

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 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 ENTSOG. 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) The lack of harmonisation in technical, operational and communication areas might 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.
- (4) The obligations set forth by Chapters 4 and 5 of this Regulation with particular regard to the commitments for transmission system operators in terms of Gas Quality and Odourisation are without prejudice to the competences of Member States in those specific areas.

¹ OJL 211,14.8.2009,p36

(5) This Regulation establishing 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 was developed by ENTSOG based on the procedure as set out in Article 6 of Regulation (EC) No 715/2009.

(6) 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.

(7) 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.

(8) 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. This Regulation sets out harmonised rules for the operation of transmission systems in order to encourage and facilitate efficient gas trading and transport across gas transmission systems within the European Union, and thereby to move towards greater internal market integration.
2. This Regulation shall apply to transmission system operators. 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 and Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply:
 - (a) **‘common data exchange solution’** means the common data network, data exchange protocols and data formats for the electronic communications referred to in Chapter VI of this Regulation;
 - (b) **‘counterparty’** means any party with whom a transmission system operator exchanges data for the purpose of the implementation of Regulation (EC) No 715/2009, unless specifically otherwise defined in this Regulation;
 - (c) **‘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;

- (d) **‘initiating transmission system operator’** means the transmission system operator initiating the matching process by sending the necessary data to the matching transmission system operator;
- (e) **‘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;
- (f) **‘matching process’** is the process of comparing and aligning processed quantities of network users at both sides of a specific interconnection point, which will result in confirmed quantities for the network users;
- (g) **‘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;
- (h) **‘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;
- (i) **‘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;
- (j) **‘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;
- (k) **‘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. To facilitate commercial and operational cooperation between adjacent transmission system operators, within the framework of an interconnection agreement, the adjacent transmission system operators shall establish rules on the following terms without any prejudice for the contracting parties to define also other issues:

- (a) a process for amending the interconnection agreement;
- (b) flow control;
- (c) measurement principles for gas quantities and quality;
- (d) matching;
- (e) allocation of gas quantities;
- (f) exceptional events;
- (g) settlement of disputes.

2. For each interconnection agreement, the relevant transmission system operators shall identify the relevant information that directly affects network users and shall inform them thereof. This information shall at least include the following:

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

3. Before making any change regarding the information foreseen under paragraph 2 of this Article 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.

4. New interconnection agreements or any amendments to the provisions regarding the mandatory terms foreseen in paragraph 1 of this Article shall be communicated by

transmission system operators to their respective national regulatory authority upon signature. Transmission system operators shall also communicate any interconnection agreement upon request of their respective national regulatory authority.

Article 4

Development and alignment of interconnection agreements

1. Within twelve months from the entry into force of this Regulation, the adjacent transmission system operators at each interconnection point, referred to as the contracting parties in the present Chapter, shall have in force new interconnection agreement(s) or shall have amended the existing ones, in compliance with the provisions set forth in this Chapter.
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. Where the adjacent transmission system operators cannot reach an agreement to meet the requirements set forth under Article 3, paragraph 1 (a), (b), (c), (d), (e), (f) and (g) of this Regulation, within twelve months from the entry into force of this Regulation each of them shall apply the default rules set forth in paragraph 4 of this Article only for those requirements which they did not agree upon.
4. For the terms referred to in Article 3, paragraph 1 (a), (b), (c), (d), (e), (f) and (g), the applicable default rules are introduced by the sentence "For the purpose of Article 4, paragraph 3 of this Regulation" in the following relevant Articles:
 - (a) amendment process: Article 5, paragraph 3;
 - (b) flow control: Article 6, paragraph 4;
 - (c) measurement principles for gas quantity and quality: Article 7, paragraph 4;
 - (d) matching: Article 8, paragraphs 2 (a), 2 (d) and 2 (f);
 - (e) rules for allocation of gas quantities: Article 9, paragraphs 2 and 5(a);
 - (f) exceptional events: Article 10, paragraph 2 (a);
 - (g) settlement of disputes arising from interconnection agreements: Article 11, paragraph 4.
5. This Article shall apply without any prejudice to the provisions set forth under

Article 3, paragraph 3 of this Regulation.

