

COMMISSION REGULATION (EU) No [xx/xx]
of [xx/xx]
establishing a Network Code on Interoperability and Data
Exchange Rules

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 715/2009¹ of the European Parliament and of the Council on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 and in particular Article 6(11) thereof;

Whereas:

- (1) Regulation (EC) No 715/2009 sets non-discriminatory rules for access conditions to natural gas transmission systems with a view to ensuring the proper functioning of the internal market in gas.
- (2) In particular, Regulation (EC) No 715/2009 defines several tasks for the European network of transmission system operators for gas ('ENTSOG') and for the Agency for the Cooperation of Energy Regulators established by Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 (the 'Agency'). Amongst these is the development of European-wide network codes in the areas referred to in Article 8 (6) of Regulation (EC) No 715/2009 to be applied by all transmission system operators for gas.
- (3) In order to encourage and facilitate efficient gas trading and transmission across gas transmission systems within the European Union, and thereby to move towards greater internal market integration, this Regulation establishes a network code on interoperability and data exchange rules as referred to in Article 8, (6), e) and d) of Regulation (EC) No 715/2009, developed by ENTSOG and recommended by the Agency based on the procedure as set out in Article 6 of Regulation (EC) No 715/2009.

¹ OJL 211, 14.8.2009, p36

(4) The lack of harmonisation in technical, operational and communication areas could create barriers to the free flow of gas in the European Union, thus hampering market integration. European interoperability and data exchange rules allow the necessary harmonisation in those areas, therefore leading to effective market integration. For that purpose and for facilitating commercial and operational cooperation between adjacent transmission system operators, this Regulation addresses several heterogeneous areas, by providing a single chapter for each of them: Interconnection Agreements, Units, Gas Quality, Odourisation and Data Exchange. Each chapter of this Regulation aims at providing rules and procedures to reach an appropriate level of harmonisation towards efficient gas trading and transport across gas transmission systems in the European Union.

(5) Adjacent transmission system operators shall reinforce transparency as well as cooperation between themselves where differences in gas quality and odourisation practices either side of an interconnection point might create a barrier to gas market integration. The obligations set forth in Chapters 4 and 5 of this Regulation with particular regard to the obligations for transmission system operators in terms of Gas Quality and Odourisation are without prejudice to the competences of Member States; namely, issues related to the definition of national gas quality specifications and odourisation practices are out of the scope of this Regulation.

(6) The provisions relating to gas quality in this Regulation are independent and separate from any standardisation process regarding gas quality conducted by CEN.

(7) Chapter 6 of this Regulation aims at ensuring the appropriate degree of harmonization of data exchange for supporting the completion and functioning of the European internal gas market, security of supply and appropriate and secure access to information, facilitating cross-border transmission activities to and from interconnection points or virtual trading points.

(8) This Regulation has been adopted on the basis of Regulation (EC) No 715/2009 which it supplements and of which it forms an integral part. References to Regulation (EC) No 715/2009 in other legal acts shall be understood as also referring to this Regulation.

(9) This Regulation shall be amended to the extent needed as from the coming into force to adapt its provisions to any changes in terms of needs, obligations or legislation applicable to the subject matter, pursuant to the procedure set forth in Article 7 of Regulation (EC) No 715/2009.

(10) The measures provided for in this Regulation are in accordance with the opinion of the Committee established pursuant to article 51 of Directive 2009/73/EC concerning common rules for the internal market in natural gas.²

HAS ADOPTED THIS REGULATION

² OJL 211,14.8.2009,p 94

CHAPTER I

GENERAL PROVISIONS

Article 1

Subject matter and scope

1. This Regulation establishes a network code which sets out provisions regarding interoperability and data exchange and harmonised rules for the operation of gas transmission systems.
2. This Regulation shall apply to transmission system operators in respect of interconnection points, without prejudice to Articles 12, 17 and 18 of this Regulation. The provisions set forth under this Regulation may also apply to interconnection points with third countries, subject to the decision of the relevant national authorities.

