



Network Codes for Gas

“Everything you always wanted to know about ... but ...”

CEDEC GAS DAY – VERONA – 27 May 2014

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European Federation of Local Energy Companies

Network codes for Gas – Outline

- **European legislation – legal basis**
- **Development process**
- **Development process – Comitology**
- **Review process**
- **Overview network codes for gas**

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European legislation – legal basis

- **European Regulation EC/713/2009**

*(establishing an Agency for the Cooperation of Energy Regulators, known as **ACER**):*

- Article 6.4:

- participate in the development of network codes;
- submit to the Commission a non-binding framework guideline (FWGL);
- provide a reasoned opinion to ENTSO for Gas on network code;
- submit network code to the Commission and may recommend for adoption;

- Article 6.5:

- provide a reasoned opinion to the Commission where ENTSO for Gas has failed to implement a network code;

- Article 6.6:

- monitor and analyse implementation of network codes and guidelines adopted by the Commission.

European legislation – legal basis

- **European Regulation EC/715/2009 – ‘Gas Regulation’**
(conditions for access to gas transmission networks):
 - Article 5: Establishment of ENTSO for Gas, known as **ENTSOG**;
 - Article 6: Establishment of network codes;
 - General description of the development process with the involvement of the Commission, ACER, ENTSOG and stakeholders → more details in diagram
 - Article 7: Amendments of network codes;
 - General description of the amendment process for network codes

European legislation – legal basis

- **European Regulation EC/715/2009 – ‘Gas Regulation’**
(conditions for access to gas transmission networks):
 - **Article 8.6: Network codes can cover following areas:**
 - (a) network security and reliability rules;
 - (b) network connection rules;
 - (c) third-party access rules;
 - (d) data exchange and settlement rules;
 - (e) interoperability rules;
 - (f) operational procedures in an emergency;
 - (g) capacity-allocation and congestion-management rules;
 - (h) rules for trading related to technical and operational provision of network access services and system balancing;
 - (i) transparency rules;
 - (j) balancing rules including network-related rules on nominations procedure, rules for imbalance charges and rules for operational balancing between transmission system operators’ systems;
 - (k) rules regarding harmonised transmission tariff structures; and
 - (l) energy efficiency regarding gas networks.

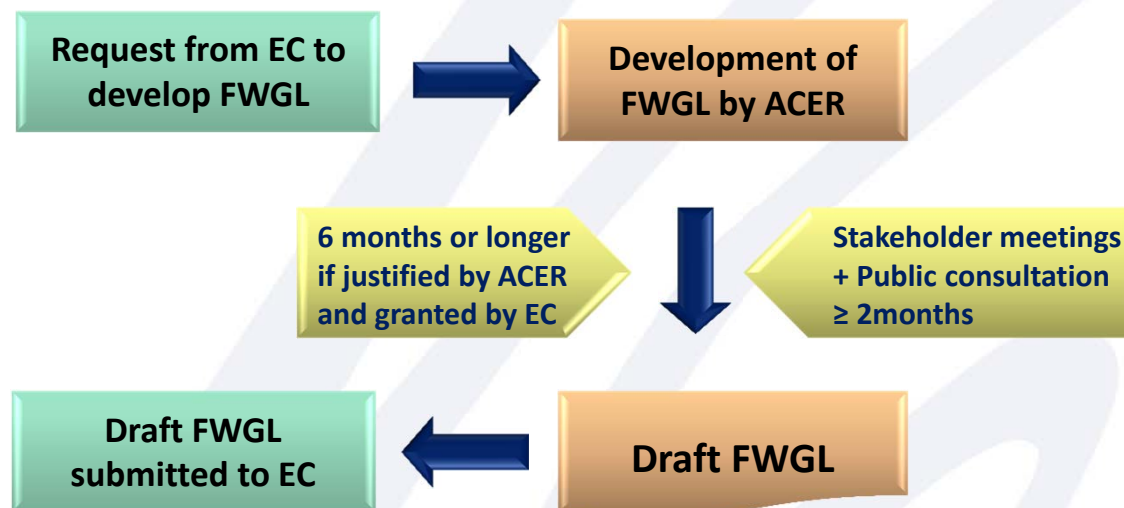
European legislation – legal basis

- **European Regulation EC/715/2009 – ‘Gas Regulation’**
(conditions for access to gas transmission networks):
 - Article 8.7: Network codes shall be developed:
 - for cross-border network issues;
 - market integration issues;
 - without prejudice to the MS’s right to establish national NCs which do not affect cross-border trade.
 - Article 8.8: ENTSOG shall:
 - monitor and analyse the implementation of the NCs;
 - report its findings to ACER.

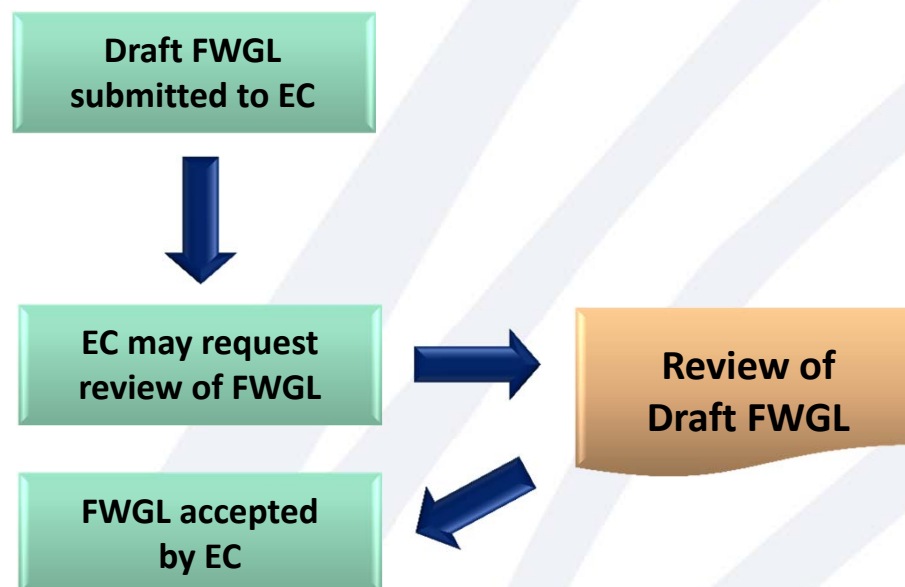
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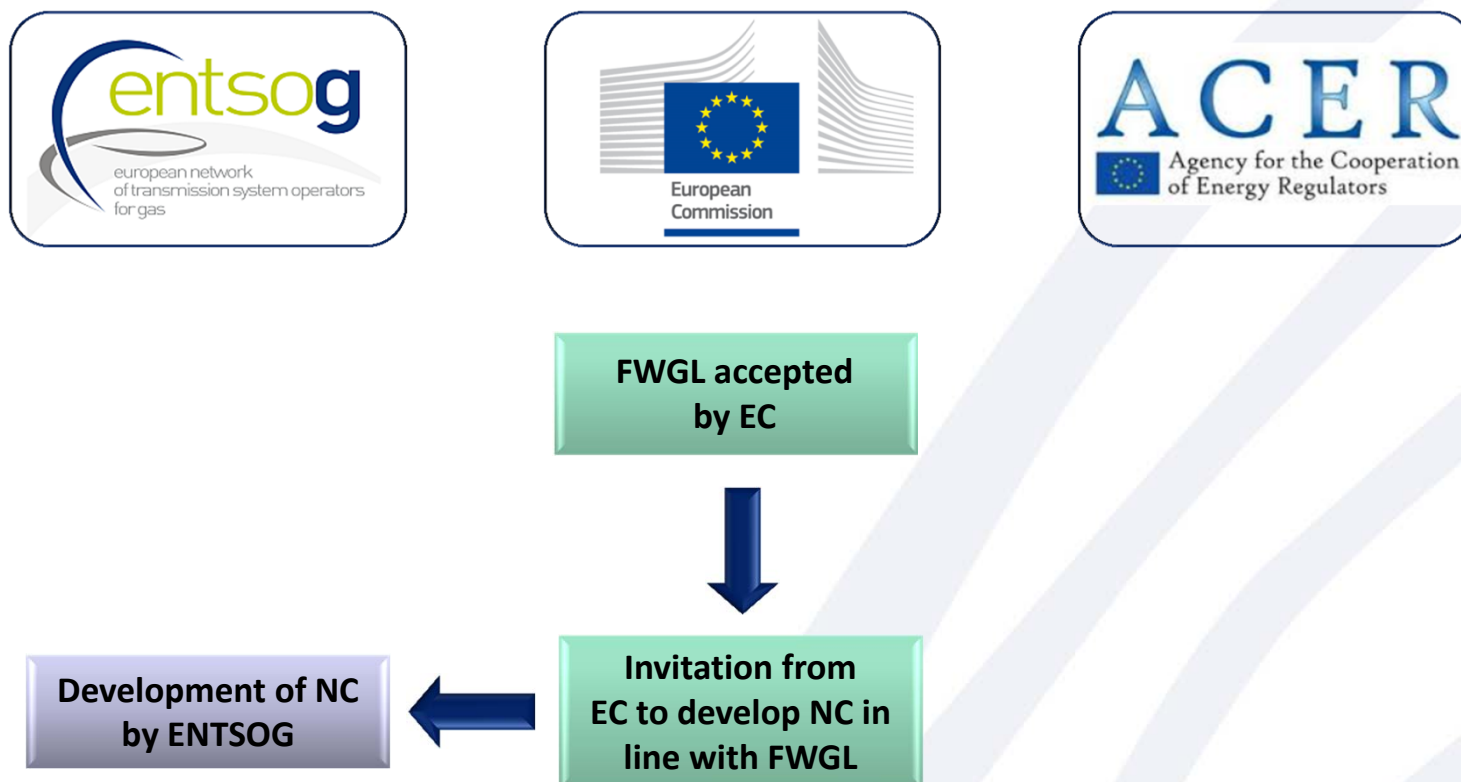
Development process