Article 5

Amendment to interconnection agreements

1. The interconnection agreement shall specify a transparent and detailed amendment process between the contracting parties.
2. The amendment process in the interconnection agreement shall commence following obligations deriving from the applicable legislative and regulatory framework or upon request of either party by means of written notice.
3. Having regard to the cases set forth under paragraph 2 of this Article, the contracting parties shall make the amendment within the deadline imposed by the relevant applicable legislative and regulatory framework or, if no such deadline is applicable, they shall reach an agreement upon the request by written notice within a period of time to be agreed among them. For the purpose of Article 4, paragraph 3 of this Regulation said period of time shall not exceed 12 months from the receipt of the written notice.
4. If the contracting parties do not agree to amend the concerned provisions of the interconnection agreement or the timeline for the amendment process 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.
5. This Article shall apply without any prejudice to the provisions set forth under Article 3, paragraph 3 of this Regulation.

Article 6

Rules for flow control

1. The interconnection agreement shall as a minimum address the following matters in respect of flow control:
 - (a) rules to facilitate a controllable, accurate, predictable and efficient gas flow across the interconnection point;
 - (b) provisions setting out how the contracting parties 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) definition of the contracting party who is responsible for installation, operation and maintenance of the flow control equipment.

2. 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 for flow control referred to in paragraph 1, (b) of this Article shall foresee the following:

(a) the contracting parties shall decide 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 shall reflect:

- (i) the results of the matching process;
- (ii) operational balancing account corrections;
- (iii) any efficient flow control arrangements between the contracting parties 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 the contracting parties may decide to alter 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 Preventative Action Plans developed in accordance with Regulation (EU) No. 994/2010³;
- (iii) an exceptional event affecting any of the contracting parties;
- (iv) any other reasons specified under national rules, where applicable;

(d) the contracting parties shall identify which party(ies) shall own and operate the flow control equipment in cooperation with the other party(ies). Provided that contractual obligations regarding pressure are complied with by all contracting parties, the party

³ OJL 295, 12.11.2010

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. For the purpose of Article 4, paragraph 3 of this Regulation, the party(ies) who owns the flow control equipment shall, in cooperation with the other party(ies), be responsible for steering the gas flow across the interconnection point in accordance with paragraph 3 (d) of this Article.

Article 7

Measurement principles for gas quantity and quality

1. The interconnection agreement shall specify as a minimum the following matters in respect of the measurement of gas quantity and quality:

- (a) details of the measurement responsibilities and standards applicable at the interconnection point;
- (b) the contracting party responsible for the installation, operation and maintenance of the measurement equipment and an obligation for such contracting party to make all relevant information and data in respect of the measurement of gas flows at the interconnection point available to the other contracting party(ies) in a timely manner and at the frequency specified under the interconnection agreement.

2. The installation, operation and maintenance of measurement equipment at an interconnection point shall take into account the relevant requirements of the contracting parties.

3. With particular regard to measurement provisions the interconnection agreement shall define:

- (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 contracting parties;

(g) the way data is exchanged, including frequency and content, among the parties in respect of the measured parameters;

(h) the specific list of signals and alarms to be provided by the contracting party(ies) who own(s) and operate(s) the measurement equipment to the other contracting party(ies);

(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 contracting parties in the event of failure of the measurement equipment;

(k) rules that shall apply between the contracting parties 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. For the purpose of Article 4, paragraph 3 of this Regulation:

(a) the owner of the measurement equipment shall be responsible for the installation, operation and maintenance of such equipment and for providing the other contracting party(ies) with the data regarding the measurement of gas flows at the interconnection point in a timely manner;

- (b) the prevailing version of European standard EN1776 Gas Supply - Natural Gas Measuring Stations - Functional Requirements shall apply.

Article 8

Matching

1. In respect of the matching process, the interconnection agreement shall specify as a minimum the following:

- (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 contracting parties to calculate the processed quantities and confirmed quantities of network users and the quantity of gas that needs to be scheduled to flow at the interconnection point(s).