Article 2

Definitions

1. For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009, Article 3 of Commission Regulation No 984/2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009³, Article 3 of Commission Regulation No [000/00 of XXX] establishing a Network Code on Gas Balancing of Transmission Networks and supplementing Regulation (EC) No 715/2009⁴ as well as in Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:
 - (a) **‘exceptional event’** means any unplanned event that may cause, for a limited period, capacity reductions, affecting thereby the quantity or quality of gas at a given interconnection point, with possible consequences on interactions between transmission system operators as well as between transmission system operator and network users;

³ OJL 273, 15.10.2013, p 5

⁴ [XXX]

- (b) **'initiating transmission system operator'** means the transmission system operator initiating the matching process by sending the necessary data to the matching transmission system operator;
- (c) **'lesser rule'** means that, in case of different processed quantities at either side of an interconnection point, the confirmed quantity will be equal to the lower of the two processed quantities;
- (d) **'matching process'** is the process of comparing and aligning processed quantities of gas for network users at both sides of a specific interconnection point, which will result in confirmed quantities for the network users;
- (e) **'matching transmission system operator'** means the transmission system operator performing the matching process and sending the result of the matching process to the initiating transmission system operator;
- (f) **'measured quantity'** means the quantity of gas that a transmission system operator determines from its measurement equipment to have physically flowed across an interconnection point per time period;
- (g) **'operational balancing account'** means an account between adjacent transmission system operators, to be used to manage steering differences at an interconnection point in order to simplify gas accounting for network users involved at the interconnection point;
- (h) **'processed quantity'** means the quantity of gas assessed by each transmission system operator, which takes into account the network user's nomination (respectively re-nomination) and contractual provisions as defined under the relevant transport contract;
- (i) **'steering difference'** means the difference between the quantity of gas that the transmission system operators schedule to flow and the measured quantity.

CHAPTER II

INTERCONNECTION AGREEMENTS

Article 3

General Provisions

1. In respect of each interconnection point the adjacent transmission system operators shall establish, within twelve months from the entry into force of this Regulation, an interconnection agreement in order to cover at least the following terms:

- (a) amendment process for the interconnection agreement;
- (b) rules for flow control;
- (c) measurement principles for gas quantities and quality;
- (d) matching process;
- (e) rules for the allocation of gas quantities;
- (f) communication procedures in case of exceptional events;
- (g) settlement of disputes arising from interconnection agreements.

2. For interconnection points established after twelve months from the entry into force of this Regulation, the adjacent transmission system operators shall have executed an interconnection agreement, containing the minimum provisions set forth in this Chapter, before gas flows.

3. If the adjacent transmission system operators fail to reach an agreement on one of the terms referred to in paragraph 1 (a) to (g) of this Article, the default rules provided for in this chapter shall apply.

Article 4

Amendment process for the interconnection agreement

1. Where at the entry into force of this Regulation an interconnection agreement is already in place between the adjacent transmission system operators in respect of an interconnection point, they shall amend such an interconnection agreement in

compliance with the mandatory terms foreseen in Article 3 paragraph 1 and subject to Article 3 paragraph 3, within twelve months from the entry into force of this Regulation.

2. For any modification other than the amendment(s) aimed at aligning the interconnection agreement with this Regulation as set forth in paragraph 1 of this Article, a transparent and detailed amendment process between the adjacent transmission system operators shall be specified within the interconnection agreement. Such a process shall commence upon request of either transmission system operator by means of written notice. The adjacent transmission system operators shall make the amendment within a period of time to be agreed among them.

3. If the adjacent transmission system operators fail to reach an agreement on the period of time as referred to in paragraph 2 of this Article or do not agree to amend the concerned provisions within 12 months from the receipt of the written notice, the dispute shall be finally settled in accordance with the provisions agreed upon in the interconnection agreement in line with Article 11 of this Regulation.

Article 5

Information obligation

1. Before the execution of a new interconnection agreement or before amendment of the rules defined in Article 3 paragraph 1 in an existing interconnection agreement, the relevant transmission system operators shall identify the relevant information that directly affects network users and shall inform them thereof. The relevant transmission system operators shall publish and invite network users to comment on the proposed change within a period of time of not less than two months before making any change regarding at least the following rules:

- (a) matching rule;
- (b) allocation rule;
- (c) communication procedure towards network users in case of an exceptional event.

2. New interconnection agreements or any amendments to the provisions regarding the mandatory terms foreseen in Article 3 paragraph 1 shall be communicated by transmission system operators to their respective national regulatory authority within the deadline of 10 days upon signature of the agreement. Transmission system operators shall also communicate any interconnection agreement upon request of their respective national regulatory authority.