Development process



Development process





Development process





Development process



**Draft NC submitted
to ACER**

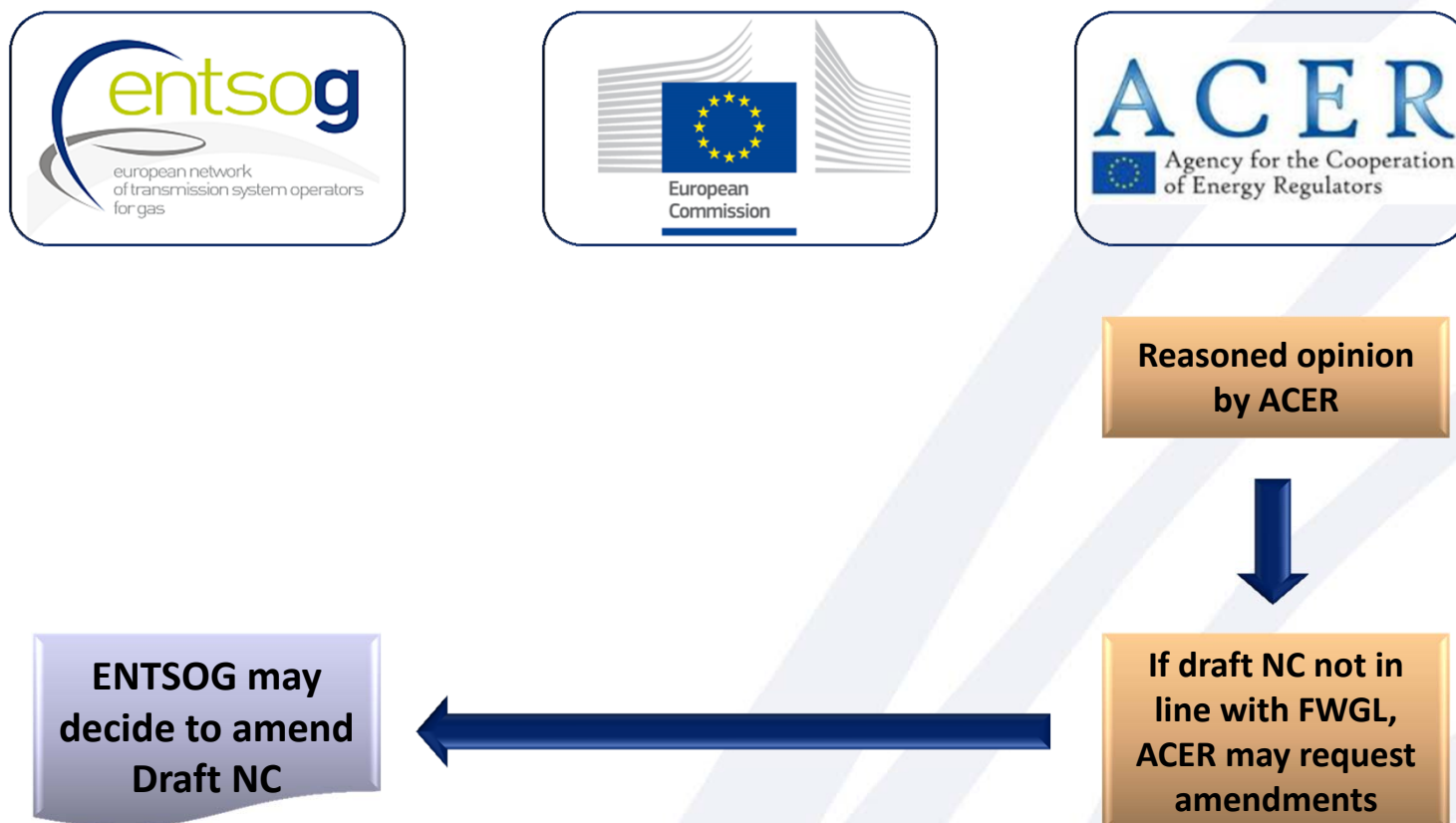
3 months



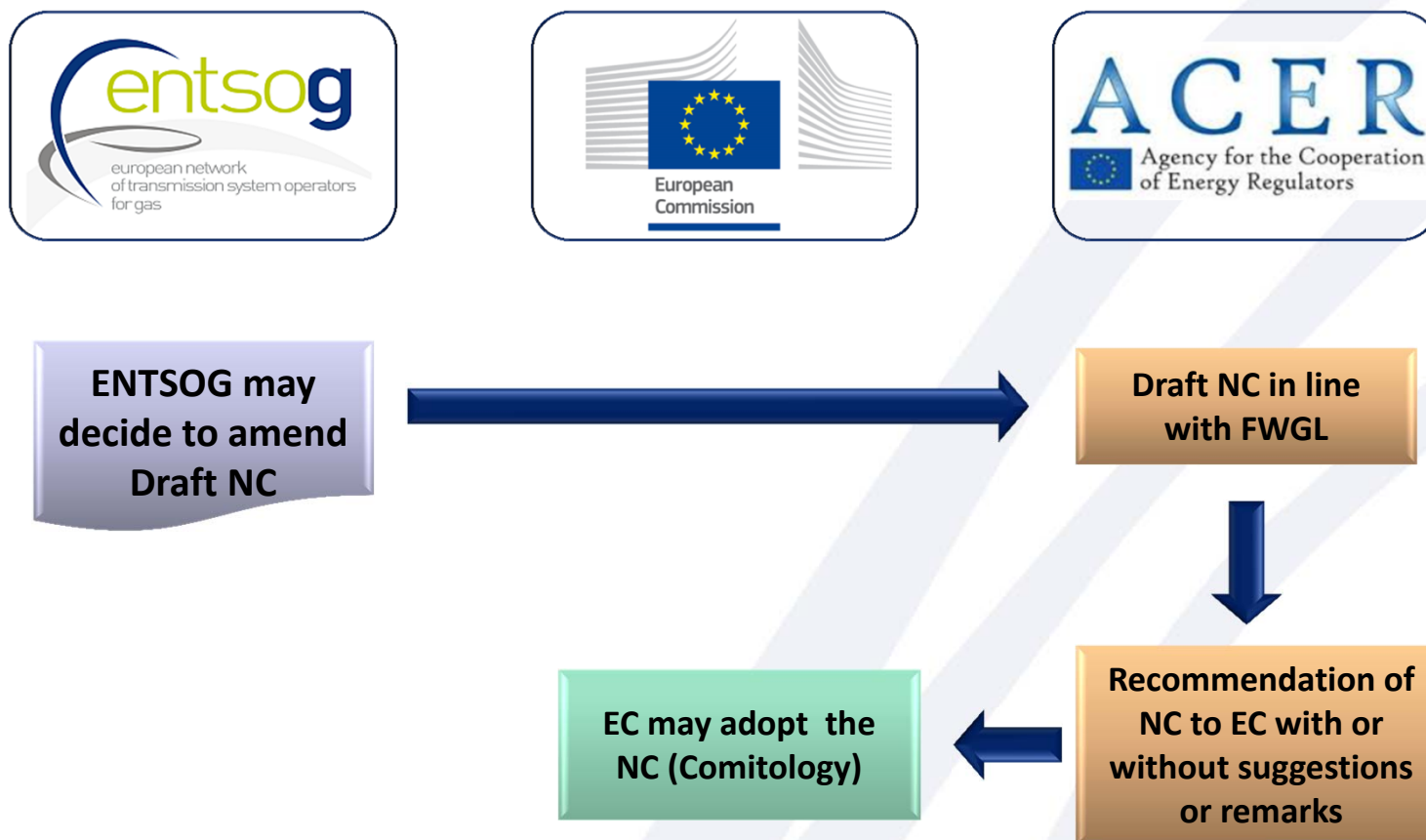
**Formal consultation
possible → ACER
organises workshop**