2. The provisions in the interconnection agreement regarding the process that the contracting parties shall use to manage nominations shall address the following points:

- (a) the application of a matching rule leading to identical confirmed quantities for each pair of network users at both sides of the interconnection point when processed quantities are not aligned. For the purpose of Article 4, paragraph 3 of this Regulation, the lesser rule shall apply;

- (b) for interconnection agreements in place at the entry into force of this Regulation, the contracting parties may agree to maintain a matching rule other than the lesser rule provided that the contracting parties follow the procedures in accordance with Article 3, paragraph 3 of this Regulation;

- (c) for new interconnection agreements, the contracting parties may agree to implement a matching rule other than the lesser rule, provided that the contracting parties follow the procedure in accordance with Article 3, paragraph 3 of this Regulation, before gas flows;

- (d) the contracting parties' respective roles in the matching process by specifying whether they are the initiating or the matching transmission system operator. For the purpose of Article 4 paragraph 3 of this Regulation the owner of the relevant flow control equipment shall be the matching transmission system operator.

- (e) 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 contracting parties 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 contracting parties to perform all calculation and communication steps in an accurate and timely manner;
- (f) for the purpose of Article 4, paragraph 3 of this Regulation, 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 contracting parties within two hours from the start of the nomination (respectively re-nomination) cycle;
3. When processing nominations for an interconnection point(s), the contracting parties 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 in the interconnection agreement shall specify:
- (a) the use of data exchange between the contracting parties 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.

Article 9

Rules for the allocation of gas quantities

1. The interconnection agreement shall define consistent rules for the allocation of gas quantities at both sides of the interconnection point.
2. For the purpose of Article 4, paragraph 3 of this Regulation and subject to paragraphs 3 and 4 of this Article, the interconnection agreement shall define the operational balancing account as the applicable allocation rule.
3. For interconnection agreements that are in place at the entry into force of this Regulation, the contracting parties may agree to maintain an allocation rule other than the operational balancing account provided that transmission system operators follow the procedures in accordance with Article 3, paragraph 3 of this Regulation.
4. For new interconnection agreements, the contracting parties may agree to implement another allocation rule, provided that the contracting parties follow the procedures in accordance with Article 3, paragraph 3 of this Regulation before gas flows.
5. Where an operational balancing account is in force it shall foresee that:
 - (a) the steering difference shall be allocated to an operational balancing account of the contracting parties and the allocations to be provided by each contracting party to its respective network user shall be equal to the confirmed quantities. For the purpose of Article 4, paragraph 3 of this Regulation, the contracting party(ies) who owns the measurement equipment shall, in accordance with the deadlines mutually agreed in the interconnection agreement, recalculate the operational balancing account with validated quantities and communicate it to the other contracting party(ies);
 - (b) the contracting parties 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 contracting parties may agree to extend such limits;

Article 10

Exceptional events

1. Provided that the provisions of Regulation (EC) No 1227/2011⁴ and any related acts are complied with, all interconnection agreements shall require as a minimum that any contracting party affected by an exceptional event shall inform the other contracting party(ies) of the occurrence of such exceptional event and shall provide all necessary information as further defined herein.

2. The interconnection agreement shall provide that:

(a) the contracting parties shall agree on the use of communication means which shall facilitate fast and simultaneous communication between the contracting parties. For the purpose of Article 4, paragraph 3 of this Regulation, the communication shall be performed by means of telephone call for information, followed by a written confirmation;

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

(c) where a contracting party 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 its network users, as soon as reasonably practicable, each contracting party shall inform

⁴ OJL 326, 8.12.2011

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 contracting party(ies) shall inform the other contracting party(ies) as soon as reasonably practicable and each contracting party shall inform its respective affected network users accordingly.

