition projects to be considered. ENTSOG will continue its work to make the European gas grid ready to meet decarbonisation goals, and in doing so, support all relevant technologies that contribute to the most efficient transition of the energy sector – both in terms of cost and time.

The ENTSOG team will contribute with proposals and analysis of the impact of possible changes to the current regulatory framework for the EU gas market. In

addition, it will work to strengthen the synergies between the gas and electricity sectors to facilitate energy flexibility, storage, international transportation capacity and security of supply. ENTSOG will work closely with its Members in 2020 and beyond to develop projects within a regulatory framework for power-to-gas and gas for transport, heating and industry.

As for previous years, and to continuously improve its way of working and developing its relations with key stakeholders, ENTSOG will continue with regular engagement with ACER, with stakeholders and ENTSOG's members to ensure a productive and effective mutual dialogue.

In 2020, ENTSOG will contribute to the Madrid Forum and Copenhagen Energy Infrastructure Forum, both hosted by the EC. The Madrid Forum addresses topics such as the implementation of the network codes and the cross-border trade of gas, while the Copenhagen Energy Infrastructure Forum addresses the different aspects of infrastructure planning and development for both electricity and gas. ENTSOG will also continue to participate in the EC's Implementation and Monitoring Group, which addresses high level issues in relation to implementation and monitoring of network codes effects for both gas and electricity.

And finally, ENTSOG will continue its work as a proactive, trusted adviser on gas transmission related topics on European level in 2020 to support the achievement of the EU goals of competitiveness, security of supply and sustainability. The structure of ENTSOG with the embedded expertise of its members as well as of its Brussels office will continue to play a pivotal role in the further development of the European gas markets.

1 ENTSOG's Articles of Association and the Rules of Procedure were last updated in October 2014 and December 2012 respectively.

1.1 SUMMARY OF ENTSOG'S ACTIVITIES IN 2020

In line with the revised approach adopted in Annual Work Programme (AWP) 2019, ENTSOG's main activities can be described using the following three headings:

- ▲ Networks Codes and Guidelines (Section 2)
- ▲ Scenarios and Infrastructure (Section 3)
- ▲ Security of Supply (Section 4)

The AWP had previously focused on the development process of the Third Package network codes, a cornerstone of the organisation's activities, and this will continue with support to processes associated with the implementation activities.

Going forward, ENTSOG's efforts will be on continued monitoring of the implementation and effects of the Congestion Management Procedure (CMP) Guidelines, Capacity Allocation Methodologies (CAM NC), Tariff (TAR NC) Balancing (BAL NC) and implementation of the Interoperability (INT NC) – these are addressed in Section 2 of this document. The joint activity of man-

aging the Functionality Process with ACER and Transparency Guidelines (including REMIT) are also included in Section 2. A summary of regulatory references for these are included in the Annex – Section 7.

The activities associated with the other topics listed above are described in Sections 3 and 4. Research and Development activities undertaken by ENTSOG are described in Section 5. Details on ENTSOG's internal supporting organisation are provided in Sections 6 of this document.

Each topic in Section 2–5 includes objectives, key deliverables and activities and a programme of activities for 2020. ENTSOG's key work areas and deliverables are highlighted in Sections 1.1.1 to 1.1.5 below and summarised in the 'Programme of Activities' tables in each section.

1.1.1 NETWORK CODES AND GUIDELINES

ENTSOG will continue in 2020 to provide help and support to its Members and other interested parties on Network Code and Guideline related topics and will continue with monitoring activities. ENTSOG will work with ACER in providing joint solutions to issues posted by the stakeholders on the Gas Network Codes Functionality Platform and in 2020 the work on the improved Functionality Platform will continue.

Interoperability work in 2020 includes the development, support and maintenance of Common Network Operation Tools (CNOTs) for data exchange. ENTSOG will continue to work in close cooperation with ACER, EC, Energy Community and stakeholders on all matters relating to Network Code and Guidelines.

Activities undertaken for the Transparency Guidelines and REMIT topics relate mainly to the management of the transparency and reporting obligations including TSOs' publications on their websites, on the ENTSOG Transparency Platform (TP) and data reporting to ACER REMIT Information System (ARIS). From a TP perspective, work will be undertaken to analyse stakeholder feedback and implement new functionalities on the Platform that will improve the usability and user-friendliness of the published data. ENTSOG and its TSO members will continue their efforts pursuing to improve data quality and completeness and delivering on their REMIT obligations. Additional support will be provided to the TSOs from Energy Community Contracting Parties as they advance their efforts on transparency publications, including potential publication on ENTSOG's TP.

1.1.2 SCENARIOS AND INFRASTRUCTURE

It is planned to publish the TYNDP2020 for public consultation by mid-2020 and to be subsequently issued as a final publication to ACER for their opinion at the end of 2020. In 2020, the TYNDP – including the system assessment and the CBA results for projects intending to apply to the PCI process – will be published ahead of the EC's 5th PCI process commencement.

Furthermore, following the conclusions of the Focus Study on the interlinkages between gas and electricity scenarios and project assessment published in 2019, ENTSOG and

ENTSO-E will develop a screening and a project assessment methodology to further adapt their Interlinked Model prior to its submission for EC approval and its implementation in the subsequent TYNDP.

1.1.3 SECURITY OF SUPPLY

ENTSOG will continue its assessment of the European security of supply, through preparation of deliverables Summer Supply Outlook 2020 and Summer 2019 Review and the Winter Supply Outlook 2020–2021 and Winter 2019–2020 Review.

Work will be undertaken on facilitation of the existing Regional Cooperation System for Gas (ReCo System for Gas) as a CNOT for emergency conditions and the common incidents classification scale. ENTSOG will continue to support the EC and the Gas Coordination Group (GCG) in the implementation of the revised Security of Supply Regulation, in particular by assisting, if requested, in the preparation and implementation of solidarity principles, regional emergency and

preventative action plans. Further work is also expected in assisting the Energy Community Secretariat and Contracting Parties in Network Code implementation workshops and queries.

ENTSOG will monitor the use of the CNOTs for emergency as adopted by ACER in 2019, along with the evolution of operational processes and needs and will revise them, if needed.

Finally, ENTSOG will further strengthen the cooperation between EU TSOs and the TSOs of third countries that play an important role in EU gas supplies and contributes to the preparedness on matters necessary to provide security of supply in emergencies.

1.1.4 MANAGEMENT SUPPORT

In 2020, the ENTSOG Management Support team will continue to work with the Business Areas and management in Brussels, and with ENTSOG members. Support will be through the Legal, HR, Finance, IT and Communications and Policy functions, to ensure there is a robust platform for ENTSOG activities and deliverables.

The Management Support team is responsible for the meetings of the General Assembly and the Management Board as well as coordinating ENTSOG publications, e. g. Annual Report and Annual Work Programme (AWP). In addition, the activities of the Liaison Group, the Legal Advisory Group and the Financial Committee are organised by the Management Support team as well as the activities of the External Contact Platform (open to non-EU Gas transmission companies), which was created in collaboration with the Energy Community.

They also, with ENTSOG Business Area Managers, prepare ENTSOG's contribution to the EC's Network Codes Implementation and Monitoring Group meetings.

The Annual Report and AWP are the result of combined efforts from the entire ENTSOG team – the Annual Report assesses ENTSOG's work and achievements retrospectively for each given year. The ENTSOG AWP contains the expected activities for ENTSOG in the upcoming year, taking into account ACER's opinions on ENTSOG's work and allowing the interested stakeholders to prepare their activities vis-à-vis ENTSOG.

2

NETWORK CODES AND GUIDELINES



EC Regulation 715/2009 requires European-wide Network Codes and Guidelines to be developed by ENTSOG to harmonise the applicable rules aimed at facilitating market integration.

The currently foreseen codes and guidelines have been developed. ENTSOG is required to monitor the implementation of the Network Codes and the Guidelines and their effect on the harmonisation of applicable rules aimed at facilitating market integration, which will continue in 2020 and beyond. ENTSOG will also continue to actively participate in the further development of the Network Codes and the Guidelines through the Functionality Process as well as the formal regulatory amendment process, as required.

In relation to transparency, specific obligations for gas TSOs have been introduced through Regulation (EC) No 715/2009, defining the basic transparency rules further specified in Chapter 3 of Annex I (and its amendments). Reporting obligations have been added following the REMIT regulation including its Implementing Acts. ENTSOG will also continue to deliver on these requirements and implement necessary updates.

2.1 CAPACITY ALLOCATION MECHANISM NETWORK CODE

The CAM Network Code (CAM NC) sets up capacity allocation mechanisms for existing and incremental capacity and how adjacent TSOs cooperate in order to facilitate capacity sales, having regard to general commercial as well as technical rules related to capacity allocation mechanisms.

The amended CAM NC entered into force as Regulation (EC) 2017/459 on 6 April 2017 and repealed the previous Regulation (EC) 984/2013.

