# Commission Regulation (EU) No 703/2015 of 30 April 2015
# establishing a Network Code on Interoperability and Data Exchange Rules
# (Text with EEA relevance)

| WORDING BY COMMSISION REGULATION (EU) 703/2015<br>as of 30 April 2015 | WORDING FOR THE ENERGY COMMUNITY<br>(Proposal)<br>[Deletions marked ~~cancelled~~, inclusions in **bold blue underlined**] |
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| CHAPTER I<br>GENERAL PROVISIONS | CHAPTER I<br>GENERAL PROVISIONS |
| *Article 1*<br>*Subject matter and scope*<br>1. This Regulation establishes a network code which sets out rules regarding interoperability and data exchange as well as harmonised rules for the operation of gas transmission systems. | *Article 1*<br>*Subject matter and scope*<br>1. This Regulation establishes a network code which sets out rules regarding interoperability and data exchange as well as harmonised rules for the operation of gas transmission systems. |
| 2. This Regulation shall apply at interconnection points. With regard to data publication, Article 13 shall apply to relevant points defined in paragraph 3.2 of Annex I to Regulation (EC) No 715/2009. In addition to interconnection points, Article 17 shall apply to other points on transmission network where the gas quality is measured. Article 18 shall apply to transmission systems. This Regulation may also apply at entry points from and exit points to third countries, subject to the decision of the national authorities. | 2. This Regulation shall apply at interconnection points **between the Contracting Parties to the Energy Community. The application at interconnection points within a Contracting Party is subject to the decision of the relevant national regulatory authority.** With regard to data publication, Article 13 shall apply to relevant points defined in paragraph 3.2 of Annex I to Regulation (EC) No 715/2009. In addition to interconnection points, Article 17 shall apply to other points on transmission network where the gas quality is measured. Article 18 shall apply to transmission systems. This Regulation may also apply at entry points from and exit points to third countries, subject to the decision of the national authorities. |
| 3. This Regulation shall not apply to interconnection points between Member States as long as one of these Member States holds a derogation on the basis of Article 49 of Directive 2009/73/EC, unless agreed otherwise by the respective Member States. | ~~3. This Regulation shall not apply to interconnection points between Member States as long as one of these Member States holds a derogation on the basis of Article 49 of Directive 2009/73/EC, unless agreed otherwise by the respective Member States~~. |

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| *Article 2*<br>*Definitions*<br>For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009, Article 3 of Commission Regulation (EU) No 984/2013, Article 3 of Commission Regulation (EU) No 312/2014 as well as in Article 2 of Directive 2009/73/EC shall apply. In addition, the following definitions shall apply: | *Article 2*<br>*Definitions*<br>For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 715/2009, ~~Article 3 of Commission Regulation (EU) No 984/2013, Article 3 of Commission Regulation (EU) No 312/2014~~ 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 is not reasonably controllable or preventable and 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; | (a) 'exceptional event' means any unplanned event that is not reasonably controllable or preventable and 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; |
| (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; | (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. | (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 results in confirmed quantities for the network users; | (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 results 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; | (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, according to the measurement equipment from the transmission system operator, has physically flowed across an interconnection point per time period; | (f) 'measured quantity' means the quantity of gas that, according to the measurement equipment from the transmission system operator, has 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 | (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 |

**Comment [ecs1]:** Those Regulations (NC CAM, NC BAL) are not yet obligatory for the CPs, thus the reference here is deleted but the definitions, relevant for this Regulation have been added at the end of the Article