**Reasoned opinion
by ACER**

Development process



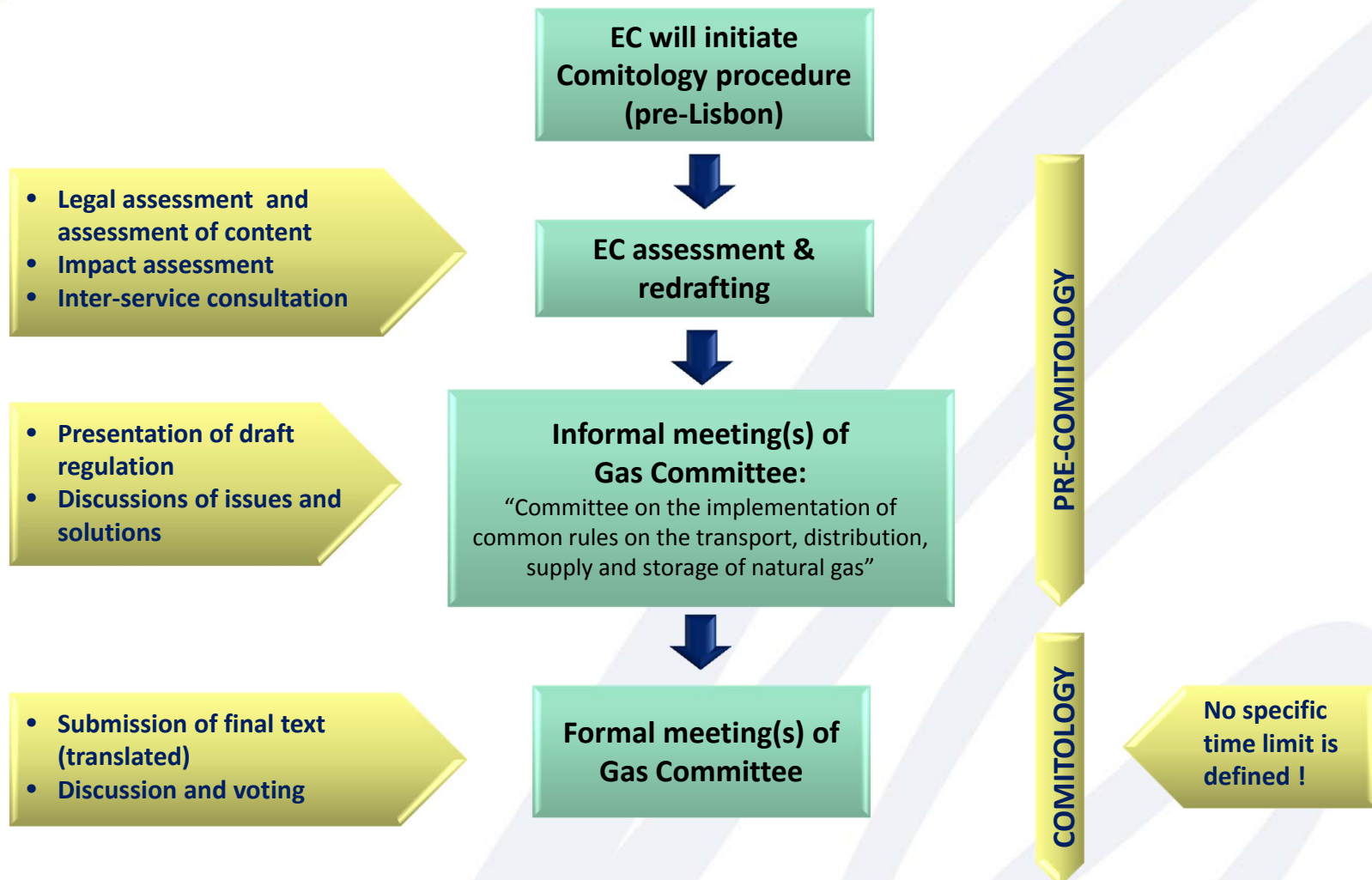
Development process



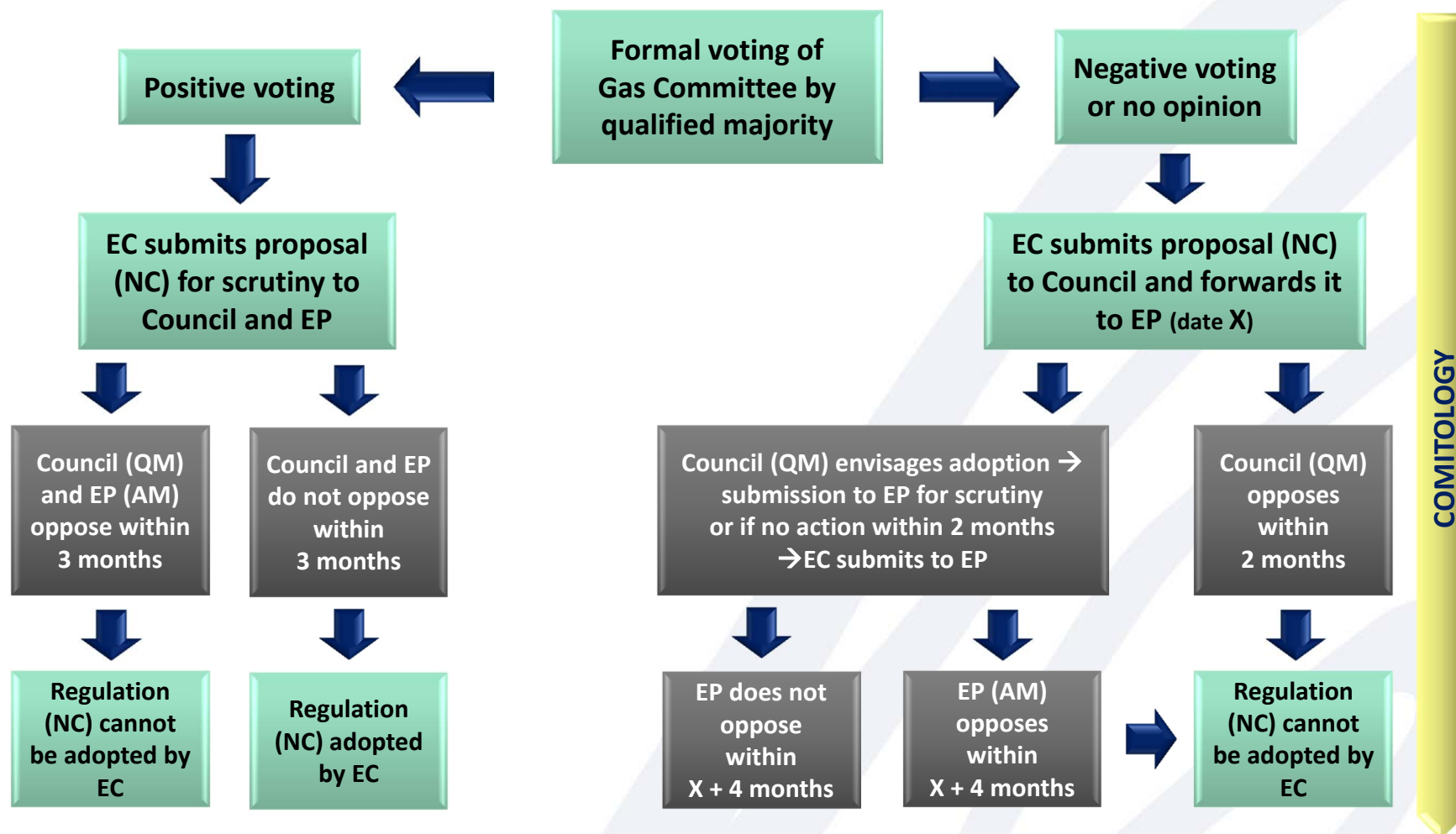
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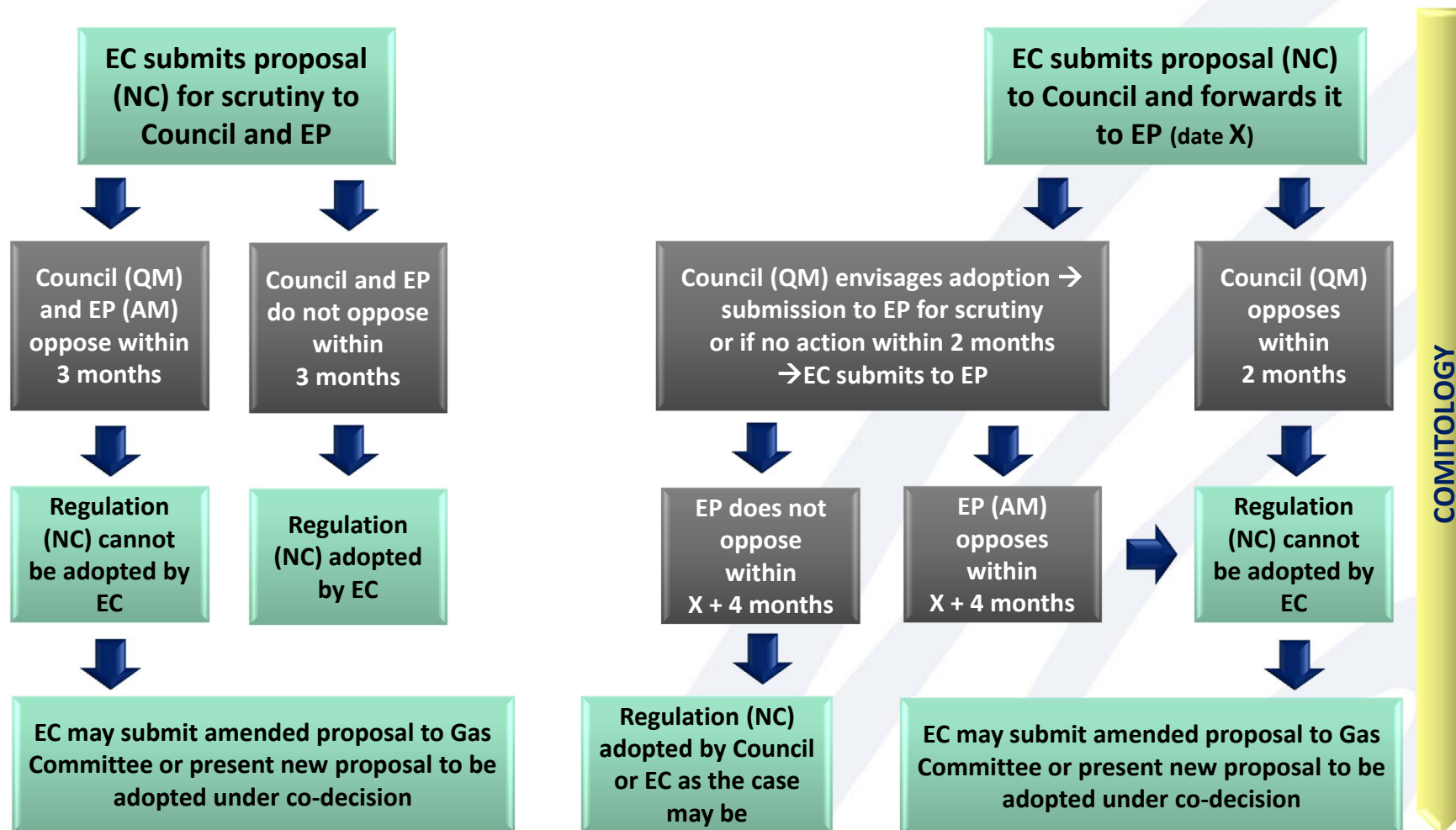
Development process - Comitology



Development process - Comitology



Development process - Comitology



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Review process

- **Basis for amendment of network codes:**
 - European Regulation EC/715/2009, article 7: amendments of network codes.
 - General description of the amendment process for network codes.
 - Agency guidance on the evaluation procedure for network code amendment proposals under article 7 of the electricity and gas Regulations.
 - Procedure for proposing network codes amendments.

Review process

- **Article 7 of European Regulation EC/715/2009**
 - Draft amendments to any network code may be proposed to ACER by persons who are likely to have an interest in that network code, including ENTSOG, TSOs, network users and consumers. ACER may also propose own amendments.
 - ACER has to consult all stakeholders. Following this process, ACER may make reasoned proposals for amendments to EC.
 - EC may adopt, taking account of ACER's proposals, amendments to a network code. Those proposed amendments are without prejudice to other amendments which the EC may propose.

Review process

- **Agency Guidance – interpretation of article 7 (1/2)**
 - Guidance restricted to network codes adapted under Article 6 of the Gas Regulation → network codes submitted to assessment by ACER and adopted via Comitology.
 - Guidance not applicable to network codes adopted by ENTSG.
 - “Persons likely to have an interest” in a code:
 - consumers, network and system users, shippers, consumer organisations, ENTSG, TSOs, DSOs, regulators, LNG and gas storage operators.
 - consumers, network users, network operators from non-EU neighbouring countries.
 - Technical, commercial or financial interest of proposer in amendment proposal(s) has to be duly justified.