The amended CAM NC includes rules for determining and marketing incremental capacity guaranteeing a European-wide harmonised procedure. It contains provisions for a capacity conversion service of unbundled capacity products as well as for harmonising the main terms and conditions for bundled capacity products.

New requirements for offering interruptible capacity and new auction dates and rules for long-term capacity products are also introduced.

In 2020, ENTSOG will be involved in supporting the implementation of the CAM NC by providing members and stakeholders advice and guidance throughout the implementation process.

2.1.1 OBJECTIVES

- ▲ To support the implementation and application of the Capacity Allocation Mechanisms network code (CAM NC)
- ▲ To monitor and analyse the implementation of the CAM NC and its effect on the harmonisation of applicable rules aimed at facilitating market integration
- ▲ To facilitate activities to promote the functionality of CAM NC in close dialogue with stakeholders
- ▲ To develop documents/solutions stemming from obligations on ENTSG outlined in the EC 459/2017 CAM NC

2.1.2 KEY ACTIVITIES AND DELIVERABLES

- ▲ CAM NC Monitoring/Reporting
- ▲ CAM NC Auction Calendar
- ▲ Issue solutions delivery from the joint ACER and ENTSG functionality process involving stakeholders
- ▲ Update of Business Requirements Specification (BRS) CAM if requested by TSO/Stakeholders

2.1.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on CAM NC related issues:

CAM NC	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
CAM NC auction calendar												
CAM NC monitoring report (implementation and effects) for 2020 (expected to be published in 2021)												
Support of Energy community in implementing CAM NC and CMP GL												
CAM BRS update (if requested by TSO/Stakeholders)												
Functionality Process for CAM NC												
Monitor the activities and develop ENTSG positions on capacity relevant issues incl. responses on public consultations												
Analyses of ACER reports) and other capacity relevant reports												
Incremental Capacity – support of TSOs with the 2 nd INC process												

■ Activity periods ■ Key deliverables available to external stakeholders
■ Undetermined workload

2.2 BALANCING NETWORK CODE

The Balancing Network Code (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 the 1 October 2015.

The BAL NC applies to balancing zones within the borders of the EU. It establishes rules for natural gas balancing, including network-related rules on nomination procedures, imbalance charges, settlement processes associated with daily imbalance charges and provisions on operational balancing.

In 2020, ENTSOG will be involved in supporting the implementation and monitoring of the BAL NC.

2.2.1 OBJECTIVES

- ▲ To publish the 2019 BAL monitoring report, which monitors and analyses the implementation of the BAL NC.
- ▲ To support and assist in the implementation of the BAL NC in terms of Regulation interpretation by relevant EU bodies as well as via knowledge sharing and good practices dissemination, including assistance to the Energy Community in implementing the BAL NC.
- ▲ To facilitate activities to promote the functionality of the BAL NC in dialogue with stakeholders.

2.2.2 KEY ACTIVITIES AND DELIVERABLES

- ▲ Publish the 2019 BAL monitoring report;
- ▲ Recommendations resulting from the joint ACER and ENTSOG Functionality Process involving stakeholders;
- ▲ Developing ENTSOG positions on balancing relevant issues including responses to public consultations and ACER reports.

2.2.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on BAL NC related issues:

Balancing NC	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Prepare for BAL NC monitoring report (implementation & effect) to be delivered in 2020												
Support and assistance of TSOs in the implementation of the BAL NC												
Analyses of ACER reports (implementation/effect monitoring, market monitoring) and other BAL relevant reports												
Monitor activities and develop ENTSG positions on balancing relevant issues incl. responses on public consultations and ACER reports												
Support of Energy Community in implementing BAL NC												
Functionality Process for BAL NC												

■ Activity periods ■ Key deliverables available to external stakeholders
■ Undetermined workload

Picture courtesy of GASSCO



2.3 TARIFF NETWORK CODE

The Tariff Network Code (TAR NC) on rules regarding harmonised transmission tariff structures for gas was published in the Official Journal of the European Union on 17 March 2017 and entered into force on the 6 April 2017. The application of the TAR NC is over three dates: 06 April 2017 (chapters I, V, VII, IX, X); 1 October 2017 (chapters VI, VIII); 31 May 2019 (chapters II, III, IV).

The TAR NC contributes to achieving tariffs, or methodologies used to calculate them, which are transparent, take into account the need for system integrity and its improvement, reflect the actual cost incurred, non-discriminatory, facilitate efficient gas trade and competition, avoid cross-subsidies between network users and provide incentives for investment.

In 2020, ENTSOG will be involved in supporting the ongoing implementation and monitoring of the TAR NC by providing members and stakeholders advice and guidance throughout the implementation process.

2.3.1 OBJECTIVES

- ▲ To support the effective and consistent implementation of the TAR NC by ENTSOG members
- ▲ To publish the 2019 TAR NC monitoring report, which monitors and analyses the implementation of the TAR NC
- ▲ To respond to TAR NC-related issues raised on the Functionality Platform, working in close dialogue with stakeholders
- ▲ To analyse and provide possible solutions to tariff-related issues raised in future looking work streams
- ▲ To continue to work in close cooperation with ACER, EC and Energy Community on all tariff and TAR NC-related matters
- ▲ To provide expert knowledge and guidance to stakeholders related to tariffs

2.3.2 KEY ACTIVITIES AND DELIVERABLES

- ▲ Publish the 2019 TAR NC monitoring report
- ▲ Make recommendations resulting from the joint ACER and ENTSOG Functionality Process on the requirements from TAR NC publication
- ▲ Provide feedback to ACER regarding their possible recommendation on multipliers, whose deadline for publication is 1 April 2021 as per Art. 13(3) of TAR NC.
- ▲ Improve the Standardised Section for publication on TSO/NRA website

2.3.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on Tariff NC related issues:

Tariff NC	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Prepare and publish the TAR NC monitoring report (implementation and effect) 2019												
Support and assist TSOs and Energy Community with implementation of TAR NC												
Respond to queries and provide advice to stakeholders on TAR NC												
Analyse ACER reports (implementation/effect monitoring, allowed/target revenue, market monitoring, possibly multiplier), other tariff relevant reports												
Monitor the activities and develop ENTSOG positions on tariff relevant issues incl. responses on public consultations												
Analyse and provide possible solutions to tariff related issues raised in future looking work streams												
Functionality Process for TAR NC												

■ Activity periods ■ Key deliverables available to external stakeholders
■ Undetermined workload

Picture courtesy of ENAGAS



2.4 INTEROPERABILITY AND DATA EXCHANGE NETWORK CODE

Commission Regulation (EU) 2015/703 established a network code on interoperability and data exchange rules in 2015.

An appropriate degree of harmonisation in technical, operational and communication areas is key to overcome potential barriers to the free flow of gas in the European Union. The Network Code on Interoperability and Data Exchange Rules (INT NC) enables the necessary harmonisation in those areas, therefore leading to effective market integration. For that purpose and for facilitating cooperation between adjacent transmission system operators, ENTSOG provides assistance for the harmonised implementation of the INT NC and develops CNOT for the technical implementation of Network Codes and Guidelines.

2.4.1 OBJECTIVES

- ▲ To monitor the implementation and functioning of the Network Code on Interoperability and Data Exchange rules (INT NC).
- ▲ To investigate the further steps of harmonisation with regard to common data exchange solutions.
- ▲ To facilitate and support coordination of technical cooperation between Member States, Energy Community and third-country transmission system operators (Art 8(3)c) Regulation (EC) No. 715/2009).

2.4.2 KEY ACTIVITIES AND DELIVERABLES

2.4.2.1 MONITORING OF THE IMPLEMENTATION AND FUNCTIONING OF THE NETWORK CODE ON INTEROPERABILITY AND DATA EXCHANGE RULE:

- ▲ Monitor and analyse how transmission system operators have implemented the INT NC, focusing on the most relevant aspects and potential input from ACER's opinion.
- ▲ Analyse any proposals arising from the Functionality Process including validation, categorisation and prioritisation of the issues and develop proposals for improvement or amendment of the network codes or guidelines together with other ENTSOG business areas as well as with ACER and relevant stakeholders.
- ▲ Deliver status update on the implementation of INT NC.

2.4.2.2 DEVELOPMENT, SUPPORT AND MAINTENANCE OF COMMON NETWORK OPERATION TOOLS (CNOTS) FOR DATA EXCHANGE:

- ▲ Monitor the implementation and functionality of published CNOTS for CAM/CMP and Nominations and matching procedures, including the related Business Requirement Specifications, Implementation Guidelines and the technical communication profiles for the selected common solutions for Data Exchange.
- ▲ Organisation of a public stakeholder workshop related to the implementation of CNOTS
- ▲ Cooperation with EASEE-gas, CEF, ACER and the rest of the stakeholder community in the field of data exchange.
- ▲ Analyse any potential requests concerning Data Exchange harmonisation.