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| users involved at the interconnection point; | users involved at the interconnection point; |
| (h) 'processed quantity' means the quantity of gas determined by the initiating transmission system operator and by the matching transmission system operator, which takes into account the network user's nomination or re-nomination and contractual provisions as defined under the relevant transport contract and which is used as the basis for the matching process; | (h) 'processed quantity' means the quantity of gas determined by the initiating transmission system operator and by the matching transmission system operator, which takes into account the network user's nomination or re-nomination and contractual provisions as defined under the relevant transport contract and which is used as the basis for the matching process; |
| (i) 'steering difference' means the difference between the quantity of gas that the transmission system operators had scheduled to flow and the measured quantity for an interconnection point. | (i) 'steering difference' means the difference between the quantity of gas that the transmission system operators had scheduled to flow and the measured quantity for an interconnection point. |
| | **(j) 'gas day' means the period from 5:00 to 5:00 UTC the following day for winter time and from 4:00 to 4:00 UTC the following day when daylight saving is applied;** |
| | **(k) 'interconnection agreement' means an agreement entered into by adjacent transmission system operators, whose systems are connected at a particular interconnection point, which specifies terms and conditions, operating procedures and provisions, in respect of delivery and/or withdrawal of gas at the interconnection point with the purpose of facilitating efficient interoperability of the interconnected transmission networks;** |
| | **(l) 'interconnection point' means a physical or virtual point connecting adjacent entry-exit systems or connecting an entry-exit system with an interconnector, in so far as these points are subject to booking procedures by network users;** |
| | **(m) 'virtual interconnection point' means two or more interconnection points which connect the same two adjacent entry-exit systems, integrated together for the purposes of providing a single capacity service;** |
| | **(n) 'confirmed quantity' means the quantity of gas confirmed by a transmission system operator to be scheduled or re-scheduled to flow on gas day D;** |
| | **(o) 'allocation' means the quantity of gas attributed to a network** |

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| | **user by a transmission system operator as an input or an off-take expressed in kWh for the purpose of determining the daily imbalance quantity;** |
| | **(p) 're-nomination cycle' means the process carried out by the transmission system operator in order to provide a network user with the message regarding the confirmed quantities following the receipt of a re-nomination.** |
| CHAPTER II<br>INTERCONNECTION AGREEMENTS | CHAPTER II<br>INTERCONNECTION AGREEMENTS |
| *Article 3*<br>*General Provisions*<br>Adjacent transmission system operators shall ensure that at least the following terms and conditions detailed in Articles 6 to 12 are covered by an interconnection agreement in respect of each interconnection point:<br>(a) rules for flow control;<br>(b) measurement principles for gas quantities and quality;<br>(c) rules for the matching process;<br>(d) rules for the allocation of gas quantities;<br>(e) communication procedures in case of exceptional events;<br>(f) settlement of disputes arising from interconnection agreements;<br>(g) amendment process for the interconnection agreement. | *Article 3*<br>*General Provisions*<br>Adjacent transmission system operators shall ensure that at least the following terms and conditions detailed in Articles 6 to 12 are covered by any **existing or future** interconnection agreement in respect of each interconnection point:<br>(a) rules for flow control;<br>(b) measurement principles for gas quantities and quality;<br>(c) rules for the matching process;<br>(d) rules for the allocation of gas quantities;<br>(e) communication procedures in case of exceptional events;<br>(f) settlement of disputes arising from interconnection agreements;<br>(g) amendment process for the interconnection agreement. |
| *Article 4*<br>*Information obligation*<br>1. The transmission system operators shall identify the information contained in interconnection agreements that directly affects network users and shall inform them thereof. | *Article 4*<br>*Information obligation*<br>1. The transmission system operators shall identify the information contained in interconnection agreements that directly affects network users and shall inform them thereof. |
| 2. Before concluding or amending an interconnection agreement which contains the rules referred to in Article 3(c), (d) and (e), transmission | 2. Before concluding or amending an interconnection agreement which contains the rules referred to in Article 3(c), (d) and (e), transmission |