Article 6

Rules for flow control

1. In respect of flow control, the following matters shall be specified as a minimum:
 - (a) rules to facilitate a controllable, accurate, predictable and efficient gas flow across the interconnection point;
 - (b) provisions setting out how the adjacent transmission system operators will steer the gas flow across the interconnection point and obligations to minimize deviations from the flow that is agreed pursuant to the matching process;
 - (c) identification of the transmission system operator who is responsible for installation, operation and maintenance of the flow control equipment.
2. In any event, flow control actions taken at an interconnection point shall be conducted only on an operational basis meaning that network users' confirmed quantities are not affected as long as an operational balancing account, as described under Article 9 of this Regulation, is in place and any flow alteration action as described under paragraph 3, (c) of this Article is not required.
3. The provisions to steer the gas flow, referred to in paragraph 1, (b) of this Article, shall require:
 - (a) a decision on the quantity and direction of gas flow for each interconnection point and for each hour of the gas day;
 - (b) the quantity and direction of gas flow to reflect:
 - (i) the results of the matching process;
 - (ii) operational balancing account corrections;
 - (iii) any efficient flow control arrangements between the adjacent transmission system operators for the purpose of ramp-up, ramp-down, minimum flow, and/or switch of flow direction or operational cost efficiency;
 - (iv) any arrangements pursuant to Article 16 of this Regulation;
 - (c) at any time, a decision on alteration of the quantity and direction of gas flow when this is required under those circumstances in which such alteration is required due to:
 - (i) the purpose of complying with requirements laid down in safety legislation;

- (ii) the purpose of complying with requirements laid down in Emergency Plans and/or Preventive Action Plans developed in accordance with Regulation (EU) No. 994/2010⁵;
 - (iii) an exceptional event affecting any of the adjacent transmission system operators;
 - (iv) any other reasons specified under national rules, where applicable;
- (d) the identification of which transmission system operator(s) operate(s) the flow control equipment in cooperation with the other adjacent transmission system operators. Provided that contractual obligations regarding pressure are complied with by all adjacent transmission system operators, the transmission system operator identified shall be responsible for steering the gas flow across the interconnection point:
- (i) at a level of accuracy sufficient to minimise the steering difference; and
 - (ii) at a level of stability in line with the efficient use of the gas transmission networks.

4. If the adjacent transmission system operators fail to reach an agreement, the transmission system operator that operates the flow control equipment shall, in cooperation with the other transmission system operator(s), be responsible for steering the gas flow across the interconnection point in accordance with paragraph 3 of this Article.

Article 7

Measurement principles for gas quantity and quality

1. In respect of the measurement principles for gas quantity and quality, the following matters shall be specified as a minimum:
- (a) details of the measurement standards applicable at the interconnection point;
 - (b) the identification of the transmission system operator responsible for the installation, operation and maintenance of the measurement equipment and having an obligation to make all relevant information and data in respect of the measurement of gas flows at the interconnection point available to the other adjacent transmission system operator(s) in a timely manner and at a frequency specified.

⁵ OJL 295, 12.11.2010

2. The installation, operation and maintenance of measurement equipment at an interconnection point shall take into account the relevant requirements of the adjacent transmission system operators.
3. With particular regard to measurement provisions the following shall be defined:
 - (a) a description of the metering station including measurement and analysis equipment to be used and details of any secondary equipment that may be used in case of failure;
 - (b) the gas quality parameters and volume and energy that shall be measured, as well as the range and the maximum permissible error/uncertainty over which the measurement equipment will operate, the frequency of measurements, in what units and according to what standards the measurement shall be made as well as any conversion factors used;
 - (c) the procedures and methods that shall be utilised to calculate those parameters which are not directly measured;
 - (d) a description of the method of calculation in respect of the maximum permissible error/uncertainty in the determination of energy;
 - (e) a description of the data validation process in use for the measured parameters;
 - (f) the measurement validation and quality assurance arrangements, including verification and adjustment procedures to be agreed between the adjacent transmission system operators;
 - (g) the way data is provided, including frequency and content, among the adjacent transmission system operators in respect of the measured parameters;
 - (h) the specific list of signals and alarms to be provided by the adjacent transmission system operator(s) who operate(s) the measurement equipment to the other adjacent transmission system operator(s);
 - (i) how to determine a correction to a measurement and any subsequent procedures that may be necessary in a situation where the volume, energy or gas quality measurement equipment is found to be or have been in error (either under-reading or over-reading outside of its defined uncertainty range);
 - (j) rules that shall apply between adjacent transmission system operators in the event of failure of the measurement equipment;
 - (k) rules that shall apply between the adjacent transmission system operators for:
 - (i) access to the measurement facility;

- (ii) additional verifications of measurement facility;
 - (iii) modification of the measurement facility and
 - (iv) attendance during calibration and maintenance work at the measurement facility.
4. If the adjacent transmission system operators fail to reach an agreement:
- (a) the transmission system operator in control of the measurement equipment shall be responsible for the installation, operation and maintenance of such equipment and for providing the other transmission system operator(s) with the data regarding the measurement of gas flows at the interconnection point in a timely manner;
 - (b) the European standard EN1776 Gas Supply - Natural Gas Measuring Stations - Functional Requirements in its subsequently upgraded versions shall apply.