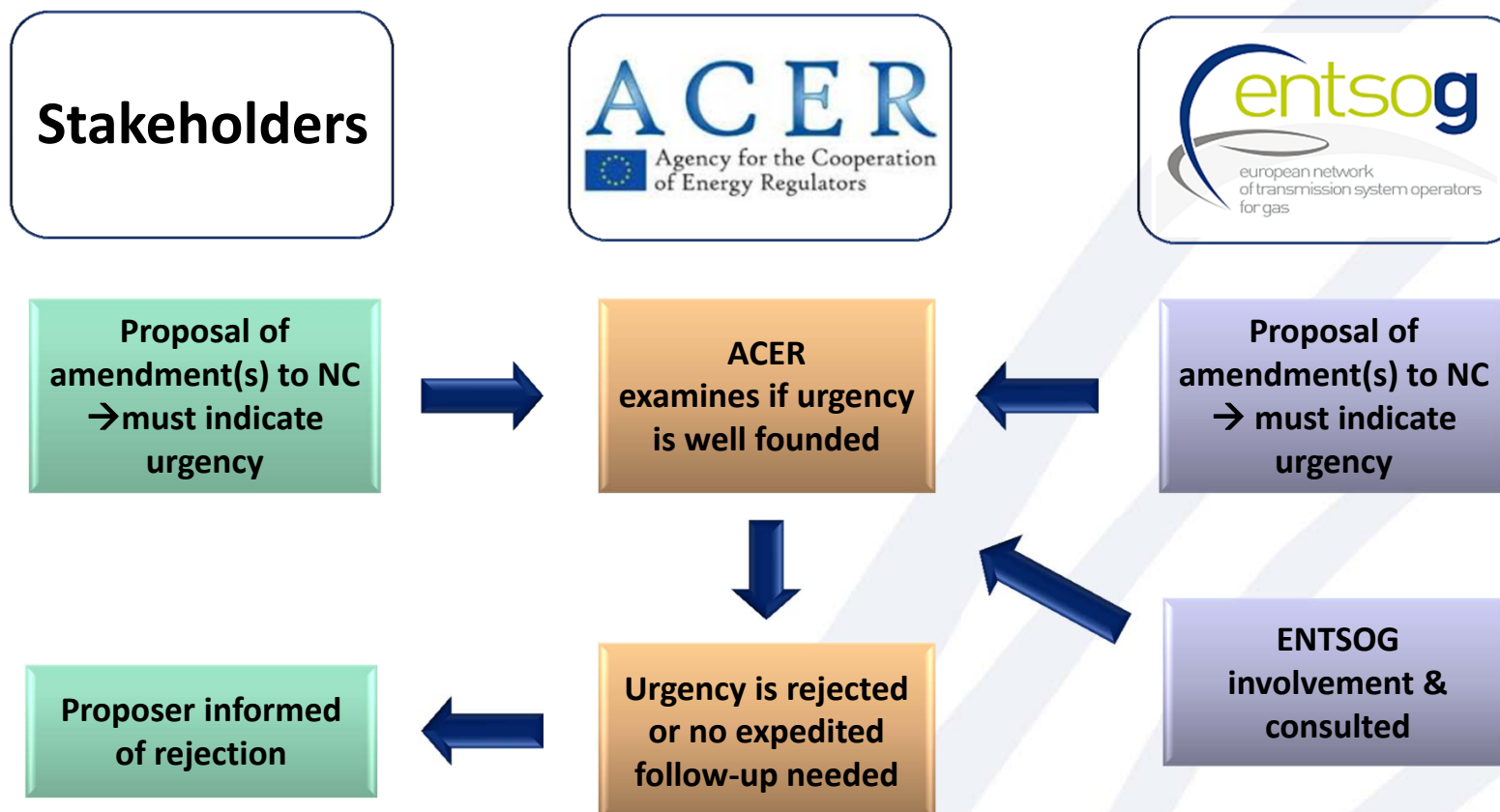
Review process

- **Agency Guidance – interpretation of article 7 (2/2)**
 - Stakeholders have the right to submit a proposal of a draft amendment, not the right to request an amendment.
 - Proposal of an amendment possible at any time.
 - ACER decides on treatment → periodic review (every 5 years) or ad-hoc review (details – see further).
 - Non urgent amendment proposals will be bundled.
 - Urgent amendments or with priority will be handled within 3-4 months.
 - ACER intends to involve ENTSOG as expert in the amendment proposal treatment, but ENTSOG's opinion not binding for ACER. ENTSOG's input will be made public.

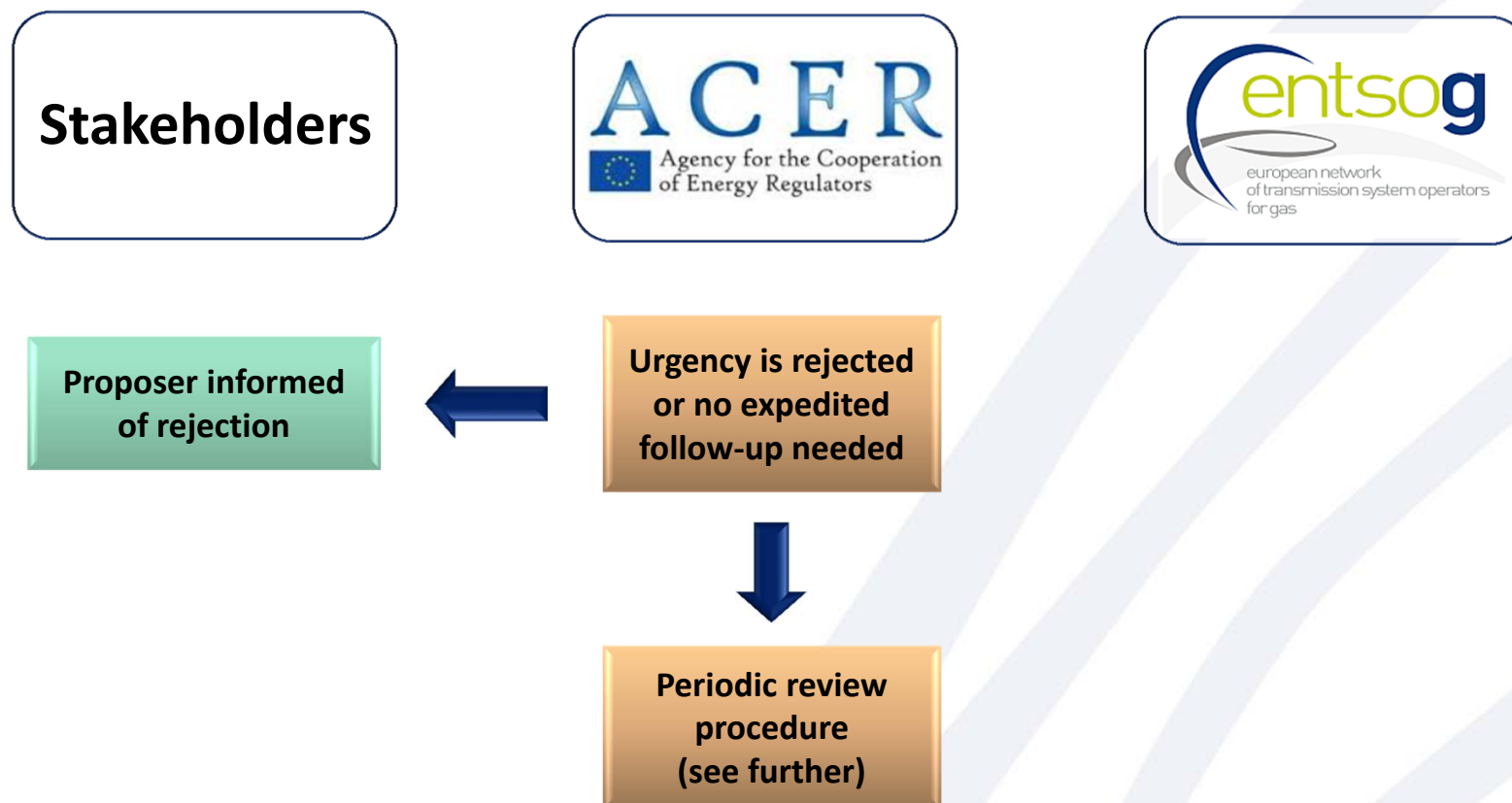
Review process - diagram



Review process - diagram



Review process - diagram



Review process - diagram

Stakeholders



**Urgency is not
rejected and
expedited follow-
up is needed**



**Ad-hoc review
procedure
(see further)**

Network codes for Gas – Outline

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- **Periodic review process**
- Overview network codes for gas

Review process – Periodic review

Stakeholders



Proposal of amendment(s) to NC must cover/contain:

- impact on market (financial, technical)
- costs & benefits
- pro's and con's for all stakeholders
- supporting legal or technical advice and/or opinions



ACER
initializes periodic
review every
 ± 5 years



ACER checks:
1. formal & legal
admissibility
2. proposer =
“interested party”

Periodic review
should not take
longer than MAX.
6 MONTHS

Review process – Periodic review

Stakeholders



ACER checks:
1. formal & legal
admissibility
2. proposer =
“interested party”