2.4.2.3 TECHNICAL COOPERATION BETWEEN MEMBER STATES, ENERGY COMMUNITY AND THIRD-COUNTRY TRANSMISSION SYSTEM OPERATORS

- ▲ If required, update of recommendations relating to the coordination of technical cooperation between Member States, Energy Community and third-country transmission system operators
- ▲ Support the TSOs of Member States, Energy Community and third countries in the implementation of the INT NC rules and expanding regional cooperation.
- ▲ Organise a workshop between EU TSOs and relevant adjacent non-EU TSOs (parties acting as TSOs) from third countries which are supplying or transiting gas to EU (e. g. North African countries, Russia, Turkey) in order to discuss future steps for strengthening technical cooperation.

2.4.2.4 OPERATE THE LOCAL ISSUING OFFICE FOR ENERGY IDENTIFICATION CODING SCHEME

- ▲ Management of EIC Codes requests and updates from/to the Central Issuing Office (CIO/ENTSOE) and ENTSG website
- ▲ Cooperation with ENTSOE to further streamline and standardise the implementation of the scheme in the gas sector

Picture courtesy of EUSTREAM



2.4.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on INT NC related issues:

Interoperability and Data Exchange NC	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Prepare for the INT NC monitoring report update, to be delivered in 2020												
Analyse ACER's reports and opinions regarding the INT NC and relevant CNOTs												
Respond to queries and provide advice to TSOs and stakeholders on the INT NC and relevant CNOTs												
Support and assistance of TSOs and Energy Community in the implementation of the INT NC and relevant CNOTs												
Update of CNOTs												
Functionality Process for the INT NC												
Data Exchange workshop												
CAM/CMP BRS update (if requested by TSO/Stakeholders)												
Nomination & Matching BRS update (if requested by TSO/Stakeholders)												
Workshop between EU TSOs and adjacent non-EU TSOs												
Management of EIC codes												
Cooperation with ENTSOE in terms of Cyber Security												
Continuation of the dialogue with stakeholders on European and national level in order to establish a common encryption method for AS4												
Analysis of interoperability topics in the decarbonisation package												
Proof of Concept for the Operational Map for Regional Coordination Teams												

■ Activity periods
 ■ Key deliverables available to external stakeholders
 ■ Undetermined workload

2.5 CONGESTION MANAGEMENT PROCEDURES GUIDELINES

The guidelines for Congestion Management Procedures (CMP GL) were developed by the European Commission in 2010 and 2011 and approved by the EU Gas Committee on 24 August 2012. The implementation date was 1 October 2013.

The CMP GL help free up unused capacity with a view to optimal and maximum use of the technical capacity and the timely detection of future congestion and saturation points. They facilitate cross-border exchanges in natural gas on a non-discriminatory basis.

In 2020, ENTSOG will be involved in supporting the implementation of the CMP GL by providing members and stakeholders advice and guidance throughout the implementation process.

2.5.1 OBJECTIVES

- ▲ To support the implementation and application of the Congestion Management Procedures (CMP)
- ▲ To monitor and analyse the implementation of the CMP GL and its effect on the harmonisation of applicable rules aimed at facilitating market integration
- ▲ To facilitate activities to promote the functionality of CMP GL in close dialogue with stakeholders

2.5.2 KEY ACTIVITIES AND DELIVERABLES

- ▲ CMP Monitoring/Reporting
- ▲ Update of Business Requirements Specification (BRS) CMP if requested by TSO/Stakeholders
- ▲ Issue solutions delivery from the joint ACER and ENTSOG Functionality Process involving stakeholders.

2.5.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on CMP related issues:

CMP Guidelines	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Monitoring report (implementation and effects) for 2020 (expected to be published in 2021)												
Functionality Process for CMP												
Analyses of ACER reports (Congestion at interconnection points, implementation) and other contractual congestion relevant reports												
Monitor the activities and develop ENTSOG positions on contractual congestion relevant issues incl. responses on public consultations												
Potential development of changes/amendments or support to other network codes												

■ Activity periods ■ Key deliverables available to external stakeholders
■ Undetermined workload

Picture courtesy of PLINOVODI



2.6 TRANSPARENCY GUIDELINES

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

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

ENTSOG activities on the Transparency topic relate to management of the transparency obligations including TSOs' publications on their websites and the Transparency Platform and Regulation on Energy Market Integrity and Transparency (REMIT). Regulation (EU) No 1227/2011 (REMIT) and its Commission Implementing Regulation (EU) No 1348/2014 introduced additional publication and reporting obligations to the market participants, aimed at supporting market monitoring, fostering open and fair competition in wholesale energy markets. The REMIT obligations are also handled by the Transparency Area in ENTSOG.

2.6.1 OBJECTIVES

The objective of the Transparency Activities in ENTSOG is to enhance the transparency of gas TSOs' activities in the European Union. This is realised by the data published on the Transparency Platform and the TSOs' websites. The requirements for the transparency publications are specified in Regulation (EC) No 715/2009, REMIT and the Network Codes. The main objectives are to:

- ▲ Further enhance ENTSOG Transparency Platform with functionalities improving the usability and user-friendliness of the published data.
- ▲ Monitor, analyse and apply the 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) 2015/703
 - Regulation (EU) 2017/459
 - Regulation (EU) 2017/460 etc.
- ▲ Cooperate with other ENTSOG business areas to fulfil transparency requirements coming from relevant network codes and liaise with relevant ENTSOG WG to identify synergies in fulfilling these obligations.

2.6.2 KEY ACTIVITIES AND DELIVERABLES

In line with the Annual Work Programme 2019, ENTSOG continues to update and improve the ENTSOG Transparency Platform to the benefit of all users and stakeholders. The TP provides technical and commercial data on the TSOs' transmission-relevant points, showing all of them on an interactive map, in charts, in tables, in downloads, as 'Application Programming Interfaces' (APIs). Part of this information is also available via 'Really Simple Syndication' (RSS) web-feeds. The information is available free of charge, provided by the TSOs.

ENTSOG continues to work closely with the TSOs to apply the regulation provisions, including the transparency requirements coming from the Network Codes and Guidelines, and REMIT

The following is a list of key activities and deliverables:

- ▲ Analyse issues and suggestions raised by stakeholders to improve the user experience, i. e. via public workshops, the Functionality Platform, satisfaction surveys or the TP Help Section.
- ▲ Follow up on the standing TP stakeholder satisfaction survey and organise the annual workshop on transparency to receive feedback from stakeholders.
- ▲ Evaluate the online training courses on using the Transparency Platform, executed in 2019, and update the form and purpose to facilitate its use by all users.
- ▲ Evaluate the communication to users of the TP, including assessment of newsletters and announcement on the Platform.
- ▲ In 2020, a technical upgrade of the TP will be a key deliverable.
- ▲ Support TSOs in improving data completeness and consistency in line with legal obligations.
- ▲ As Registered Reporting Mechanism, ENTSOG will continue to provide aggregated fundamental data to the ARIS as defined in Article 9(1) of Regulation (EU) 1348/2014.
- ▲ Follow-up on reporting provisions as well as on data collection processes for TSOs and ENTSOG under REMIT obligations. In 2020, this includes activities to implement the updated electronic formats for reporting to ARIS, expected to become applicable in 2020.
- ▲ ENTSOG and the gas TSOs will continue working closely with ACER's Market Integrity and Transparency department, and its active support on improving REMIT application. This includes participation in ACER public consultations and surveys on REMIT, and various stakeholder user groups managed by the Agency, e. g. REMIT Expert Group, RRM User Group, Roundtable for inside information disclosure etc.

2.6.3 SUPPORTING ACTIVITIES

- ▲ Facilitate required data collection processes when required by the legislation, e. g. the information for ACER's 2019 Congestion Monitoring Report.
- ▲ Support TSOs from Energy Community Contracting Parties concerning their transparency publications on ENTSOG TP.
- ▲ Support the Agency's REMIT teams and ACER stakeholder user groups, e. g. REMIT Expert Group, RRM User Group, Roundtable for inside information disclosure etc., with input on the processes and practices on the EU gas market relevant for the REMIT implementation and developments.
- ▲ Continuous dialogue with other ENTSOG working and kernel groups to provide support for any ad hoc data requests for possible ACER monitoring or for research studies within ENTSOG

2.6.4 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on Transparency Guidelines related issues:

Transparency Guidelines	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Continuous Platform improvements												
Activities on application of the transparency requirements coming from EU legislation												
Functionality Process for Transparency Guidelines												
Facilitate required data collection processes												
Support Energy Community CPs												
Support ACER's REMIT department												
Support to TSOs on data completeness												
Follow-up on REMIT requirements												
Cooperate with ENTSOG business areas on transparency requirements and support with projects concerning TP												
Stakeholder satisfaction survey												
Public workshop on Transparency												

Activity periods Key deliverables available to external stakeholders
 Undetermined workload

2.7 FUNCTIONALITY PROCESS

The established Functionality Process, co-managed by ENTSOG and ACER and supported by the European Commission, is aimed at reaching commonly recommended solution(s) on implementation and operational issues within the existing Gas NCs and GLs which already entered into force.