Article 8

Matching process

1. In respect of the matching process, the following matters shall be specified as a minimum:
- (a) the rules detailing the matching process taking into account daily-hourly nomination arrangements where relevant and
 - (b) the communication and processing of the relevant data among the adjacent transmission system operators to calculate the processed quantities and confirmed quantities of gas for network users and the quantity of gas that needs to be scheduled to flow at the interconnection point(s).
2. Nominations/re-nominations shall be managed in respect of the following principles:
- (a) the application of a matching rule shall lead to identical confirmed quantities for each pair of network users at both sides of the interconnection point when processed quantities are not aligned;
 - (b) for interconnection agreements in place at the entry into force of this Regulation or for new interconnection agreements, the adjacent transmission system operators may agree to maintain or implement a matching rule other than the lesser rule provided that

this rule is published and network users are invited to comment on the proposed matching rule within a period of time of not less than two months;

(c) the adjacent transmission system operators shall specify their respective roles in the matching process by indicating whether they are the initiating or the matching transmission system operator;

(d) the applicable time schedule for the matching process within the nomination/re-nomination cycle, given that the whole matching process shall not take more than 2 (two) hours from the starting of the nomination/re-nomination cycle, shall take into account the following points:

- (i) the data that needs to be exchanged between the adjacent transmission system operators in order to enable them to inform network users of their confirmed quantities before the end of the nomination/re-nomination cycle. As a minimum the data shown in Article 8, paragraph 4 has to be exchanged;
- (ii) the process to exchange the data defined under Article 8, paragraph 2, (e), (i) which shall enable the adjacent transmission system operators to perform all calculation and communication steps in an accurate and timely manner.

3. In any event, when processing nominations for interconnection point(s), the adjacent transmission system operators shall ensure that the gas flow at both sides of the interconnection point(s) is calculated on a consistent basis taking into account any temporary reduction of capacity due to any of the items mentioned under Article 6 paragraph 3 (c) on one or both sides of the interconnection point(s).

4. The provisions regarding the data exchange for the matching process shall specify:

(a) the use of data exchange between the adjacent transmission system operators for the matching process;

(b) the harmonised information contained within the data exchange for the matching process which shall contain as a minimum:

- (i) interconnection point identification;
- (ii) network user identification or if applicable its portfolio identification;
- (iii) the identification of the party delivering to or receiving gas from the network user or if applicable its portfolio identification;
- (iv) start and end time of the gas flow for which the matching is made;

- (v) gas day;
- (vi) processed and confirmed quantities;
- (vii) direction of gas flow.

5. If the adjacent transmission system operators fail to reach an agreement on the matters to be specified, the following rules shall apply:

- (a) the lesser rule.
- (b) the transmission system operator in control of the relevant flow control equipment shall be the matching transmission system operator.
- (c) the matching process shall be performed in the following sequential steps:
 - (i) calculating and sending of processed quantities by initiating transmission system operators within forty-five minutes of the start of the nomination (respectively re-nomination) cycle;
 - (ii) calculating and sending of confirmed quantities by matching transmission system operators within ninety minutes from the start of the nomination (respectively re-nomination) cycle;
 - (iii) confirming to network users and scheduling the gas flow across the interconnection point by all the adjacent transmission system operators within two hours from the start of the nomination (respectively re-nomination) cycle. This paragraph shall be without prejudice to the rule for minimum interruption lead times referred to in Article 22 of Commission Regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009.

Article 9

Rules for the allocation of gas quantities

1. In respect of the allocation of gas quantities rules granting consistency between the allocated quantities at both sides of the interconnection point shall be specified.
2. For interconnection agreements that are in place at the entry into force of this Regulation or for new interconnection agreements, the adjacent transmission system operators may agree to maintain or implement an allocation rule other than the operational balancing account provided that this rule is published and network users are

invited to comment on the proposed allocation rule within a period of time of not less than two months.