Article 11

Settlement of disputes arising from Interconnection Agreements

1. The interconnection agreement shall specify how to settle any disputes including any controversies or claims between the contracting parties arising out of or in connection with the interconnection agreement, including its existence, content, amendment, validity or termination, which cannot be amicably settled by the contracting parties.
2. In the interconnection agreement the contracting parties 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 the designated jurisdiction declare itself not to be competent or should any of the contracting parties not comply with the obligations agreed with regard to the procedure before the expert, the applicable conflict-of-law rules shall apply.
4. Should the contracting parties not agree on a jurisdiction clause to settle the disputes arising out of or in connection with the interconnection agreement within twelve months from the entry into force of this Regulation and for the purpose of Article 4, paragraph 3 of this Regulation, 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 with adjacent transmission system operator(s) or with other counterparties.
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

1. Notwithstanding Articles 12 and 13 of this Regulation, the use of additional units or reference conditions for data exchange between adjacent transmission system operators or from a transmission system operator to a counterparty shall be allowed supplementary to the common set of units set forth in this Chapter where communicating parties agree.
2. 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

General provisions

Adjacent transmission system operators shall reinforce transparency as well as cooperation between themselves where differences in gas quality either side of an interconnection point might create a barrier to gas market integration.

Article 16

Managing gas quality differences

1. The provisions set forth in this Article shall apply at an interconnection point where:
 - (a) gas is capable of physically flowing from one transmission system operator's network into another transmission system operator's network and
 - (b) the range of any gas quality parameter that applies in respect of the transmission system operator's network delivering the gas is different from the range that applies for that parameter in respect of the transmission system operator's network receiving the gas and where such difference is preventing, or could in the future prevent, gas from physically flowing between the two transmission networks thus creating a barrier to cross border flows.
2. As from the entry into force of this Regulation, where the national regulatory authorities either side of an interconnection point identify a barrier hampering cross-border flow at that interconnection point due to gas quality differences and, where the conditions detailed in paragraph 1 of this Article are met, the concerned transmission system operators shall within twelve months after being informed of such barrier by their national regulatory authorities:
 - (a) cooperate and develop technically feasible options, which may include swapping, co-mingling, flow commitments and gas treatment, in order to remove the identified barrier(s) to cross border flow;

- (b) jointly carry out a cost benefit analysis on the technically feasible options to define economically efficient solutions;
- (c) conduct a public consultation on identified feasible solutions and take into consideration the results of the consultation;
- (d) submit a proposal for removing the identified barrier 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.

Should the concerned transmission system operators not reach an agreement on a solution each of them shall promptly inform its own national regulatory authority and seek to have the dispute settled in accordance with Article 26 of this Regulation.

3. 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.

4. 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.

5. The provisions set forth under Article 27 paragraph 2 shall apply in respect of any costs incurred by transmission system operators pursuant to the obligations detailed in this Article.

Article 17

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 18

Short term monitoring on gas quality variation information exchange

1. The following parties shall be deemed as potentially 'eligible' to receive gas quality information from a transmission system operator:
 - (a) any end consumer directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes;
 - (b) any distribution system operator, with connected end consumers whose operational processes are adversely affected by gas quality changes, directly connected to the transmission system operator's network; 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 end consumers, any network user that has a contract in force with an end consumer 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 end consumer.
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 eligible 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 gas quality parameters relevant to each eligible party in respect of which information has been requested;
 - (ii) the frequency of the information provision;
 - (iii) the lead-time;
 - (iv) the method of communication.
4. Provision of the information specified in paragraph 3 of this Article shall be conditional on there being no obligation on the transmission system operators to install additional equipment. Such information shall be provided as the transmission system

operator's best estimate at a point in time and for internal use of 'eligible' parties only, without any warranty given by the transmission system operator for any loss or damage related to the use of this information.

Article 19

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 20

Odourisation

1. As from the entry into force of this Regulation, where the national regulatory authorities either side of an interconnection point identify a barrier hampering cross-border flow at that interconnection point due to differences in odourisation practices, the concerned transmission system operators shall, after being informed by their national regulatory authorities, within six months, seek to reach an agreement to solve any barrier identified. The concerned adjacent transmission system operators shall provide their respective national regulatory authorities with the agreement including cost recovery mechanism 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 barrier, 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 an identified barrier aimed at delivering physical flows of non-odourised gas 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 actively cooperate to:
 - (a) develop options to remove the barrier 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) produce cost estimates for each potential option and define the most cost effective option;
- (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 to the relevant national authorities.