The central tool of the process is the Gas Network Codes Functionality Platform (www.gasnfunc.eu) which was launched in February 2016.

After an issue has been reported, ACER and ENTSOG will jointly validate, categorise and prioritise the raised issues and elaborate solutions taking into account stakeholders' views.

2.7.1 OBJECTIVES

ENTSOG and ACER provide stakeholders a platform to raise and discuss implementation and operation Network Code and Guidelines issues and provide an

opportunity to be involved in developing solutions, which, at the end of the process, will aim at commonly recommended non-binding guidance.

2.7.2 KEY ACTIVITIES AND DELIVERABLES

In 2020, it is anticipated that ENTSOG will provide further joint ACER and ENTSOG solutions to issues posted by the stakeholders on the Functionality Platform.

During 2018 and 2019 ACER and ENTSOG collected suggestions for improvements to the Functionality Process itself and the Functionality Platform from stakeholders as well as from within both organisations.

The collected input was analysed and transformed into project steps in 2019. In 2020 the work on the improved Functionality Platform will continue.

The aim of the exercise is to make the Functionality Process more efficient, transparent and smoother for the involved stakeholders.

2.7.3 PROGRAMME OF ACTIVITIES

The following table shows expected timeline and key activities on the Functionality Process:

Functionality Process	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Develop and publish Issue solution												
Process improvement												

■ Activity periods

2.8 SUPPORTING ACTIVITIES

2.8.1 IMPLEMENTATION AND MONITORING NETWORK CODE GROUP

The Network Code Implementation and Monitoring Group (NC IMG) is a forum for high level strategic coordination between the European Commission, the Agency for the Cooperation of Energy Regulators (ACER), the European Network of Transmission System Operators for Electricity (ENTSO-E), and the European Network of Transmission System Operators for Gas (ENTSO-G).

The NC IMG oversees the implementation and implementation monitoring of electricity network codes and gas network codes in the EU.

The IMG for Network Codes was launched by the European Commission on 3 May 2017 at the event celebrating the legal endorsement of the last Network Code that both ENTSOG and ENTSO-E were tasked to deliver, as required by the Third Energy Package.

ENTSO-G has been among the founding members of the group and is represented at every meeting to report the progress made in NC implementation as well as to discuss the strategic issues related to codes and guidelines effects.

It is also the forum at which the issues related to codes and guidelines can be effectively discussed and solved in a coordinated manner between the ENTSOs, the Regulators and the Commission.

ENTSO-G reports also on the stakeholders' dialogue framed by the Functionality Process. ENTSOG also present the progress made in Transparency Platform development.

3

SCENARIOS AND INFRASTRUCTURE



The deliverables and activities outlined in this Section reflect ENTSOG obligations under Regulations (EC) 715/2009 (3rd Energy Package), (EU) 2017/1938 (Security of Supply), (EU) 347/2013 (Energy Infrastructure Guidelines) and EU 2015/703 (Interoperability & Data Exchange Network Code) and relate to scenario development, investment and infrastructure assessment for the EU energy system. One of ENTSOG's main deliverables are short and medium to long-term assessments such as the Ten-Year Network Development Plan (TYNDP), the Union-wide network development plan. In addition, the ENTSOG maps show commitment to transparency and to providing stakeholders with easily accessible and high added value information.

All these deliverables aim at developing a vision of the integrated European energy market and in particular its infrastructure component. This vision is of particular importance in view of completing the pillars of the European Energy Policy in the perspective of achieving the European energy and climate targets and European commitments to the Paris Agreement.

The TYNDP development process is a three-year process, with scenario development taking two years, and the infrastructure and project assessment taking an additional year. This process is the entry point to two parallel subsequent processes, to which ENTSOG provides its support: the development of the Gas Regional Investment Plans (GRIPs) and the Projects of Common Interest (PCI) selection process. The overall TYNDP and subsequent processes take a total of four years and are repeated every second year.

ENTSOG will publish the Draft TYNDP 2020 in mid-2020, which includes the System Assessment and Project-Specific Assessment. Following the Draft TYNDP publication and the subsequent public consul-

tation, ENTSOG will submit TYNDP 2020 to ACER in the second half of 2020, before publishing the final TYNDP2020 at the end of year 2020. The draft TYNDP report will include also the project-specific cost-benefit analysis (PS-CBA) results for those projects intending to apply for the PCI label under the 5th PCI selection process, in line with the provisions of the ENTSOG 2nd CBA Methodology, approved by the European Commission in January 2019.

The TYNDP 2020 report identifies the infrastructure gaps, namely the priority areas lacking market integration, security of supply, competition or sustainability. The report also assesses 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.

TYNDP 2020 represents the basis for the selection of the fifth list of PCIs, both to support the identification by Regional Groups of the investment needs, and to serve as basis for the project-specific cost-benefit analysis of PCI candidates.

3.1 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 the Regional Groups, established by the EC, in the process of selection of PCIs by providing the technical background and methodologies with regard to cost-benefit analysis of projects.
- ▲ To provide support to institutions and stakeholders in the understanding of gas infrastructure.
- ▲ To develop ENTSOG skills, methodologies and tools to sustain the achievement of the above objectives.

3.2 KEY DELIVERABLES AND ACTIVITIES

- ▲ Ten-Year Network Development Plan (TYNDP) 2020
- ▲ Adapting ENTSO-E/ENTSOG Consistent and Interlinked Model
- ▲ Scenario development for TYNDP 2022
- ▲ Support to PCI Project Collection and PCI Selection Process
- ▲ System Development map 2020

3.2.1 TYNDP 2020

Building on the alignment of ENTSOG and ENTSO-E TYNDP timelines, it is planned that the Draft and Final TYNDP 2020 will be published in mid-2020 and at the end of 2020, respectively.

ENTSOG will run and publish project-specific assessments as part of the Draft TYNDP2020 in mid-2020, taking account of the feedback from the associated public consultation and submission to ACER for its opinion.

TYNDP 2020 – including the system assessment and the CBA results for project intending to apply to the PCI process – will be published ahead of the commencement of the EC's 5th PCI process.

Following feedback during the 4th PCI selection process by the EC and in ACER's Opinion, work will be undertaken on TYNDP 2020 which will improve the assessment of sustainability needs to meet the EU'S

climate targets and in view of the 5th PCI selection process. For this purpose, ENTSOG and ENTSO-E developed a specific scenario (National Trends) in line with the National Energy and Climate Plans of the EU Member States, and two additional scenarios meeting the COP 21 targets, each based on either a centralised or a decentralised approach.

Additionally, ENTSOG will include for the first time a new category of Energy Transition Related (ETR) projects and assess how those projects can address the need for decarbonisation in line with the Paris Agreement targets.

With regards to modelling tool and indicators improvements for TYNDP, an efficient and result-oriented improvement of the ENTSOG modelling tool and indicators is being performed on an on-going basis, considering feedback from stakeholders during consultation processes.

3.2.2 METHODOLOGIES AND MODELLING: ENTSO-E/ENTSOG INTERLINKED MODEL

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

As for TYNDPs 2018 and 2020, the ENTSOs will continue their joint scenario building process with TYNDP 2022 and subsequent TYNDP editions. The ENTSOs aim at further development of their methodologies to build full-energy scenarios taking into account different direct and indirect interlinkages such as gas fired power generation, Power-to-Gas and hybrid demand solutions.

The ENTSOs acknowledge that ACER opinion points at additional potential interlinkages that are not part of the draft Interlinked Model as submitted in December 2016. In line with ACER suggestions the ENTSOs launched on 17 May 2018 a focus study on the interlinkages between gas and electricity scenarios and projects assessment. The conclusions of the focus study were presented during the Copenhagen Infrastructure Forum in May 2019 by the two ENSTOs.

In 2020, ENTSOG and ENTSO-E will build on the outcomes of the study to prepare the adapted version of the Interlinked Model for EC approval in view of its implementation in future TYNDP editions.

3.2.3 SCENARIOS FOR TYNDP 2022

After publishing the scenarios for TYNDP 2020 in Q4 2019, ENTSOG and ENTSO-E will jointly identify the lessons-learned in Q1 2020. Based on that, ENTSOs will discuss the framework of the scenarios for the TYNDP 2022.

As for the previous scenarios, ENTSOs' joint Scenario Building Working Group will start the scenario building process with the development of consistent and robust storylines, which will be published in a draft version in the first half 2020. The storyline publication will be followed by a public workshop and consultation.