3. Where an operational balancing account is in force it shall be foreseen that:

(a) the steering difference shall be allocated to an operational balancing account of the adjacent transmission system operators and the allocations to be provided by each adjacent transmission system operator to its respective network user shall be equal to the confirmed quantities;

(b) the adjacent transmission system operators shall endeavour to maintain at all times an operational balancing account balance that is as close to zero as possible;

(c) the operational balancing account limits shall be set taking into account specific characteristics of each interconnection point and/or the interconnected transmission networks such as:

(i) physical characteristics of the interconnection point;

(ii) linepack capability of each transmission network;

(iii) the total technical capacities at the interconnection point;

(iv) gas flow dynamics at the interconnected transmission networks.

(d) where the defined limits of the operational balancing account are reached, the adjacent transmission system operators may agree to extend such limits.

4. If the adjacent transmission system operators fail to reach an agreement the operational balancing account shall apply. The transmission system operator in control of the measurement equipment shall, in accordance with the deadlines to be mutually agreed, recalculate the operational balancing account with validated quantities and communicate it to the adjacent transmission system operator(s).

Article 10

Communication procedures in case of exceptional events

1. In respect of the communication procedures in case of exceptional events any transmission system operator affected by an exceptional event shall be required, as a minimum, to inform the adjacent transmission system operator(s) of the occurrence of such exceptional event and to provide all necessary information as follows:

(a) the adjacent transmission system operators shall agree on the use of communication means which shall facilitate fast and simultaneous communication between the adjacent transmission system operators;

(b) where an exceptional event occurs on a transmission system operator's network affecting the interconnection point, the relevant transmission system operator shall without delay inform and keep informed the other adjacent transmission system operator(s) in respect of the possible impact on the quantities of gas that can be transported over the interconnection point.

(c) where one of the adjacent transmission system operators considers there is an evident danger to system security and/or stability and an exceptional event may have an impact on the confirmed quantities of gas for its network users, it shall inform without delay its respective affected network users that are active at the concerned interconnection point of the consequences for the confirmed quantities;

(d) once the exceptional event ends, the relevant affected transmission system operator(s) shall inform without delay the adjacent transmission system operator(s) and each transmission system operator shall inform its respective affected network users accordingly, where the situation under paragraph 2 (c) of this Article occurs.

2. This Article applies without prejudice to the provisions set forth under Regulation (EC) No 1227/2011⁶ and any related acts.

3. If the adjacent transmission system operators fail to reach an agreement the communication shall be performed by means of telephone call for information, followed by a written confirmation.

Article 11

Settlement of disputes arising from Interconnection Agreements

1. In respect of any disputes including any controversies or claims between the adjacent transmission system operators, arising out of or in connection with the interconnection agreement, the adjacent transmission system operators shall be required to endeavour to solve amicably and specify how to settle the disputes which cannot be amicably settled. Such disputes may refer, without limitation, to the existence, content, amendment, validity or termination of the interconnection agreement.

⁶ OJL 326, 8.12.2011

2. Adjacent transmission system operators shall define the court of jurisdiction or describe terms and conditions of the appointment of experts either within the framework of an institutional forum or chosen on *an ad hoc* basis.
3. Should any of the adjacent transmission system operators not comply with the obligations agreed with regard to the procedure before the expert, the applicable conflict-of-law rules shall apply.

CHAPTER III

UNITS

Article 12

General provisions

1. Each transmission system operator shall use the common set of units defined in Article 13 of this Regulation for any data exchange and data publication related to Regulation (EC) No 715/2009.
2. The provisions set forth in this Chapter are without prejudice to existing European Union regulations covering harmonisation of units for other parameters.

Article 13

Common set of units

1. For the parameters of pressure, temperature, volume, gross calorific value, energy, and Wobbe-index the transmission system operators shall use:
 - (a) pressure: bar
 - (b) temperature: °C (degree Celsius)
 - (c) volume: m³
 - (d) gross calorific value (GCV): kWh/m³
 - (e) energy: kWh (based on GCV)
 - (f) Wobbe-index: kWh/m³ (based on GCV)
2. For pressure, the transmission system operators shall indicate whether it refers to absolute (bar (a)) or gauge (bar (g)).
3. The reference conditions for volume shall be 0°C and 1.01325 bar(a). For GCV, energy and Wobbe-index the default combustion reference temperature shall be 25°C.

Article 14

Additional units

The communicating parties may agree to use, besides the common set of units, additional units or reference conditions for data exchange or data publication. In this case any conversion between reference conditions shall be done on the basis of the actual gas composition, provided that if the relevant gas composition data is not available, the conversion factors used shall be consistent with the procedures described in the latest version of EN ISO 13443 "Natural Gas – Standard reference conditions".