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| system operators shall invite network users to comment on the proposed text of those rules at least two months before the agreement is concluded or amended. The transmission system operators shall take the network users' comments into account when concluding or amending their interconnection agreement. | system operators shall invite network users to comment on the proposed text of those rules at least two months before the agreement is concluded or amended. The transmission system operators shall take the network users' comments into account when concluding or amending their interconnection agreement. |
| 3. The mandatory terms of interconnection agreements listed in Article 3 or any amendments thereof concluded after the entry into force of this Regulation shall be communicated by the transmission system operators to their national regulatory authority and to Entsog within 10 days after conclusion or amendment of the agreement. Transmission system operators shall also communicate interconnection agreements upon request of competent national authorities of the Member State within 10 days. | 3. The mandatory terms of interconnection agreements listed in Article 3 or any amendments thereof concluded after the entry into force of this Regulation shall be communicated by the transmission system operators to their national regulatory authority and to Entsog within 10 days after conclusion or amendment of the agreement. Transmission system operators shall also communicate interconnection agreements upon request of competent national authorities of the ~~Member State~~ **Contracting Party** within 10 days. |
| *Article 5*<br>*Interconnection agreement template*<br>1. By 30 June 2015, Entsog shall develop and publish a draft interconnection agreement template covering the default terms and conditions set out in Articles 6 to 10. | *Article 5*<br>*Interconnection agreement template*<br>1. ~~By 30 June 2015, Entsog shall develop and publish a draft interconnection agreement template covering the default terms and conditions set out in Articles 6 to 10.~~ |
| 2. Any national regulatory authority may provide an opinion on the compliance of the template with national law to the Agency by 31 August 2015. The Agency having due regard to the opinions of the national regulatory authorities shall then provide its opinion on the Entsog template by 31 October 2015. After taking into account the opinion provided by the Agency, Entsog shall publish on its website the final template by 31 December 2015. | ~~2. Any national regulatory authority may provide an opinion on the compliance of the template with national law to the Agency by 31 August 2015. The Agency having due regard to the opinions of the national regulatory authorities shall then provide its opinion on the Entsog template by 31 October 2015. After taking into account the opinion provided by the Agency, Entsog shall publish on its website the final template by 31 December 2015.~~ |
| 3. If adjacent transmission system operators fail to agree on one or more of the terms and conditions set out in Articles 6 to 10 in their interconnection agreement in accordance with Article 3, they shall conclude an interconnection agreement on the basis of the Entsog template in respect of any term they failed to agree upon. | ~~3~~. If adjacent transmission system operators fail to agree on one or more of the terms and conditions set out in Articles 6 to 10 in their interconnection agreement in accordance with Article 3, they shall conclude an interconnection agreement on the basis of the Entsog template in respect of any term they failed to agree upon. |
| *Article 6*<br>*Rules for flow control*<br>1.In respect of flow control, the adjacent transmission system operators | *Article 6*<br>*Rules for flow control*<br>1.In respect of flow control, the adjacent transmission system operators |

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| shall:<br>(a) ensure that rules are established in order to facilitate a controllable, accurate, predictable and efficient gas flow across the interconnection point;<br>(b) ensure that rules are established for steering the gas flow across the interconnection point and for minimising the deviations from the flow pursuant to the matching process;<br>(c) designate the transmission system operator who is responsible for steering the gas flow across the interconnection point. If the adjacent transmission system operators fail to agree on this designation, 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. | shall:<br>(a) ensure that rules are established in order to facilitate a controllable, accurate, predictable and efficient gas flow across the interconnection point;<br>(b) ensure that rules are established for steering the gas flow across the interconnection point and for minimising the deviations from the flow pursuant to the matching process;<br>(c) designate the transmission system operator who is responsible for steering the gas flow across the interconnection point. If the adjacent transmission system operators fail to agree on this designation, 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. |
| 2. In order to steer the gas flow, the adjacent transmission system operators shall decide on the quantity and direction of the gas flow for each interconnection point and for each hour of the gas day.<br>The transmission system operator designated pursuant to point (c) of paragraph 1 shall be responsible for steering the gas flow across the interconnection point provided that contractual obligations regarding pressure are complied with by all adjacent transmission system operators:<br>(a) at a level of accuracy sufficient to minimise the steering difference; and<br>(b) at a level of stability in line with the efficient use of the gas transmission networks. | 2. In order to steer the gas flow, the adjacent transmission system operators shall decide on the quantity and direction of the gas flow for each interconnection point and for each hour of the gas day.<br>The transmission system operator designated pursuant to point (c) of paragraph 1 shall be responsible for steering the gas flow across the interconnection point provided that contractual obligations regarding pressure are complied with by all adjacent transmission system operators:<br>(a) at a level of accuracy sufficient to minimise the steering difference; and<br>(b) at a level of stability in line with the efficient use of the gas transmission networks. |
| 3. The quantity and direction of the gas flow decided by the adjacent transmission system operators shall reflect:<br>(a) the result of the matching process;<br>(b) the operational balancing account correction;<br>(c) any efficient flow control arrangements between the adjacent transmission system operators for purposes such as ramp-up, ramp-down, minimum flow, split of the flow at the virtual interconnection point if any, and/or switch of flow direction or operational cost efficiency;<br>(d) any arrangement managing cross-border trade restrictions due to gas | 3. The quantity and direction of the gas flow decided by the adjacent transmission system operators shall reflect:<br>(a) the result of the matching process;<br>(b) the operational balancing account correction;<br>(c) any efficient flow control arrangements between the adjacent transmission system operators for purposes such as ramp-up, ramp-down, minimum flow, split of the flow at the virtual interconnection point if any, and/or switch of flow direction or operational cost efficiency;<br>(d) any arrangement managing cross-border trade restrictions due to gas |