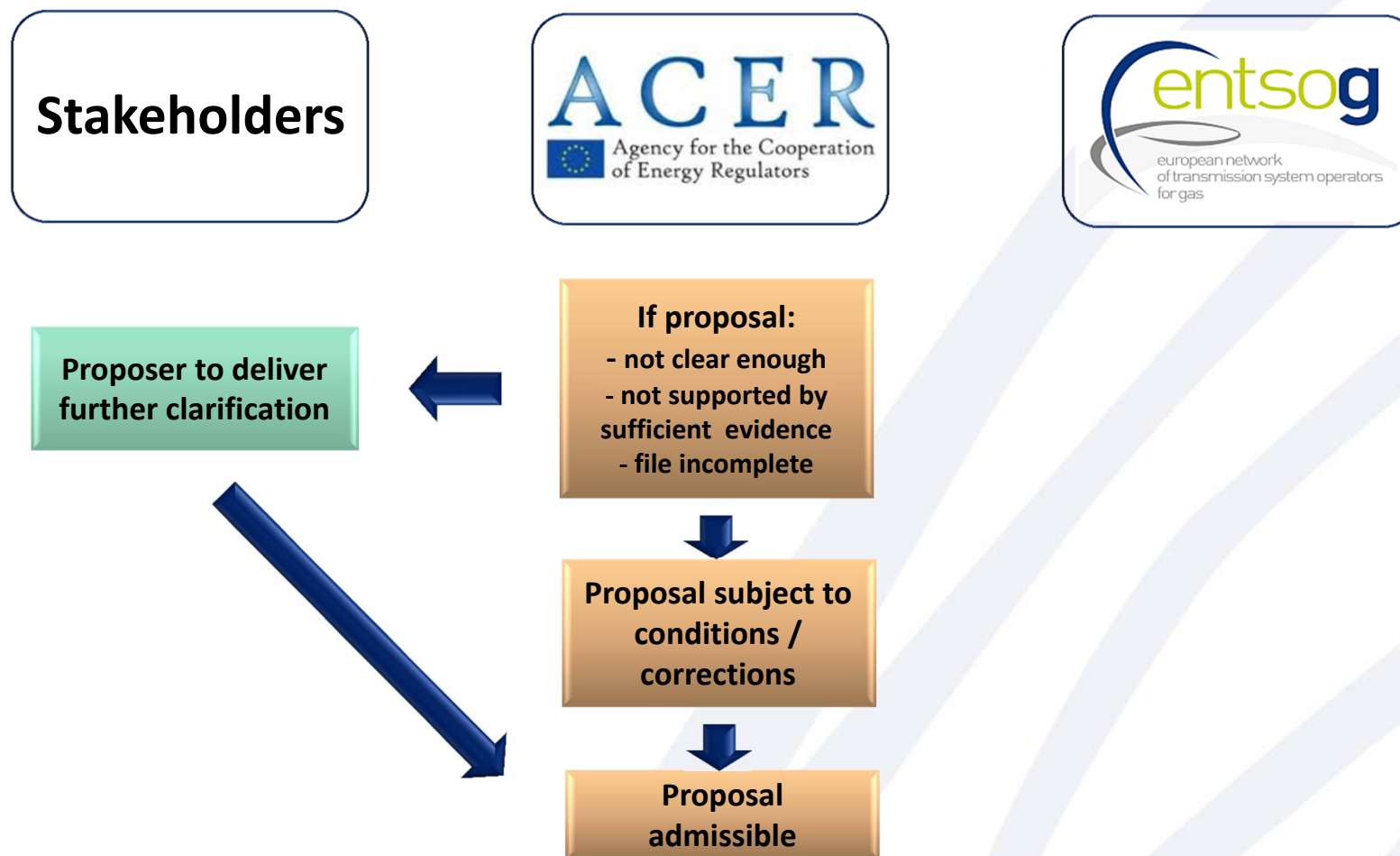


If proposal:
- not clear enough
- not supported by
sufficient evidence
- file incomplete



**Proposer to deliver
further clarification**

Review process – Periodic review



Review process – Periodic review

Stakeholders



Evaluation criteria

Amendments must be

- consistent with objectives of NCs – art.6(2) of Gas Regulation
- not modifying essential elements of Gas Regulation
- of existing provisions or supplementing them
- relate to new arguments or facts
- based on more advanced insight on matters
- corrections, wordings, typos only of secondary importance

**Proposal
admissible**



**Evaluation by ACER
(elimination of
proposals with
insufficient merit)**



**All amendment
proposals on ACE
website**

- Status in process
- Opinion of ENTSOG
- Final outcome
- Proposals taken into account or not

**ENTSOG input
for evaluation**



European Federation of Local Energy Companies

Review process – Periodic review

Stakeholders



**All amendment
proposals on ACER
website**



**Impact analysis
by ACER**

- on all stakeholders
- scope depending on importance of amendments
- quantitative analysis (costs & benefits) as far as possible

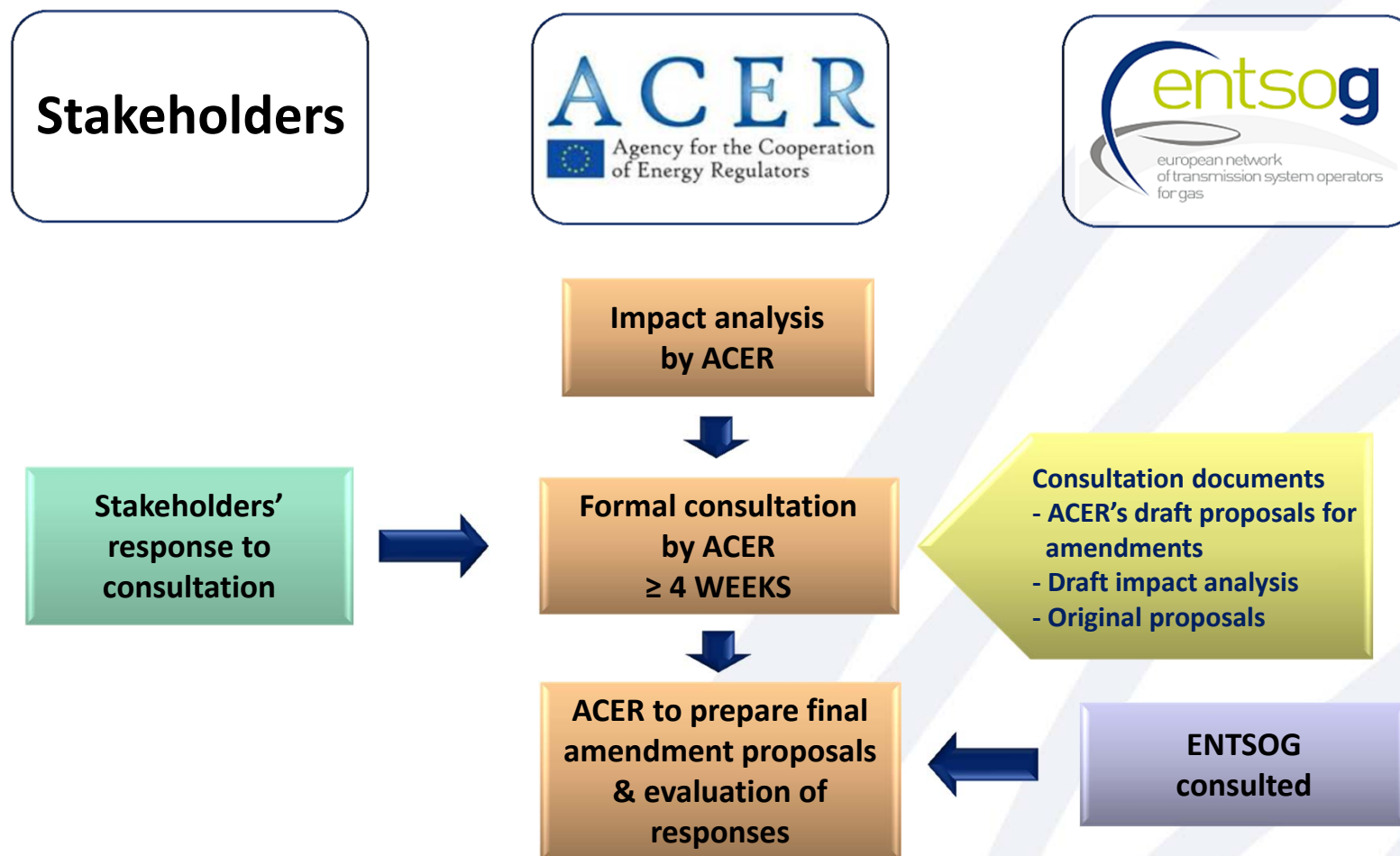
**ENTSOG to provide
view**



Focus on

- specific & operational objectives assessment
- consistency test (with other codes)
- proportionality test