CHAPTER IV

GAS QUALITY

Article 15

Managing cross-border trade restrictions due to gas quality differences

1. Transmission system operators shall cooperate to avoid restrictions to cross-border trade due to gas quality differences. Such cooperation may include swapping and co-mingling, where feasible.
2. Where a restriction to cross-border trade due to gas quality differences cannot be avoided by the concerned transmission system operators and is recognised by the national regulatory authorities of the concerned transmission system operators, they may require the concerned transmission system operators to perform within twelve months the following actions in sequence:
 - (a) to cooperate and develop technically feasible options, without changing the gas quality specifications, which may include flow commitments and gas treatment, in order to remove the recognised restriction;
 - (b) to jointly carry out a cost benefit analysis on the technically feasible options to define economically efficient solutions which shall specify the breakdown of costs and benefits among the categories of affected parties;
 - (c) to produce an estimate of the implementation time for each potential option;
 - (d) to conduct a public consultation on identified feasible solutions and take into consideration the results of the consultation;
 - (e) to submit a proposal for removing the recognised restriction, including the timeframe for implementation, based on the cost benefit analysis and results of the public consultation to their respective national regulatory authorities for approval and to the relevant national authorities for information.
3. Should the concerned transmission system operators not reach an agreement on a solution, each of them shall promptly inform its own national regulatory authority.
4. The transmission system operators shall assess the effectiveness of any solution adopted and any necessity to implement an alternative solution. In case transmission

system operators consider that an alternative solution is necessary, the process described under paragraph 2 of this Article shall apply.

5. In respect of new interconnection points, adjacent transmission system operators shall give due regard to the potential requirements for solutions to manage gas quality differences in line with this Article, before gas flows.

6. Once a solution, including the appropriate cost recovery mechanism, is approved by the respective national regulatory authorities, the solution shall be implemented in accordance with the timeframe foreseen in paragraph 2 (e) of this Article.

Article 16

Short term monitoring on gas quality - data publication

Transmission system operators shall publish, with a frequency of at least once per hour during the gas day, the Wobbe-index and gross calorific value for gas directly entering its transmission network at all physical interconnection points. Such information shall be provided without any warranty given by the transmission system operators for any loss or damage related to the use of this information by any third party.

Article 17

Short term monitoring on gas quality variation information exchange

1. The following parties may potentially be selected by a transmission system operator to receive gas quality information from that transmission system operator:

(a) any final customers directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes;

(b) any distribution system operator directly connected to the transmission system operator's network, with connected final customers whose operational processes are adversely affected by gas quality changes; and

(c) any storage system operator directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes.

2. With regard to paragraph 1 (a) of this Article, where a Member State's national rules do not provide for any direct contractual relationship between a transmission system operator and its directly connected final customers, any network user that has a

contract in force with a final customer directly connected to that transmission system's network, whose operational processes can be affected by gas quality changes, shall be an eligible party on behalf of such final customer.

3. Within twelve months from the entry into force of this Regulation each transmission system operator shall:

(a) taking into account the provisions foreseen in paragraph 1 of this Article, define and maintain a list of parties to receive indicative gas quality information;

(b) cooperate with the parties, if any, identified in the list foreseen under paragraph 3, (a) of this Article, in order to assess:

(i) the relevant information on gas quality parameters to be provided;

(ii) the frequency for the information to be provided;

(iii) the lead-time;

(iv) the method of communication.

4. The provision of paragraph 3 shall not create an obligation for transmission system operators to install additional equipment, unless otherwise required by the national regulatory authority. Such information shall be provided as the transmission system operator's best estimate at a point in time and for internal use only, without any warranty given by the transmission system operator for any loss or damage related to the use of this information.

Article 18

Long term monitoring

1. ENTSOG shall publish every two years a long term gas quality monitoring outlook in order to identify the potential trends of gas quality parameters and respective potential variability within the next ten years.

2. The outlook shall be based on the inputs gathered in the framework of the regional cooperation established within ENTSOG in accordance with Article 12, paragraph 1 of Regulation (EC) No 715/2009. The relevant regions shall be defined by ENTSOG for the purpose of the outlook.