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| quality differences pursuant to Article 15 and/or odourisation practices pursuant to Article 19. | quality differences pursuant to Article 15 and/or odourisation practices pursuant to Article 19. |
| 4. A transmission system operator may decide to alter the quantity of gas or the gas flow direction or both, if this is needed, in order to:<br>(a) comply with provisions laid down in national or Union safety legislation applicable to the interconnection point;<br>(b) comply with requirements laid down in Emergency Plans and Preventive Action Plans developed in accordance with Regulation (EU) No 994/2010 of the European Parliament and of the Council;<br>(c) react in case the operator's system is affected by an exceptional event. | 4. A transmission system operator may decide to alter the quantity of gas or the gas flow direction or both, if this is needed, in order to:<br>(a) comply with provisions laid down in national or Union safety legislation applicable to the interconnection point;<br>(b) comply with requirements laid down in Emergency Plans and Preventive Action Plans developed in accordance with **applicable Energy Community legislation on security of gas supply** ~~the Regulation (EU) No 994/2010 of the European Parliament and of the Council~~;<br>(c) react in case the operator's system is affected by an exceptional event. |
| *Article 7*<br>*Measurement principles for gas quantity and quality*<br>1. In respect of the measurement principles for volume, energy and gas quality, the adjacent transmission system operators shall ensure that:<br>(a) the details of the measurement standards applicable at the interconnection point are established;<br>(b) the transmission system operator responsible for the installation, operation and maintenance of the measurement equipment is identified. This operator shall have the obligation to make all 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. | *Article 7*<br>*Measurement principles for gas quantity and quality*<br>1. In respect of the measurement principles for volume, energy and gas quality, the adjacent transmission system operators shall ensure that:<br>(a) the details of the measurement standards applicable at the interconnection point are established;<br>(b) the transmission system operator responsible for the installation, operation and maintenance of the measurement equipment is identified. This operator shall have the obligation to make all 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. |
| 2. The installation, operation and maintenance of measurement equipment at an interconnection point shall take into account the technical requirements imposed by national regulations on the adjacent transmission system operators. | 2. The installation, operation and maintenance of measurement equipment at an interconnection point shall take into account the technical requirements imposed by national regulations on the adjacent transmission system operators. |
| 3. The adjacent transmission system operators shall agree on measurement principles which shall at least include:<br>(a) a description of the metering station including measurement and analysis equipment to be used and details of any secondary equipment | 3. The adjacent transmission system operators shall agree on measurement principles which shall at least include:<br>(a) a description of the metering station including measurement and analysis equipment to be used and details of any secondary equipment |