The joint scenario building process, as part of the Interlinked Model, will build on continuous cooperation between ENTSOG and ENTSO-E, allowing for the evolution of policy and technology to be considered, and for the experience gained from TYNDP 2020 and the joint focus study on the interlinkages between gas and electricity sectors. In this regard, ENTSOs will further develop their methodology with regard to the construction of full-energy scenarios including aspects of sector coupling such as hybrid demand solutions and Power-to-Gas.

3.2.4 MAPS 2020

Since its creation ENTSOG has developed different maps, on a voluntary basis. These maps are welcomed by institutions and stakeholders as a highly useful overview and resource.

Every year ENTSOG publishes the System Development Map and starting from 2018 publish either the Capacity

Map, or the TYNDP Map with all the projects included in TYNDP, on a bi-annual basis.

In 2020, ENTSOG will issue the System Development Map and TYNDP Map, which can be purchased or downloaded from ENTSOG website.

3.3 SUPPORTING ACTIVITIES

3.3.1 SUPPORT TO REGIONAL GROUPS ON THE PCI SELECTION PROCESS

ENTSOG will take part in the Cooperation platform between Commission, ACER and ENTSOs, and will participate in and support the work of the Regional Groups established by the Commission in the tasks of running the 5th PCI selection process and monitoring PCIs.

ENTSOG will also support promoters of projects applying for the PCI label, as for the previous PCI selection processes, including through the handling of Project-Specific cost-benefit analysis (PS-CBA) as part of TYNDP, in line with its 2nd CBA Methodology, and ACER recommendations. The publication of PS-CBA results will provide a transparent tool to all concerned stakeholders taking part to the 5th PCI process.

3.3.2 GAS REGIONAL INVESTMENT PLANS (GRIPs)

TSOs regional cooperation to produce Gas Regional Investment Plans (GRIPs) will continue, and ENTSOG will support TSOs in the development of the 5th edition of the GRIPs.

3.4 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on Scenarios and Infrastructure related issues:

Scenarios and Infrastructure	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
TYNDP 2020												
Draft TYNDP report												
PS-CBAs												
Public consultation												
Formal submission to ACER												
Final report edition												
TYNDP 2022												
Scenario development and stakeholder process												
Adaptation of Interlinked Model												
TYNDP and System Development Maps												
Support Activities												
Support to TSOs with GRIPs												
Support to Regional Groups on the PCI selection process												

■ Activity periods
 ■ Key deliverables available to external stakeholders
■ Undetermined workload

4

SECURITY OF SUPPLY



After the gas crises of 2006 and 2009, the EU reinforced its security of gas supply notably by adopting the first security of gas supply Regulation No 994/2010 in 2010. On 28 October 2017 revised Regulation No. (EU) 2017/1938 concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 entered into force. The new rules ensure a regionally coordinated and common approach when choosing the security of supply measures among EU Member States.

The regulation also defines the role of ENTSOG in ensuring the security of gas supply. ENTSOG will continue to take part in the works of the Gas Coordination Group (GCG) and ensure functionality of the Regional Coordination System for Gas (ReCo System for Gas).

4.1 OBJECTIVES

- ▲ Facilitate regional cooperation for security of supply (SoS) and operational issues
- ▲ Within the framework of the revised SoS regulation, to facilitate the functioning of the Regional Coordination System for Gas (ReCo System for Gas) as CNOT for emergency conditions and the incidents classification scale (Art 8(3)c) Regulation (EC) No. 715/2009).
- ▲ Support the GCG and relevant stakeholders in the implementation of the revised SoS regulation and the assessment of European Security of Supply.
- ▲ Provide support to institutions and stakeholders in the provision of gas demand and supply outlooks, reviews and monitoring activities.

4.2 KEY DELIVERABLES AND ACTIVITIES

- ▲ Summer Supply Outlook 2020
- ▲ Summer Supply Review 2019
- ▲ Winter Supply Outlook 2020–2021
- ▲ Winter Supply Review 2019–2020
- ▲ Support functioning of the ReCo System for Gas
- ▲ Support to the Gas Coordination Group
- ▲ Ukrainian gas flow and pressure monitoring

4.2.1 OUTLOOKS AND REVIEWS

4.2.1.1 SUMMER SUPPLY OUTLOOK 2020 AND SUMMER 2019 REVIEW

ENTSOG plans to publish its Summer Supply Outlook 2020 in April 2020, so that stakeholders are informed very early in the injection season. To develop this report, 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.

Summer Supply Outlook 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 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 for all Supply Outlooks since 2013, EC and Member States, through the GCG, will be able to ask ENTSOG for specific situations they would want to be assessed.

Along with its Summer Supply Outlook 2020, ENTSOG will also deliver on a voluntary basis the Summer 2019 Review: a description of the behaviour of the gas market during the summer months of 2019 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.

This analysis will then be factored in the Research and Development activities for further improvement of ENTSOG approach for future deliverables.

4.2.1.2 WINTER SUPPLY OUTLOOK 2020–2021 AND WINTER 2019–2020 REVIEW

ENTSOG plans to publish its Winter Supply Outlook 2020–2021 in October 2020, so that stakeholders can be informed very early in the withdrawal season. To develop this report, 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.

Winter Supply Outlook 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 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 for all Supply Outlooks since 2013, EC and Member States, through the GCG, will be able to ask ENTSOG for specific situations they would want to be assessed.

Along with the Winter Supply Outlook 2020–2021 ENTSOG will also deliver on a voluntary basis the Winter 2019–2020 Review, a description of the behaviour of the gas market during the winter months of 2019–2020 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.

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

4.2.1.3 REGIONAL COORDINATION SYSTEM FOR GAS

ENTSOG will ensure facilitation of the existing ReCo System for Gas as a CNOT for emergency conditions, including the incidents classification scale, and other supporting documentation for the ReCo Teams. ENTSOG will also investigate the need to implement a ReCo Team South East and potential interactions with other critical infrastructure operators and other stake

holders in crisis situations. In 2020, ENTSOG will continue to facilitate knowledge sharing amongst TSOs regarding operational procedures in emergency conditions. ENTSOG in coordination with the ReCo Teams and ENTSG will analyse how to strengthen the cooperation between gas and electricity TSOs in case of stress events and in normal conditions.

4.3 SUPPORTING ACTIVITIES

4.3.1 SUPPORT TO GAS COORDINATION GROUP (GCG)

- ▲ Support of the EC and the GCG in the implementation of the revised SoS regulation. Follow upon any tasks given to it by GCG.
- ▲ Through the GCG and when preparing Supply Outlooks, ENTSOG will continue to encourage Member States (MS) to feedback on particular cases of interest.
- ▲ Support the TSOs and MS in the risk assessment for the defined groups based on the results of the Union-wide simulation.
- ▲ Support the TSOs and competent authorities in the establishment of the preventive action and emergency plans.
- ▲ Support the TSOs and competent authorities to agree on the technical arrangements for the application of the solidarity principles.

4.3.2 TECHNICAL COOPERATION BETWEEN MEMBER STATES, ENERGY COMMUNITY AND THIRD COUNTRY TSOs

- ▲ Support Energy Community Contracting Parties and third countries transmission system operators concerning security of supply
- ▲ Enhance technical cooperation with all the third-country TSOs of countries supplying or transiting gas to the Union, in particular, exchange of technical and operational information in case of stress events.
- ▲ Further support the EC in their activities concerning gas flow monitoring in Ukraine as well as in the EU-Russian Work Stream 3 energy dialogue
- ▲ Continue to host meetings External Contact Platform (ECP), a platform developed by ENTSOG and the Energy Community Secretariat, to strengthen ENTSOG's cooperation with non-EU gas transmission companies, including those from the Energy Community countries
- ▲ Support the TSOs of Member States, Energy Community and third countries in the implementation of the EU NC rules by expanding regional cooperation, via workshops or meetings organised by ENTSOG.
- ▲ Organise a workshop between EU TSOs and relevant adjacent Non-EU TSOs (e. g. from North African countries, Russia, Turkey and parties acting as TSOs) supplying or transiting gas to EU in order to discuss future steps for strengthening technical cooperation.

4.4 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on Security of Supply related issues:

Security of Supply	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Summer Supply Outlook 2020 & Review												
Summer Supply Outlook 2020												
Summer Review 2019												
Winter Supply Outlook 2020/21 & Review												
Winter Supply Outlook 2020/21												
Winter Review 2019/20												
Support to GCG												
Support to the EC concerning the SoS Regulation, L-gas Risk Group, regional EP, PAP and solidarity mechanisms												
Facilitation of ReCo System for Gas												
Review and update of the ReCo System for Gas.												
Cooperation with ENTSO-e in Security of Supply												

Activity periods Key deliverables available to external stakeholders
 Undetermined workload

5

RESEARCH & DEVELOPMENT



5.1 OBJECTIVES

Regulation No 715/2009 requires that the ENTSOG Annual Work Programme contains a list and description of its research and development activities. ENTSOG is committed to working towards and promotion of innovation and improvement of processes of its Members activities, in 2020 and beyond.