4. Upon request from a concerned national regulatory authority, the Agency shall provide an opinion based on matter of facts on whether the decision taken by the national regulatory authorities involved complies with Regulation (EC) No 715/2009 or Directive 2009/73/EC in accordance with Article 7, paragraph 4 of Regulation (EC) No 713/2009.

5. Once a solution including the appropriate cost recovery mechanism is approved by the competent national authorities, the solution shall be implemented by the concerned transmission system operators in a timeframe in line with the implementation time as foreseen in paragraph 3, (c) of this Article.

CHAPTER VI

DATA EXCHANGE

Article 21

General provisions

1. The appropriate degree of harmonization of data exchange to support the completion and functioning of the European internal gas market, security of supply and appropriate and secure access to the relevant information is set forth in this Chapter for the exchange of data among transmission system operators as well as for the exchange of data to their counterparties. In this Chapter the term ‘counterparties’ refers to network users active at interconnection points.
2. The common data exchange solutions foreseen under this Regulation cover all electronic exchanges of data arising from Regulation (EC) No 715/2009.
3. 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.
4. 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 22

Common data exchange solutions

1. Under this Regulation three types of common data exchange solutions are foreseen:
 - (a) document based data exchange: such data is exchanged wrapped into a file and automatically exchanged between the IT systems of the two communicating parties;
 - (b) integrated data exchange: such data is exchanged between two applications directly on the IT systems of the two communicating parties;

(c) interactive data exchange: such data is exchanged interactively between communicating party and a web application of the other communicating party via a browser.

2. 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, without prejudice for ENTSOG to develop a different data format, should the development and availability of Edig@s-XML become commercially and/or contractually impracticable for ENTSOG.

3. 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, without prejudice for ENTSOG to develop a different data format, should the development and availability of Edig@s-XML become commercially and/or contractually impracticable for ENTSOG.

4. 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;

5. The common data exchange solutions described under paragraphs 2, 3 and 4 of this Article shall be the common data exchange solution for document based data exchange, integrated data exchange and interactive data exchange, without any prejudice to define new common data exchange solutions in accordance with paragraph 6 of this Article.

6. 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 23

Data exchange system security and availability

1. Each communicating party shall be responsible to ensure that the appropriate security measure are undertaken in particular:

(a) each communicating party shall secure the communication chain to provide secured and reliable communications including protection of the confidentiality by encryption, the integrity and the authenticity by signature of the sender and the non-repudiation by signed confirmation;

(b) each communicating party shall be responsible for implementing appropriate security measures to prevent unauthorised access of their IT infrastructure;

(c) each communicating party shall notify the other parties it communicates with as soon as it is aware of any unauthorised access 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 24

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 23 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 25

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 involvement for the development of data exchange requirements as referred to in paragraph 1 of this Article and the data exchange requirements themselves.

CHAPTER VII

Dispute Resolution

Article 26

For any dispute arising out of or in connection with this Regulation, which is not addressed by Article 11 of this Regulation, the concerned adjacent transmissions system operators shall endeavour to settle the dispute, by referring to alternative dispute resolution tools such as mediation. Should the adjacent transmissions system operators fail to settle amicably the dispute in a twelve-month period, the dispute shall be settled in accordance with Article 41, paragraph 11 of Directive 2009/73/EC. Should a final common decision not be reached the Agency shall be involved to take appropriate measures in accordance with the provisions of Article 8 of Regulation (EC) No 713/2009.

CHAPTER VIII

Final Provisions

Article 27

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 a timely manner via network tariffs or appropriate mechanisms as determined by the applicable legislative and regulatory framework.
3. After the entry into force of this Regulation, each transmission system operator shall promptly inform the concerned counterparties 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 28

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.