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| that may be used in case of failure; | 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 or uncertainty margin within which the measurement equipment shall 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; | (b) the gas quality parameters and volume and energy that shall be measured, as well as the range and the maximum permissible error or uncertainty margin within which the measurement equipment shall 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 used to calculate those parameters which are not directly measured; | (c) the procedures and methods that shall be used to calculate those parameters which are not directly measured; |
| (d) a description of the method of calculation in respect of the maximum permissible error or uncertainty in the determination of energy transported; | (d) a description of the method of calculation in respect of the maximum permissible error or uncertainty in the determination of energy transported; |
| (e) a description of the data validation process in use for the measured parameters; | (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; | (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, including frequency and content, is provided among the adjacent transmission system operators in respect of the measured parameters; | (g) the way data, including frequency and content, is provided 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); | (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) the method of determining a correction to a measurement and any subsequent procedures that may be necessary in a temporary situation where the measurement equipment is found to be or have been in error (either under-reading or over-reading outside of its defined uncertainty range).This transmission system operator shall take appropriate action to end this situation. | (i) the method of determining a correction to a measurement and any subsequent procedures that may be necessary in a temporary situation where the measurement equipment is found to be or have been in error (either under-reading or over-reading outside of its defined uncertainty range).This transmission system operator shall take appropriate action to end this situation. |
| (j) rules that shall apply between adjacent transmission system operators in the event of failure of the measurement equipment; | (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: | (k) rules that shall apply between the adjacent transmission system operators for: |
| (i) access to the measurement facility; | (i) access to the measurement facility; |

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| (ii) additional verifications of measurement facility;<br>(iii) modification of the measurement facility; (iv) attendance during calibration and maintenance work at the measurement facility. | (ii) additional verifications of measurement facility;<br>(iii) modification of the measurement facility; (iv) attendance during calibration and maintenance work at the measurement facility. |
| 4. If the adjacent transmission system operators fail to comply with their obligations provided for in paragraphs 1 and 3:<br>(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 with the data regarding the measurement of gas flows at the interconnection point in a timely manner;<br>(b) the European standard EN1776 'Gas Supply Natural Gas Measuring Stations Functional Requirements' in the version applicable at the time shall apply. | 4. If the adjacent transmission system operators fail to comply with their obligations provided for in paragraphs 1 and 3:<br>(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 with the data regarding the measurement of gas flows at the interconnection point in a timely manner;<br>(b) the European standard EN1776 'Gas Supply Natural Gas Measuring Stations Functional Requirements' in the version applicable at the time shall apply. |
| *Article 8*<br>*Rules for the matching process*<br>1. In respect of the matching process, the adjacent transmission system operators shall establish:<br>(a) the rules detailing the matching process taking into account daily-hourly nomination arrangements where relevant;<br>(b) the rules governing the communication and processing of the relevant data among the adjacent transmission system operators in order 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). | *Article 8*<br>*Rules for the matching process*<br>1. In respect of the matching process, the adjacent transmission system operators shall establish:<br>(a) the rules detailing the matching process taking into account daily-hourly nomination arrangements where relevant;<br>(b) the rules governing the communication and processing of the relevant data among the adjacent transmission system operators in order 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 and re-nominations shall be managed in accordance with the following:<br>(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;<br>(b) 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 | 2. Nominations and re-nominations shall be managed in accordance with the following:<br>(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;<br>(b) 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 |

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| months after publication of the matching rule;<br>(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;<br>(d) the adjacent transmission system operators shall specify the applicable time schedule for the matching process within the nomination or re-nomination cycle, given that the whole matching process shall not take more than two hours from the starting of the nomination or re-nomination cycle, and shall take into account:<br>(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 or re-nomination cycle, including as a minimum the data referred to in paragraph 4(b);<br>(ii) the data exchange process defined in point (i) above shall enable the adjacent transmission system operators to perform all calculation and communication steps in an accurate and timely manner. | months after publication of the matching rule;<br>(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;<br>(d) the adjacent transmission system operators shall specify the applicable time schedule for the matching process within the nomination or re-nomination cycle, given that the whole matching process shall not take more than two hours from the starting of the nomination or re-nomination cycle, and shall take into account:<br>(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 or re-nomination cycle, including as a minimum the data referred to in paragraph 4(b);<br>(ii) the data exchange process defined in point (i) above shall enable the adjacent transmission system operators to perform all calculation and communication steps in an accurate and timely manner. |
| 3. When processing nominations for an interconnection point, the adjacent transmission system operators shall ensure that the gas flow at both sides of the interconnection point is calculated on a consistent basis taking into account any temporary reduction of capacity due to any of the conditions referred to in Article 6(4) on one or both sides of the interconnection point. | 3. When processing nominations for an interconnection point, the adjacent transmission system operators shall ensure that the gas flow at both sides of the interconnection point is calculated on a consistent basis taking into account any temporary reduction of capacity due to any of the conditions referred to in Article 6(4) on one or both sides of the interconnection point. |
| 4. Each interconnection agreement shall specify in its provisions on data exchange for the matching process:<br>(a) the use of data exchange between the adjacent transmission system operators for the matching process;<br>(b) the harmonised information contained within the data exchange for the matching process which shall contain at least the following:<br>(i) interconnection point identification;<br>(ii) network user identification or if applicable its portfolio identification;<br>(iii) identification of the party delivering to or receiving gas from the network user or if applicable its portfolio identification; | 4. Each interconnection agreement shall specify in its provisions on data exchange for the matching process:<br>(a) the use of data exchange between the adjacent transmission system operators for the matching process;<br>(b) the harmonised information contained within the data exchange for the matching process which shall contain at least the following:<br>(i) interconnection point identification;<br>(ii) network user identification or if applicable its portfolio identification;<br>(iii) identification of the party delivering to or receiving gas from the network user or if applicable its portfolio identification; |