5.2 KEY DELIVERABLES AND ACTIVITIES

5.2.1 PROMOTING TSO INNOVATIVE ACTIVITIES

In 2020, ENTSOG will continue its work to actively engage with its Members to further build the data base of TSO Research, Development and Innovation (RDI) activities using the Innovative Projects Platform (IPP), available on ENTSOG's public website – a platform for communication and exchange of best practices applied by EU TSOs for technology development, business models and partnerships. The purpose of this ex-

ercise is to increase representation of the TSOs input into the discussion on existing regulatory barriers and on the enablers needed for promotion of the innovation in the gas sector during the energy transition.

ENTSOG will continue to promote the IPP via its social media and other media channels.

5.2.2 ONLINE TRAINING FOR GAS NETWORK CODES

In 2019, ENTSOG continued to collaborate with the Florence School of Regulation (FSR) on the online course to promote the regulatory knowledge of the gas Network Codes, facilitating the understanding of their regulatory background, design and implementation.

The course was endorsed by ACER and the EC, was largely attended and received positive feedback from participants, as for the 2018 edition. Due to its success, ENTSOG plans to repeat this course jointly with FSR in 2020.

5.2.3 JOINT FUNCTIONALITY PROCESS IMPROVEMENTS

In 2020 it is anticipated that ENTSOG will provide further joint ACER and ENTSOG issue solutions to issues posted by the stakeholders on the Functionality Platform.

During 2018 and 2019, ACER and ENTSOG collected suggestions for improvements to the Functionality Process itself, as well as the Functionality Platform from stakeholders and from within both organisations.

The collected input was analysed and transformed into project steps in 2019. In 2020, the work on the improved Functionality Platform will continue, to make the Functionality Process more efficient, transparent and smoother for the involved stakeholders.

5.2.4 GAS QUALITY AND HYDROGEN

Work on this topic in 2020 includes provision of the third Long-Term Gas Quality Outlook (Gas Quality Outlook) for TYNDP 2020. ENTSOG continues improving the gas quality reference data and the modelling assumptions used for the long-term gas quality monitoring outlook for the Gas Quality Outlook. With reference to the TYNDP 2020, the Gas Quality Outlook includes an analysis of how renewable gases may impact the different regional outlooks in the long term.

In addition, ENTSOG will cooperate with CEN in the normative work related to gas quality provisions as stated in the standard EN16726, including a potential revision of the regulatory framework. Cooperation will also take place with CEN, Marcogaz and EASEE-gas regarding the transmission network readiness to integrate hydrogen and other renewable gases. ENTSOG will continue its dialogue with stakeholders along the gas value chain in the field of gas quality and hydrogen and will deliver a workshop on this matter in 2020.

5.2.5 CYBERSECURITY

In 2020, ENTSOG IT will continue with its programme to protect its information assets from Cybersecurity attacks. The programme also ensures that ENTSOG delivers on its obligations for the General Data Protection Regulation (GDPR) which came into effect in May 2018. This ongoing programme includes the development and implementation of policies, controls

and governance that balances the need to protect ENTSOG and its members against Cybersecurity attacks with the need to run the organisation.

Additionally, ENTSOG will continue its coordination and dialogue with relevant parties in the field of cybersecurity, especially regarding the work on a potential network code for the cybersecurity sector.

5.2.6 ONGOING ENHANCEMENT TO THE PDWS AND TP

ENTSOG owns and maintains a data repository and reporting solution (Professional Data Warehouse System, or PDWS). This solution supports the activities of the business areas. The system will be enhanced further to fulfil the needs of its users, which will include development of additional reports and automated extracts. Following a public consultation in 2018, ACER will update the electronic formats used for REMIT reporting, which will require that ENTSOG makes modifications in its reporting structure.

The Transparency Platform (TP) is part of the PDWS and publishes data provided by TSOs. Further enhancement requests originating from the TP users will be assessed and developed. In 2020, a big portion of the resources will be dedicated to an upgrade of the software driving the PDWS and the TP, and migration to the cloud.

5.2.7 GIS IMPLEMENTATION USING ESRI ARCGIS

As part of ENTSOG's IT R&D strategy, the GIS implementation, which commenced in 2019 will continue into 2020. ESRI ArcGIS can create and share interactive data visualisations and simplify how large volumes of data are analysed and shared. ENTSOG plans to use GIS software to develop two maps:

- ▲ A Reference Map which contains the topology/network model (gas transmission network), used by the TP and simulation tools

- ▲ A Results Map which contains results from the simulation cases

These two maps would be made publicly available online and stakeholders can check the results immediately after each simulation.

In the long term, GIS could be used to build an online version of other ENTSOG maps (e. g. Transmission Capacity and System Development maps).

5.3 PROGRAMME OF ACTIVITIES

The following table shows the expected timeline and key activities on Research and Development related issues:

Research and Development	2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Promoting TSO Innovative Activities												
Online Training for Gas Network Codes												
Joint Functionality Process Improvements												
Cybersecurity												
Hydrogen and Gas Quality (cooperation with CEN, Marcogaz, EASEE-gas and others)												
Gas Quality workshop												
Ongoing Enhancement to the PDWS and TP												
GIS implementation												

Activity periods
 Key deliverables available to external stakeholders
 Undetermined workload

6

ENTSOG SUPPORTING ACTIVITIES



6.1 OBJECTIVES

With the support of its Members and the guidance of its steering bodies the Management Support team coordinates and supports the work of ENTSG. It prepares, arranges and coordinates the various General Assembly and Management Board Meetings and maintains an overview on all organisational activities. It is structured in various management support functions that work with the Brussels team but also directly with the Members. With a growing number of cross-organisational projects and interlinked activities, the Management Support team supports ENTSG planning, management and execution.

The Management Support team also prepares the strategic processes aimed at defining the ENTSG profile and taking care of the consistent application of

those strategic orientation lines in organisation practice. To establish and maintain the most efficient structure to support all organisational Business Areas (i. e. Market, System Development and System Operation) and the related working groups (WGs). That includes the planning and building up of financial and human resources but also the communication flow within the association and to its stakeholders.

ENTSG will continue to internally evaluate the risks that present challenges to meet its objectives, activities and deliverables, addressing regulatory, legal, finance and human resource aspects. Risk assessment and plans for proper mitigation measures will be supervised by ENTSG's steering bodies.

6.2 KEY DELIVERABLES AND ACTIVITIES

6.2.1 LEGAL

The ENTSG Legal Team ensures compliance of ENTSG with the applicable law and the regulatory framework while carrying out its missions. It undertakes the day to day activities of the association from the legal perspective as well as supporting activities undertaken by the different Business Areas and their respective WGs.

In 2020, this support will continue with respect to the implementation of the existing network codes and in some cases effect monitoring. The Legal Team will in particular support WGs and Task Forces (TFs) established or to be established with the aim to follow the discussions and legislative proposals shaping the future gas market reform. The Legal Team will also support the System Development team by providing legal assistance to include but not limited to the continuing development of the TYNDPs.

The Legal Team will continue to facilitate meetings of the External Contact Platform (ECP), a platform developed by ENTSG and the Energy Community Secretariat, to strengthen ENTSG's cooperation with non-EU gas transmission companies, including those from the Energy Community countries.

To address the legal issues arising out of meetings of the ENTSG Working Groups, the Legal Team coordinates the activities of the Legal Advisory Group (LAG), which convenes for monthly meetings. The LAG is the ENTSG legal working group composed of ENTSG members' representatives from legal staff of the TSOs.

On a day to day basis, the Legal Team provides legal assistance and advice to the management, the Board and the General Assembly in terms of governance. The Legal Team will also support ENTSG's further IT development, notably in terms of cyber security and personal data protection, from a legal perspective.

6.2.2 FINANCE AND HR

6.2.2.1 FINANCE

ENTSOG is an international non-profit association (AISBL) established according to Belgian law and is now comprised of 44 Member TSOs. The highest decisive body of ENTSOG is the General Assembly which meets four times a year. ENTSOG is financed by its Members. The member TSOs contribute to the budget according to the number of kilometres of gas grid, population of the country and in some cases to special EU Grid connection significance.

With regards to financial reporting, ENTSOG created and implemented clear and efficient accounting procedures and controls.

In 2010, a Financial Committee has been established and the main tasks of the Committee are as follows:

- checking the compliance with local laws and obligation
- advising on the association's Budget
- validating the closure of the accounting year and balance sheet
- reporting on a quarterly basis to the Board and General Assembly on account situation

6.2.2.2 HUMAN RESOURCES

ENTSOG is committed to delivering the documents foreseen by the EC 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 have the relevant resources and competences to perform the requested activities.