3. The outlook shall cover at least the Wobbe-index and gross calorific value. Additional gas quality parameters may be included after the consultation with stakeholders foreseen in paragraph 8 of this Article.
4. The outlook shall identify potential new supply sources including indigenous and non-conventional gas production from a gas quality perspective.
5. In order to define the reference values of gas quality parameters for the respective supply sources to be used in the outlook, an analysis of the previous years shall be carried out. Such data may be replaced by stakeholders' inputs which result from the stakeholder engagement process foreseen in paragraph 8 of this Article.
6. For every considered gas quality parameter and every region, the analysis shall result in a range within which the parameter is likely to evolve.
7. The outlook shall be consistent and aligned with the ENTSOG Union-wide Ten Year Network Development Plan under preparation at the same time.
8. The stakeholder consultation process utilised for the Union-wide Ten Year Network Development Plan shall be enlarged to include gas quality as an item. Through this process, stakeholders shall be invited to provide ENTSOG with their views on the evolution of gas quality parameters of supplies.

CHAPTER V

ODOURISATION

Article 19

Managing cross-border trade restrictions due to differences in odourisation practices

1. Where a restriction to cross-border trade due to differences in odourisation practices is recognised by national regulatory authorities, they may require the concerned transmission system operators within six months, to seek an agreement, which may include swapping and flow commitments, to solve any restriction recognised. The concerned adjacent transmission system operators shall provide their respective national regulatory authorities with the agreement for approval and to the relevant national authorities for information.
2. Where no agreement can be reached between the concerned transmission system operators after the six-month period, referred to under paragraph 1 of this Article, or where the competent national regulatory authorities agree that the proposed agreement by the concerned adjacent transmission system operators is not sufficiently effective to remove the restriction, the concerned transmission system operators in cooperation with relevant national authorities shall, within the following twelve months, define a detailed plan setting out the most cost effective method to remove a recognised restriction at the specific cross-border interconnection point.
3. For the purpose of fulfilling the obligations under paragraph 2 of this Article, the concerned transmission system operators shall in sequence actively cooperate to:
 - (a) develop options to remove the restriction by identifying and assessing:
 - (i) a conversion towards non-odourised gas in the odourised transmission network or part thereof;
 - (ii) the potential physical flow of odourised gas into the non-odourised transmission network or part thereof and interconnected downstream systems;
 - (iii) an acceptable level of odourant for the interconnected transmission networks.

- (b) jointly carry out a cost benefit analysis on the technically feasible options to define economically efficient solutions which shall specify the breakdown of costs and benefits among the categories of affected parties;
 - (c) produce an estimate of the implementation time for each potential option;
 - (d) conduct a public consultation and take into consideration the results of such consultation;
 - (e) submit the feasible solutions including the cost recovery mechanism and implementation timing to the relevant national authorities for approval.
4. Once a solution is approved by the relevant national authorities, the solution shall be implemented in accordance with the timeframe foreseen in paragraph 3 (e) of this Article.
5. If the relevant national authorities do not approve any solution submitted under paragraph 3 (e) of this Article a shift towards the physical flow of non-odourised gas shall be implemented within a timeframe approved by the relevant national authorities.

CHAPTER VI

DATA EXCHANGE

Article 20

General provisions

1. The common data exchange solutions foreseen under this Regulation comprise the data network, the data exchange protocol and the data format and cover all electronic exchanges of data arising from Regulation (EC) No 715/2009 for the exchange of data among transmission system operators as well as for the exchange of data from transmission system operators to their counterparties. In this Chapter the term 'counterparties' refers to network users active at interconnection points.
2. ENTSOG shall coordinate and facilitate the implementation of the common data exchange solutions foreseen under this Article and related data exchange requirements foreseen for the business processes as further detailed under this Chapter.
3. The Internet shall be used for the purpose of the present Regulation as the network for all common data exchange solutions defined under the present Chapter.

Article 21

Common data exchange solutions

1. Having regard to the communication practices, the following types of data exchange can be used:
 - (a) document based data exchange: such data is exchanged wrapped into a file and automatically exchanged between the respective IT systems;
 - (b) integrated data exchange: such data is exchanged between two applications directly on the respective IT systems;
 - (c) interactive data exchange: such data is exchanged interactively through a web application via a browser.

One or more of these types can be implemented depending on the relevant business needs and requirements.

Under this Regulation common data exchange solutions are foreseen for each of the abovementioned types:

For the document based data exchange, the common data exchange solution shall be:

- (a) protocol: AS4 shall be used as common data exchange protocol for document based data exchanges;
- (b) data format: Edig@s-XML, or an equivalent data format to be developed by ENTSOG.