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| (iv) start and end time of the gas flow for which the matching is made;<br>(v) gas day;<br>(vi) processed and confirmed quantities;<br>(vii) direction of gas flow. | (iv) start and end time of the gas flow for which the matching is made;<br>(v) gas day;<br>(vi) processed and confirmed quantities;<br>(vii) direction of gas flow. |
| 5. Unless otherwise agreed by the adjacent transmission system operators in their interconnection agreement, the following shall apply:<br>(a) the transmission system operators shall use the lesser rule. The application of the lesser rule as the default rule may only be restricted in case the conditions of point 2.2.3.1 of Annex I of Regulation (EC) No 715/2009 are fulfilled and its application would prevent the offer of firm capacity from the congestion management procedures;<br>(b) the transmission system operator in control of the flow control equipment shall be the matching transmission system operator;<br>(c) the transmission system operators shall perform the matching process in the following sequential steps:<br>(i) calculating and sending of processed quantities of gas by the initiating transmission system operator within 45 minutes of the start of the nomination or re-nomination cycle;<br>(ii) calculating and sending of confirmed quantities of gas by the matching transmission system operator within 90 minutes from the start of the nomination or re-nomination cycle;<br>(iii) sending confirmed quantities of gas to network users and scheduling the gas flow across the interconnection point by the adjacent transmission system operators within two hours from the start of the nomination or re-nomination cycle. These sequential steps shall be without prejudice to the rule for minimum interruption lead times referred to in Article 22 of Regulation (EU) No 984/2013 and paragraph 2 (d) of this Article. | 5. Unless otherwise agreed by the adjacent transmission system operators in their interconnection agreement, the following shall apply:<br>(a) the transmission system operators shall use the lesser rule. The application of the lesser rule as the default rule may only be restricted in case the conditions of point 2.2.3.1 of Annex I of Regulation (EC) No 715/2009 are fulfilled and its application would prevent the offer of firm capacity from the congestion management procedures;<br>(b) the transmission system operator in control of the flow control equipment shall be the matching transmission system operator;<br>(c) the transmission system operators shall perform the matching process in the following sequential steps:<br>(i) calculating and sending of processed quantities of gas by the initiating transmission system operator within 45 minutes of the start of the nomination or re-nomination cycle;<br>(ii) calculating and sending of confirmed quantities of gas by the matching transmission system operator within 90 minutes from the start of the nomination or re-nomination cycle;<br>(iii) sending confirmed quantities of gas to network users and scheduling the gas flow across the interconnection point by the adjacent transmission system operators within two hours from the start of the nomination or re-nomination cycle. These sequential steps shall be without prejudice to the ~~rule for~~ minimum interruption lead times ~~referred to in Article 22 of Regulation (EU) No 984/2013~~ **decided jointly by adjacent transmission system operators** and paragraph 2 (d) of this Article.<br>**The default minimum interruption lead time for a given gas hour shall be forty five minutes after the start of the re-nomination cycle for that gas hour. Where two transmission system operators wish to shorten the lead time for interruptions, any related agreement entered into between the transmission system** |