By the end of 2019, the ENTSOG Team in Brussels consists of forty-two persons and a replacement plan is in place to prepare for replacement of seconded persons whose contracts expire.

ENTSOG is comprised of seconded staff from its members – typically seconded for 3–5 years – and therefore the organisation is under dynamic change and always ready to offer new opportunities. The ENTSOG staff consists currently of 20 different nationalities and representing 15 companies, which provides a unique and challenging international working environment.

Key responsibilities of the Adviser role include leadership and support for internal work groups, external workshops and meetings, as well as participation in processes led by the European Commission, ACER and other European authorities.

ENTSOG has a strong focus on the resource allocation as well as the relevant hand-over processes to ensure the performance of the organisation vis-à-vis the required deliverables. Systematic planning of resources replacement and knowledge transfer allows for the mitigation of risks which may affect the business continuity of the association.

ENTSOG Staff	31.12.2018	31.12.2019
General Manager	1	1
Business Area Managers	3	3
Manager / Advisers	33	34
Senior Assistants	3	2
Assistant	1	2
Total	41	42

6.2.3 COMMUNICATIONS AND POLICY

It is the aim of ENTSOG to always communicate its activities in a transparent manner.

The Communications and Policy Team is providing support to managerial activities as well as promoting the activities of ENTSOG to its Members and the external environment. One of the tasks will be to monitor the activities and public opinions of relevant stakeholders. This can be achieved by contributing to consultations, participating in conferences and fora as discussion partner or speaker but also maintain a close dialogue with media representatives. One of ENTSOG's primary aims is to involve the relevant market participants/stakeholders in its work. This requires well-prepared stakeholder management and well-structured and efficient workshops, as well as an accurate updated website to communicate the work undertaken effectively and to enhance ENTSOG's visibility and recognise its efforts. In 2020, ENTSOG's redesigned website will continue to be updated with input and information from Members, as well as ongoing updates on ENTSOG activities.

Consistent external communication is managed by a small communications team, who is responsible for the coordination for all publications (e. g., the Annual Plan and Annual Work Programme) and is in dialogue with members within the organisation, the European Commission, ACER as well as with key external stakeholders.

The team contributes to the strategic processes, aimed at defining the ENTSOG profile and taking care of the consistent application of those strategic orientation lines in the practices of the organisation. The team has been tasked with further development of the ENTSOG network, with raising awareness of policy processes and with organising the internal knowledge sharing on upcoming regulatory developments and with strengthening of internal communication. The Communication and Policy Team also watches the consistency of ENTSOG communications towards stakeholders, media and broader public.

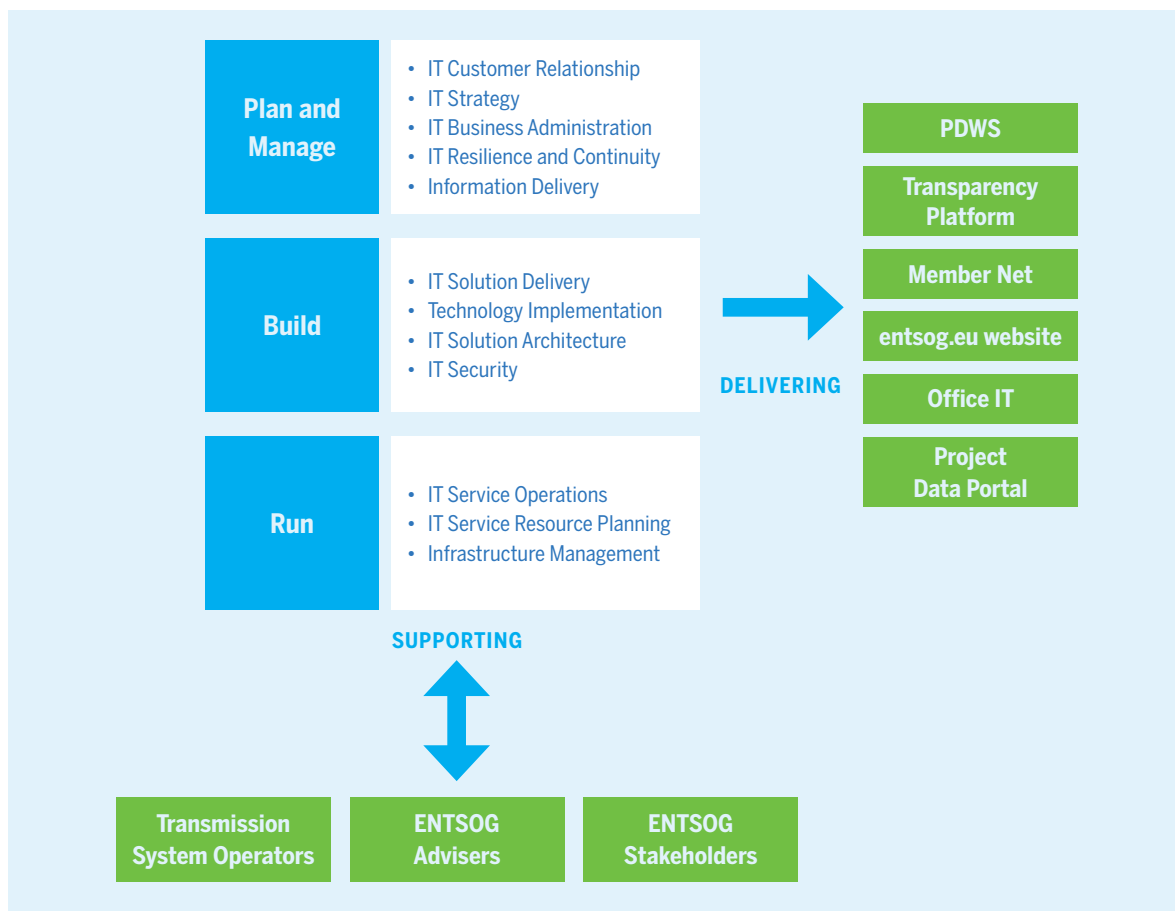
Picture courtesy of TEREGA



6.2.4 INFORMATION TECHNOLOGY (IT)

The ENTSOG IT team provides IT support and services to the ENTSOG team (i.e. management and the Business Areas), its members and other ENTSOG

stakeholders (e.g. ACER, EC). Figure 1.1 outlines the key delivery and support activities which are the responsibility of the IT team.



Working with several IT providers, vendors and IT contractors, the IT team plans, manages, builds and operates IT systems to support ENTSOG advisors and their activities; they also provide IT support to ENTSOG stakeholders in the use of ENTSOG's data and systems.

The ENTSOG IT systems includes:

- ▲ Professional Data Warehouse (PDWS) (including a Data Portal for reporting)
- ▲ Portal for Projects Data Collection
- ▲ Transparency Platform (TP)
- ▲ Content Management Solution (aka Member-net)
- ▲ ENTSOG Website
- ▲ ESRI ArcGIS solution
- ▲ Office IT – Network, Laptops, Mobile phones, Conferencing Audio-Video, etc.

Following a review of its IT systems in 2019, ENTSOG will plan the replacement/upgrade of ENTSOG's IT assets in the coming years to deliver secure, integrated, and cost-effective IT solutions for ENTSOG. The targeted services for these upgrades in 2020 are the TP, PDWS and ArcGIS systems:

- ▲ The TP upgrade commenced in 2019 and will continue in the following years
- ▲ One of the purposes of PDWS is the reporting feature. This will be improved in 2020 by migrating some or building new reports in [Power BI](#) (a business analytics service that delivers insights by transforming data into visuals which can be shared and collaborate on)
- ▲ [ESRI ArcGIS](#) software implementation, which had commenced in 2019 as part of IT R&D strategy and BI vision will continue in 2020.