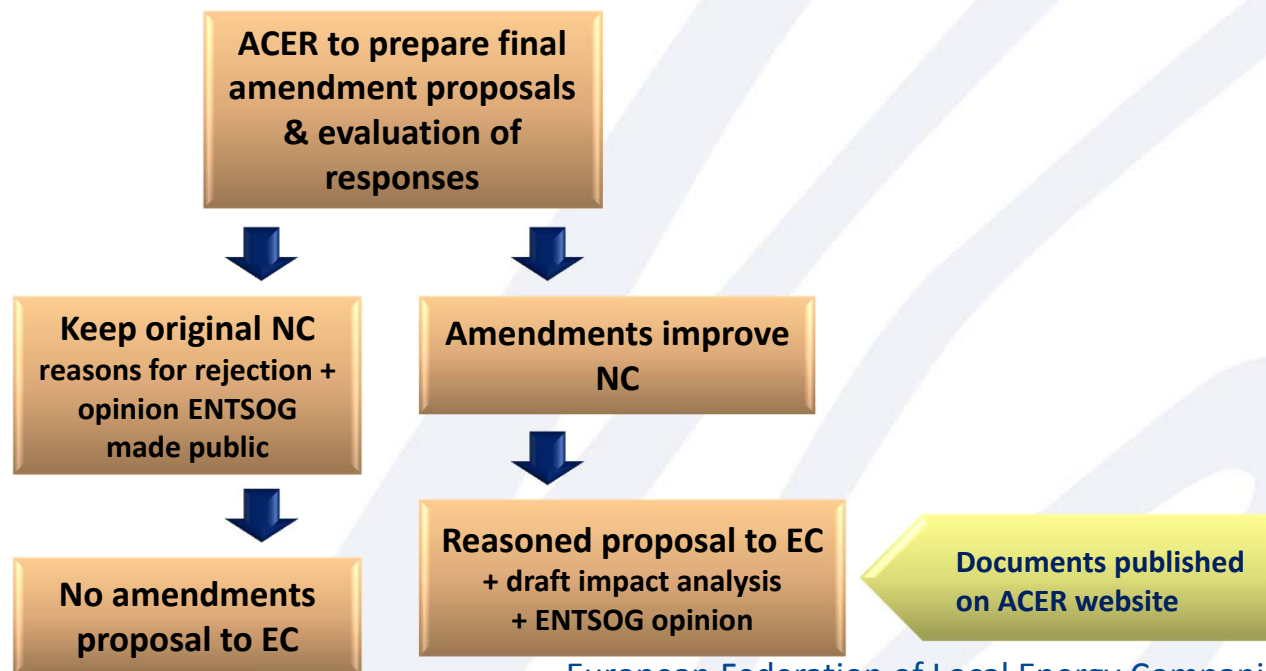
Review process – Periodic review



European Federation of Local Energy Companies

Review process – Periodic review

Stakeholders

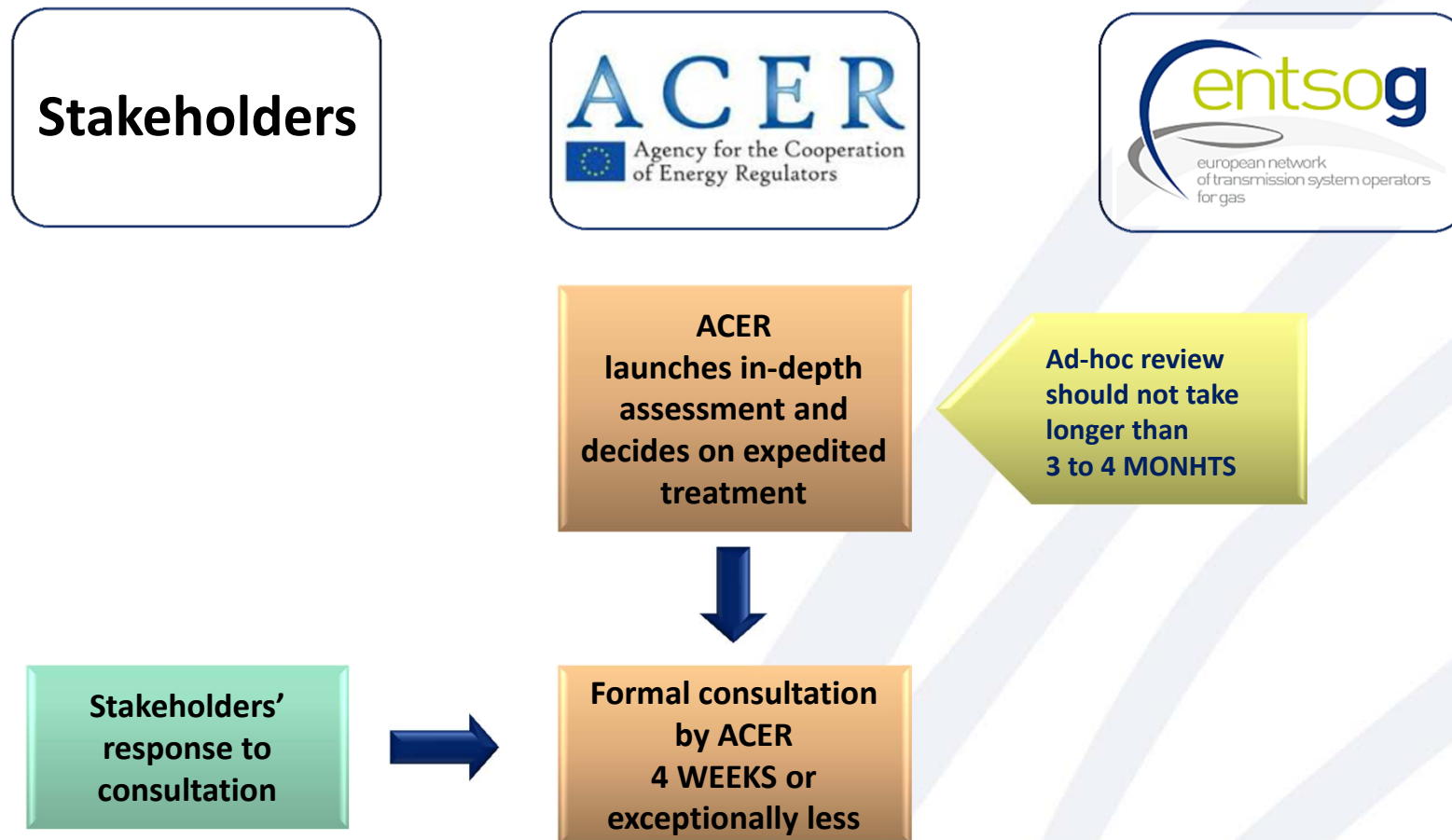


European Federation of Local Energy Companies

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- **Ad-hoc review process**
- Overview network codes for gas

Review process – Ad-hoc review



Review process – Ad-hoc review

Stakeholders



**Formal consultation
by ACER
4 WEEKS or
exceptionally less**



**Further process
probably comparable
to that of periodical
review, but not
specified in ACER's
Guidance.**

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Overview Network Codes for Gas

- **Network Codes for Gas developed or being developed by ENTSOG**
 - NC CAM: Capacity Allocation Mechanisms
 - Amendment: Part of “Incremental Proposal”
 - NC GB: Gas Balancing
 - NC IO & DE: Interoperability and Data Exchange
 - NC TAR: Harmonised Transmission Tariff Structures
- **Framework Guidelines being developed by ACER**
 - FWGL RfT: Rules for Trading

Network codes for Gas – Outline

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 - NC GB: Gas Balancing
 - NC IO & DE: Interoperability and Data Exchange
 - NC TAR: Harmonised Transmission Tariff Structures
 - FWGL RfT: Rules for Trading

NC CAM: Capacity Allocation Mechanisms

Timeline

- **NC based on FWGL CAM published by ACER on 3 August 2011**
- **Development by ENTSOG started officially on 17 August 2011 (EC invitation letter)**
- **ACER issued a final recommendation on 9 November 2012**
- **On 15 April 2013, the Gas Committee delivered a positive vote on the NC CAM**
- **NC CAM published as Commission Regulation N° 984/2013 in Official Journal of the EU on 15 October 2013.**
- **Most provisions of the NC CAM will apply as from 1 November 2015, following the implementation period.**



NC CAM: Capacity Allocation Mechanisms

Objectives

- **Ensure more efficient allocation of capacity on interconnection points (IPs) between EU gas transport systems:**
 - Facilitate trade in gas;
 - Support creation of efficient gas wholesale markets in EU.
- **Application by gas grid operators of harmonized auctions and of a transparent and fair way of ensuring third party access:**
 - Auctions held at same time, same rules and same products across EU;
 - Facilitating access to networks for interested network users;
 - Use of online based booking platforms;
 - Products sold in bundled manner.

NC CAM: Capacity Allocation Mechanisms

Scope

- **Regulation shall apply to interconnection points:**
 - May also apply to entry points from or exit points to third countries;
- **Regulation shall NOT apply to:**
 - **Exit points to:**
 - End consumers;
 - **Distribution networks (and hence no impact should be expected);**
 - Storage facilities;
 - **Entry points from:**
 - LNG terminals;
 - Production facilities;
 - Storage facilities;
- **Regulation shall apply to all technical and interruptible capacity at IPs and to additional capacity (cf. Regulation N° 715/2009).**



NC CAM: Capacity Allocation Mechanisms

Content overview

- Principles of cooperation between TSOs;
- Allocation of firm capacity;
- Bundling of cross-border capacity;
- Interruptible capacity;
- Tariffs and capacity booking platforms.



NC CAM: Capacity Allocation Mechanisms

Amendment - Part of the 'Incremental proposal'

- **EC has asked ENTSOG (19/12/2013) to draft an amendment on incremental and new capacity, based on guidance from ACER, by 31/12/2014.**
 - Amendment sufficiently specific for immediate application;
 - Development in coordination with work on NC TAR;
 - ENTSOG to deliver also an impact assessment.
- **5 Stakeholder Joint Workshop Sessions have taken place.**
- **Public consultation starts on 30/05/2014 (till 30/07/2014)**
 - Consultation workshop on 24/06/2014.