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| | **operators shall be subject to competent national regulatory authority approval.** |
| *Article 9*<br>*Rules for the allocation of gas quantities*<br>1. In respect of the allocation of gas quantities, the adjacent transmission system operators shall establish rules ensuring consistency between the allocated quantities at both sides of the interconnection point. | *Article 9*<br>*Rules for the allocation of gas quantities*<br>1. In respect of the allocation of gas quantities, the adjacent transmission system operators shall establish rules ensuring consistency between the allocated quantities at both sides of the interconnection point. |
| 2. Unless otherwise agreed in the interconnection agreement, the transmission system operators shall use an operational balancing account. The transmission system operator in control of the measurement equipment shall recalculate the operational balancing account with validated quantities and communicate it to the adjacent transmission system operator(s). | 2. Unless otherwise agreed in the interconnection agreement, the transmission system operators shall use an operational balancing account. The transmission system operator in control of the measurement equipment shall recalculate the operational balancing account with validated quantities and communicate it to the adjacent transmission system operator(s). |
| 3. Where an operational balancing account applies:<br>(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 their respective network users shall be equal to the confirmed quantities;<br>(b) the adjacent transmission system operators shall maintain an operational balancing account balance that is as close to zero as possible; (c) the operational balancing account limits shall take into account specific characteristics of each interconnection point and/or the interconnected transmission networks, in particular:<br>(i) physical characteristics of the interconnection point;<br>(ii) linepack capability of each transmission network;<br>(iii) the total technical capacities at the interconnection point;<br>(iv) gas flow dynamics at the interconnected transmission networks.<br>Where the defined limits of the operational balancing account are reached, the adjacent transmission system operators may agree to extend those limits in order to provide allocations to network users that are equal to their confirmed quantities or otherwise allocate quantities to network users proportionally based on the measured quantity. | 3. Where an operational balancing account applies:<br>(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 their respective network users shall be equal to the confirmed quantities;<br>(b) the adjacent transmission system operators shall maintain an operational balancing account balance that is as close to zero as possible; (c) the operational balancing account limits shall take into account specific characteristics of each interconnection point and/or the interconnected transmission networks, in particular:<br>(i) physical characteristics of the interconnection point;<br>(ii) linepack capability of each transmission network;<br>(iii) the total technical capacities at the interconnection point;<br>(iv) gas flow dynamics at the interconnected transmission networks.<br>Where the defined limits of the operational balancing account are reached, the adjacent transmission system operators may agree to extend those limits in order to provide allocations to network users that are equal to their confirmed quantities or otherwise allocate quantities to network users proportionally based on the measured quantity. |

**Comment [ecs2]:** This is the text of Article 22 of Network Code on Capacity Allocation Mechanisms (CAM), referred here. Since NC CAM is not yet applicable in the EnC, description of lead time for interruptions has been copied to avoid discrepancies