7

ANNEX: OVERVIEW OF ENTSOG'S REGULATORY FRAMEWORK



THE TASKS ENTRUSTED TO ENTSOG DERIVE MAINLY FROM THE FOLLOWING PIECES OF LEGISLATION:

Regulation (EC) No. 715/2009 of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (so-called Gas Regulation)

- ▲ Definition of the tasks of ENTSOG (Art. 8)
 - elaboration of network codes (NCs);
 - adoption of:
 - I. common network operation tools (CNOTs);
 - II. a non-binding Community-wide ten-year network development plan;
 - III. recommendations relating to the coordination of technical cooperation between Community and third country TSOs;
 - IV. an annual work programme;
 - V. an annual report;
 - VI. annual summer and winter supply outlooks, obligation of monitoring and analysing the implementation of NCs and the Guidelines adopted by the Commission and their effect on the harmonisation of applicable rules aimed at facilitating market integration.
- ▲ views to the Commission on the adoption of the Guidelines, upon request of the latter institution;
- ▲ ENTSOG shall make available all information required by ACER to fulfil its tasks.
- ▲ All TSOs shall cooperate at Community level through ENTSOG in order to promote the completion and functioning of the internal market in natural gas and cross-border trade and to ensure the optimal management, coordinated operation and sound technical evolution of the natural gas transmission network (Art. 4);
- ▲ TSOs shall establish regional cooperation within the ENTSOG to contribute to the accomplishment of some of its tasks (Art. 12);

Regulation (EU) No. 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency (so-called REMIT)

- ▲ market participants, or a person or authority on their behalf (as ENTSOG), shall provide ACER with a record of wholesale energy market transactions, including orders to trade (Art. 8);
- ▲ cooperation at Union level foreseen (Art. 16);

Commission Implementing Regulation (EU) No. 1348/2014 of 17 December 2014 on data reporting implementing Article 8(2) and Article 8(6) of Regulation (EU) No. 1227/2011 (so-called REMIT Implementing Act)

- ▲ For reducing the burden of reporting on market participants and to make best use of existing data sources, reporting should involve where possible ENTSOG (Recital 8);
- ▲ the obligation for reporting should be phased in, starting with transmitting fundamental data available on the transparency platforms of ENTSOG (Recital 11);
- ▲ ENTSOG shall, on behalf of market participants, report information to ACER in relation to the capacity and use of facilities for transmission of natural gas including planned and unplanned unavailability of these facilities, through the Union-wide central platform (commonly known as ENTSOG TP) (Art. 9);
- ▲ ENTSOG is obliged to make the said information available to ACER as soon as it becomes available on its TP (Art. 9).

Commission Regulation (EU) No. 703/2015 of 30 April 2015 establishing a network code on interoperability and data exchange rules (the INT NC)

- ▲ ENTSOG should monitor and analyse the implementation of this Reg. and report its findings to ACER for allowing the institution to fulfil its tasks (Recital 10);
- ▲ TSOs shall communicate to ENTSOG the mandatory terms of interconnection agreements or any amendments thereof concluded after the entry into force of this Reg. within 10 days after their conclusion or amendment (Art. 4);

- ▲ by 30 June 2015, ENTSOG shall develop and publish a draft interconnection agreement template covering the default terms and conditions set out in the Reg. (Art. 5);
- ▲ taking into account the opinion provided by ACER, ENTSOG shall publish on its website the final template by 31 December 2015 (Art. 5);
- ▲ ENTSOG shall publish on its TP a link to the websites of the TSOs with reference to the Wobbe-index and gross calorific value for gas directly entering their transmission networks for each interconnection point (Art. 16);
- ▲ ENTSOG shall publish every two years a long-term gas quality monitoring outlook for transmission systems (aligned with the TYNDP) in order to identify the potential trends of gas quality parameters and respective potential variability within the next 10 years (Art. 18);
- ▲ For each data exchange requirement, ENTSOG shall develop a CNOT and publish it on its website (Art. 24);
- ▲ ENTSOG shall establish a transparent process for the development of all CNOTs (Art. 24);
- ▲ Where a potential need to change the common data exchange solution is identified, ENTSOG on its own initiative or on the request of ACER, should evaluate relevant technical solutions and produce a cost-benefit analysis of the potential change(s) (Art. 21);
- ▲ by 30 September 2016 at the latest, ENTSOG had to monitor and analyse how TSOs have implemented Chapters II to V of this Reg. TSOs were obliged to send the relevant information before 31 July 2016 (Art. 25).

Regulation (EU) No. 347/2013 of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009

- ▲ By 16 November 2013, ENTSOG for Gas was obliged to publish and submit to Member States, the Commission and ACER the methodology, including on network and market modelling, for a harmonised energy system-wide cost-benefit analysis at Union level for projects of common interest (Art. 11);
- ▲ It is the obligation of ENTSOG to develop and, as required, update the CBA Methodology according to Art. 11
- ▲ by 31 December 2016, both ENTSOGs were obliged to jointly submit to the Commission and ACER a consistent and interlinked electricity and gas market and network model including both electricity and gas transmission infrastructure as well as storage and LNG facilities, covering the energy infrastructure priority corridors and areas (Art. 11);
- ▲ Involvement in the process dedicated to the regional list of project of common interests (Annex III);

Regulation (EU) 2017/1938 of 25 October 2017 of the European Parliament and of the Council concerning measures to safeguard the security of gas supply and repealing Regulation (EU) No 994/2010 (the new “SOS Regulation”)

- ▲ Obligation for ENTSOG to perform an EU-wide gas supply and infrastructure disruption simulation in order to provide a high-level overview of the major supply risks for the EU
- ▲ Participation in in the Gas Coordination Group
- ▲ Obligations for the TSOs, in the event of a regional or Union emergency, to cooperate and exchange information using the ReCo System for Gas established by ENTSOG.

Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013 (the CAM NC)

- ▲ ENTSOG is required to publish the auction calendar (by January of every calendar year for auctions taking place during the period of March until February of the following calendar year) (Art. 3);
- ▲ ENTSOG has facilitated the establishment of joint booking platforms (Art. 37).
- ▲ ENTSOG is involved in a process by which terms and conditions of TSOs across the Union for bundled capacity products should be assessed and aligned to the extent possible, with a view to creating a common template of terms and conditions (Recital 10);
- ▲ within nine months from the entry into force of this Regulation ENTSOG shall, after consulting stakeholders, review and create a catalogue of the applicable main terms and conditions of the transport contract(s) of the TSOs in relation to bundled capacity products (Art. 20);
- ▲ in particular, ENTSOG shall analyse existing transport contracts, identifying and categorising differences concerning the main terms and con-

ditions and the reasons for such differences and publish its findings in a report (Art. 20);

- ▲ on the basis of the said report, ENTSOG shall develop and publish a template for the main terms and conditions, covering contractual provisions which are not affected by fundamental differences in principles of national law or jurisprudence, for the offer of bundled capacity products (Art. 20);
- ▲ no later than three months after receiving the ACER's opinion, ENTSOG shall publish on its website the final template for the main terms and conditions (Art. 20);
- ▲ ENTSOG shall finalise at the latest by 1 October 2017, after consulting stakeholders and ACER, a conversion model for existing transport contracts in case of network users holding mismatched unbundled capacity at one side of an interconnection point. This because a free-of-charge capacity conversion service shall be offered by TSOs as from 1 January 2018 (Art. 21);

- ▲ ENTSOG shall coordinate and assist the completion of the demand assessment reports including by providing a standard template and publishing the reports on ENTSOG's website (Art. 26);
- ▲ in order to assist ACER in its implementation monitoring, ENTSOG shall monitor and analyse how TSOs have implemented the New version of CAM in accordance with Article 8(8) and (9) of Regulation (EC) No. 715/2009. In particular, ENTSOG shall ensure the completeness and correctness of all relevant information from TSOs. ENTSOG shall submit to ACER that information by 31 March 2019 (Art. 38).
- ▲ ENTSOG shall monitor and analyse effects of network codes and the Guidelines on the harmonisation of applicable rules aimed at facilitating market integration. (EC 715/2019 Art. 8,8)

Commission Regulation (EU) 2017/460 of 17 March 2017 establishing a network code on harmonised transmission tariff structures for gas (the TAR NC)

- ▲ in order to assist ACER in its implementation monitoring, ENTSOG shall monitor and analyse in accordance with Article 8(8) and (9) of Regulation (EC) NO 715/2009 how transmission system operators have implemented the TAR NC. In particular, ENTSOG shall ensure the completeness and correctness of all relevant information provided by transmission system operators. ENTSOG shall submit to ACER that information in accordance with deadlines set out in the TAR NC (Art. 36);
- ▲ provide feedback on the template that ACER shall develop for the consultation document (Art. 26).

8 ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
AWP	Annual Work Programme
BAL NC	Network Code on Gas Balancing
BRS	Business Requirements Specifications
CAM NC	Network Code on Capacity Allocation Mechanisms
CBA	Cost-Benefit Analysis
CEN	European Committee for Standardisation
CMP GL	Congestion Management Procedures Guidelines
CNOT	Common Network Operations Tools
EC	European Commission
ECP	External Contact Platform
ENTSO-E	European Network of Transmission System Operators for Electricity
ENTSOG	European Network of Transmission System Operators for Gas
EU	European Union
GCG	Gas Coordination Group
GIE	Gas Infrastructure Europe
GRIP	Gas Regional Investment Plan
INT NC	Network Code on Interoperability and Data Exchange Rules
NC IMG	Network Code Implementation and Monitoring Group
PCI	Projects of Common Interest
RDI	Research, Development and Innovation
REMIT	Regulation on Energy Market Integrity and Transparency
TP	Transparency Platform
TF	Task Force
TAR NC	Network Code on Harmonised Transmission Tariff Structures for Gas
TSO	Transmission System Operator
TYNDP	Ten-Year Network Development Plan
WG	Working Group

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