For the integrated data exchange, the common data exchange solution shall be:

- (a) protocol: HTTP/S-SOAP shall be used as common data exchange protocol for integrated data exchanges;
- (b) data format: Edig@s-XML, or an equivalent data format to be developed by ENTSOG.

For the interactive data exchange, the common data exchange solution shall be:

- (a) protocol: HTTP/S shall be used as common data exchange protocol for interactive data exchanges;

The most appropriate data exchange type(s) for each business process pursuant to Article 20 paragraph 2 shall be defined and published according to the rules described in Article 24 paragraph 2 of this Regulation.

2. ENTSOG shall monitor the evolutions in IT technology for data exchange solutions. When a potential need to change the common data exchange solution is identified, ENTSOG shall evaluate relevant technical solutions and produce a cost benefit analysis of the potential change(s) that would be needed including the analysis of the reasons that make a technological evolutionary step necessary. A public consultation involving all stakeholders shall be organised by ENTSOG including the presentation of the result of the evaluation and proposal(s) based on the cost benefit analysis realised. Where an amendment to the common data exchange solutions is considered necessary, ENTSOG shall submit a proposal to ACER in accordance with the procedure set out in Article 7 of Regulation (EU) No. 715/2009.

Article 22

Data exchange system security and availability

1. Each transmission system operator and each counterparty shall be responsible to ensure that the appropriate security measures are undertaken and in particular it:
 - (a) shall secure the communication chain in order to provide secured and reliable communications, including protection of the confidentiality by encryption, integrity and the authenticity by signature of the sender and non-repudiation by a signed confirmation;
 - (b) shall implement appropriate security measures in order to prevent unauthorised access of their IT infrastructure;
 - (c) shall notify the other parties, it communicates with, without delay of any unauthorised access which has or may have occurred on his own system.
2. Each transmission system operator shall be responsible to ensure the availability of its own system and shall:
 - (a) take appropriate measures to prevent that a single point of failure will cause an unavailability of the data exchange system. This requirement also applies up to the network connection(s) with the internet service provider(s);
 - (b) obtain the appropriate services and support from their internet service provider(s);
 - (c) keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform their counterparties in a timely manner, prior to the planned unavailability.

Article 23

Implementation of the common data exchange solutions

1. Transmission system operators shall make the common data exchange solutions available within twelve months from the entry into force of this Regulation.
2. Where data exchange solutions between counterparties and transmission system operators are in place at the coming into force of this Regulation and provided that the existing communication solutions are compatible with the business requirements resulting from Regulation (EC) No 715/2009 and the requirements defined in Article 22 of this Regulation, a different implementation schedule can be agreed between the

transmission system operator and the concerned counterparties subject to national regulatory authority approval.

Article 24

Development process for data exchange requirements related to Regulation (EC) No 715/2009

1. The data exchange requirements related to Regulation (EC) No 715/2009 and related follow up of technical developments shall be managed and controlled by ENTSOG. These data exchange requirements may include the following: business requirement specification(s), data content format, release management and implementation guidelines.
2. ENTSOG shall develop common network operation tools in accordance with Article 8, paragraph 3 (a) of Regulation (EC) No 715/2009 and shall publish them on its website. The common network operation tools shall include a transparent process with the necessary stakeholder consultation for the development of data exchange requirements as referred to in paragraph 1 of this Article and the data exchange requirements themselves.

CHAPTER VII

Final Provisions

Article 25

Implementation

1. The transmission system operators shall comply with the provisions of this Regulation within a twelve-month period as from its entry into force which shall include the adaption of all relevant contractual terms and conditions, except where otherwise provided in this Regulation and to the extent specific derogations and exemptions referred to in Article 30 of Regulation (EC) No 715/2009 are implemented.
2. Costs related to all obligations referred to in this Regulation which have to be borne by transmission system operators shall be assessed by national regulatory authorities. Costs assessed as reasonable and proportionate shall be recovered in accordance with Article 13(1) of the Regulation (EC) No. 715/2009 via the regulatory framework established by the national regulatory authorities pursuant to Article 41(6) of Directive 2009/73/EC.
3. After the entry into force of this Regulation, each transmission system operator shall promptly inform the concerned parties of its provisions in order for them to consider the possible consequences on their activities and to enable them to adapt their practices as necessary.

Article 26

Entry into force

1. This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.
2. It shall apply as from its entry into force.
3. This Regulation shall be binding in its entirety and directly applicable in all Member States.