NC CAM: Capacity Allocation Mechanisms

Amendment - Part of the 'Incremental proposal'

- **Scope covers:**
 - **When to offer incremental capacity** (conditions for offering, gap identification in TYNDP)
 - **Co-ordination** (TSO – NRA and cross-border cooperation)
 - **Information provision** (volume of offered standard bundled capacity products, ...)
 - **Integration of incremental and new capacity in annual yearly capacity auctions**
 - **Open Season Procedures** (in case of more than 2 market areas, ...)
 - **Economic test** (validate project's financial viability)
 - **Tariff related issues** (if reference prices in cost allocation methodology in NC TAR lead to negative economic test → tariff adjustments to be considered)

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NC GB: Gas Balancing

Timeline

- NC based on FWGL GB published by ACER on 18 October 2011
- Development by ENTSOG started officially on 4 November 2011 (EC invitation letter)
- ACER issued a final recommendation on 25 March 2013
- On 2 October 2013, the Gas Committee delivered a positive vote on the NC GB
- NC GB published as Commission Regulation N° 312/2014 in Official Journal of the EU on 27 March 2014.
- Most provisions of the NC GB will apply as from 1 October 2015, following the implementation period, with the exception of some specific paragraphs.

NC GB: Gas Balancing

Objectives

- **Generally:**
 - Fostering the short term gas markets and providing price signals;
 - Improvement of competitiveness and efficiency of the gas whole sale market.
- **Specifically:**
 - Harmonize gas balancing arrangements to facilitate gas trading across Balancing Zones toward greater market integration;
 - Primary responsibility on Network Users to balance their portfolio;
 - Reduce the need for TSOs to take Balancing Actions;
 - Use of Short Term Wholesale Gas Market for Network Users to trade;
 - Use of Short Term Wholesale Gas Market for TSO to take Balancing Actions;
 - Harmonization to promote cross-border trade of flexible gas.

NC GB: Gas Balancing

Scope

- Regulation shall apply to balancing zones within the EU.
- Regulation shall NOT apply:
 - To balancing zones in MS that hold a derogation (Art. 49 Directive 2009/73/EC);
 - To reconciliation, necessary between allocations and actual consumption;
 - In emergency situations (TSO implements specific measures defined in national rules and according to Regulation N° 994/2010);
- Regulation shall ONLY apply to Network Users which have concluded a legally binding agreement (= transport contract or another contract, enabling them to submit trade notifications).

NC GB: Gas Balancing

Content overview

- Balancing System;
- Operational balancing;
- Nominations;
- Daily imbalance charges;
- Within day obligations;
- Neutrality arrangements;
- Information provisions (3 models: base case and 2 variants);
 - Information obligations of DSOs to the TSO and to forecasting parties;
- Linepack Flexibility Service (conditions);
- Interim Measures;
- Final and transitional provisions.

Impact on DSOs

- Two specific articles (40, 41) include DSOs to provide information to TSO and forecasting party (*TSO, DSO or third party*).
Forecasting party = responsible for network user's non daily metered off-takes and allocation (where appropriate).
- Depending on the information provisions models (base, variant 1 and variant 2) and the information exchange already existing today, DSOs may encounter some ICT and other practical challenges on the level of:
 - Forecasting;
 - Prediction update during the day;
 - Installation of intraday read meters (*power supply : battery → E connection*)

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NC IO & DE: Interoperability and Data Exchange

Timeline

- NC based on FWGL Interoperability and Data Exchange rules published by ACER on 26 July 2012
- Development by ENTSOG started officially on 11 September 2012 (EC invitation letter)
- Latest draft of the NC dates from 18 December 2013
- ACER issued a final recommendation on 15 January 2014
- Network code is being treated in Comitology (1st meeting 28/03/2014, 2nd meeting 11/07/2014)
- NC IO & DE will probably be published as a Regulation late 2014 – beginning of 2015.



NC IO & DE: Interoperability and Data Exchange

Objectives

- **Generally:**
 - Improving inter-operation of the gas systems in EU;
 - Relate interoperability to other topics (interactions to clarify at an early stage);
- **Specifically:**
 - Harmonisation of rules for operation of transmission systems (encourage and facilitate efficient gas trading and transport);
 - Define consistently harmonised technical, operational, communication rules and rules for business conduct (Interconnection Agreements, units, gas quality and odourisation, capacity calculation and data exchange)



NC IO & DE: Interoperability and Data Exchange

Scope

- **Regulation shall apply to TSOs in respect of IPs;**
 - Focus on cooperation among TSOs, BUT also;
 - Between TSOs and Network Users;
 - National provisions to be established for other operators (producers, LNG and storage operators, ...);
- **Regulation may also apply to IPs with third countries.**



NC IO & DE: Interoperability and Data Exchange

Content overview

- **Interconnection agreements (IAs);**
- **Units;**
- **Gas Quality;**
- **Odourisation;**
- **Data exchange;**
- **Final provisions.**



NC IO & DE: Interoperability and Data Exchange

Impact on DSOs (1/3)

- **Generally: scope is limited to transmission level (IPs), but goes beyond this limit for:**
 - Use of units (art. 12);
 - Information provision for short term monitoring of GQ (art. 17);
 - Information provision for long term monitoring of GQ (art. 18);
- **Relevant topics: Gas quality, Odourisation, Data Exchange.**



NC IO & DE: Interoperability and Data Exchange

Impact on DSOs (2/3)

- **Gas Quality:**
 - TSO provides WI and GCV, only on indicative basis; some consumers may need other information;
 - DSO needs to know final consumers whose operational processes are adversely affected by GQ changes;
- **Odourisation:**
 - There seems to be no role for the DSOs in the 12 month period during which a detailed plan for setting out most effective method to remove a restriction at a specific cross-border IP is defined;
 - How to deal with changes within a MS? Who is responsible?

NC IO & DE: Interoperability and Data Exchange

Impact on DSOs (3/3)

- **Data Exchange:**
 - Data exchange covers all data exchanged arising from Regulation EC N° 715/2009 (= all NCs!);
 - Common data exchange solutions (*available within 12 months from entry into force*):
 - Document based data exchange:
 - protocol = AS4;
 - data format = Edig@s-XML or equivalent developed by ENTSOG.
 - Integrated data exchange:
 - protocol = HTTP/S-SOAP;
 - data format = Edig@s-XML or equivalent developed by ENTSOG.
 - Interactive data exchange:
 - Protocol = HTTP/S.
 - Data exchange is limited to exchange of data between TSOs and between TSO and 'their counterparties';
Counterparty = network user active at interconnection point.
 - DSOs seem not to be involved, but impact may arise after standardisation on TSO-level through cascading effect.

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NC TAR: Harmonised Transmission Tariff Structures

Timeline

- NC based on FWGL on rules regarding harmonised transmission tariff structures for gas, published by ACER on 29 November 2013
- Development by ENTSOG started officially on 19 December 2013 (EC invitation letter) – NC to be delivered on 31/12/2014
- Network code is in development by ENTSOG
 - 5 Stakeholder joint working sessions have taken place (1/2014 – 4/2014);
 - 30/05/2014 – 30/07/2014: public consultation;
 - 25/06/2014: consultation workshop;
 - 24/09/2014: Refinement workshop;
 - 07/11/2014 – 21/11/2014: Stakeholder support process period;



NC TAR: Harmonised Transmission Tariff Structures

Scope and objectives

- Lay down clear and objective requirements for harmonizing gas transmission tariff structures across EU;
- Tariff structures developed on the basis of NC TAR shall not disincentive entry-exit zone mergers but should, in case such a merger is considered economically efficient, facilitate it.
- Regulation shall cover transmission services offered at all entry and exit points (physical and virtual points);
- Regulation shall propose and justify a consistent definition for transmission services;
- Regulation provisions shall apply to all contracts as from 1 October 2017 at the latest.



NC TAR: Harmonised Transmission Tariff Structures

Content overview (ENTSOG proposal)

- General provisions;
- Cost allocation methodology;
- Publication requirements;
- Reserve price;
- Revenue reconciliation;
- Pricing of bundled capacity and capacity for VIPs;
- Payable price;
- Incremental capacity;
- Final and transitional provisions;



NC TAR: Harmonised Transmission Tariff Structures

Impact on DSOs still to be determined.

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 - **FWGL RfT: Rules for Trading**

FWGL on rules for trading

Timeline

- ACER launched a public consultation on the potential scope for FWGL on Rules for Trading – 14 April till 12 May (extended to 19 May);
- Scoping phase should confirm the need (or not) for a FWGL and NC;
- If the need is confirmed :
 - FWGL drafting till end of 2014;
 - NC development on rules for trading in 2015.

Potential scope (capacity and not commodity trading);

- Capacity products and terms and conditions of capacity contracts;
- Secondary capacity markets;
- Virtual trading point (VTP) design/access, and hub issues;
- Transparency rules;
- Licensing requirements for market participants other than TSOs.

Overview Network Codes for Gas