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| 4. 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 at least two months after publication of the allocation rule. | 4. 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 at least two months after publication of the allocation rule. |
| *Article 10*<br>*Communication procedures in case of exceptional events*<br>1. The adjacent transmission system operators shall ensure that communication procedures which facilitate fast and simultaneous communication in cases of exceptional events are established. Unless otherwise agreed, the communication between the involved transmission system operators shall be performed by oral communication in English for information, followed by an electronic written confirmation. | *Article 10*<br>*Communication procedures in case of exceptional events*<br>1. The adjacent transmission system operators shall ensure that communication procedures which facilitate fast and simultaneous communication in cases of exceptional events are established. Unless otherwise agreed, the communication between the involved transmission system operators shall be performed by oral communication in English for information, followed by an electronic written confirmation. |
| 2.The transmission system operator affected by an exceptional event shall be required, as a minimum, to inform its network users with respect to point (b) and (c) of this paragraph if there is a potential impact on their confirmed quantities and the adjacent transmission system operator(s) with respect to point (a) and (c) of this paragraph of the occurrence of such exceptional event and to provide all necessary information about:<br>(a) the possible impact on the quantities and quality of gas that can be transported through the interconnection point;<br>(b) the possible impact on the confirmed quantities for network users active at the concerned interconnection point(s);<br>(c) the expected and actual end of the exceptional event. | 2.The transmission system operator affected by an exceptional event shall be required, as a minimum, to inform its network users with respect to point (b) and (c) of this paragraph if there is a potential impact on their confirmed quantities and the adjacent transmission system operator(s) with respect to point (a) and (c) of this paragraph of the occurrence of such exceptional event and to provide all necessary information about:<br>(a) the possible impact on the quantities and quality of gas that can be transported through the interconnection point;<br>(b) the possible impact on the confirmed quantities for network users active at the concerned interconnection point(s);<br>(c) the expected and actual end of the exceptional event. |
| 3. This Article applies without prejudice to the provisions set forth under Regulation (EU) No 1227/2011 of the European Parliament and of the Council and to its implementing acts. | ~~3. This Article applies without prejudice to the provisions set forth under Regulation (EU) No 1227/2011 of the European Parliament and of the Council and to its implementing acts.~~ |
| *Article 11*<br>*Settlement of disputes arising from Interconnection Agreements*<br>1. The adjacent transmission system operators shall endeavour to solve amicably any disputes arising out of or in connection with the interconnection agreement and specify therein a dispute settlement | *Article 11*<br>*Settlement of disputes arising from Interconnection Agreements*<br>1. The adjacent transmission system operators shall endeavour to solve amicably any disputes arising out of or in connection with the interconnection agreement and specify therein a dispute settlement |

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| mechanism for disputes which could not be amicably settled. The dispute settlement mechanism shall at least specify:<br>(a) the applicable law; and<br>(b) the court of jurisdiction or the terms and conditions of the appointment of experts either within the framework of an institutional forum or on an ad hoc basis, which may include arbitration.<br>Where the dispute settlement mechanism is arbitration, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards shall apply. | mechanism for disputes which could not be amicably settled. The dispute settlement mechanism shall at least specify:<br>(a) the applicable law; and<br>(b) the court of jurisdiction or the terms and conditions of the appointment of experts either within the framework of an institutional forum or on an ad hoc basis, which may include arbitration.<br>~~Where the dispute settlement mechanism is arbitration, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards shall apply.~~ |
| 2 In the absence of agreement on the dispute settlement mechanism, Council Regulation (EC) No 44/2001 and Regulation (EC) No 593/2008 of the European Parliament and of the Council shall apply. | ~~2 In the absence of agreement on the dispute settlement mechanism, Council Regulation (EC) No 44/2001 and Regulation (EC) No 593/2008 of the European Parliament and of the Council shall apply~~. |
| *Article 12*<br>*Amendment process*<br>1. The adjacent transmission system operators shall establish a transparent and detailed amendment process of their interconnection agreement to be triggered by a written notice of one of the transmission system operators. | *Article 12*<br>*Amendment process*<br>1. The adjacent transmission system operators shall establish a transparent and detailed amendment process of their interconnection agreement to be triggered by a written notice of one of the transmission system operators. |
| 2. If the adjacent transmission system operators fail to reach an agreement on the amendment process, they may use the dispute settlement mechanisms developed in accordance with Article 11. | 2. If the adjacent transmission system operators fail to reach an agreement on the amendment process, they may use the dispute settlement mechanisms developed in accordance with Article 11. |
| CHAPTER III<br>UNITS | CHAPTER III<br>UNITS |
| *Article 13*<br>*Common set of units*<br>1. Each transmission system operator shall use the common set of units defined in this Article for any data exchange and data publication related to Regulation (EC) No 715/2009. | *Article 13*<br>*Common set of units*<br>1. Each transmission system operator shall use the common set of units defined in this Article for any data exchange and data publication related to Regulation (EC) No 715/2009. |
| 2. For the parameters of pressure, temperature, volume, gross calorific value, energy, and Wobbe-index the transmission system operators shall use: | 2. For the parameters of pressure, temperature, volume, gross calorific value, energy, and Wobbe-index the transmission system operators shall use: |

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| (a) pressure: bar<br>(b) temperature: °C (degree Celsius)<br>(c) volume: $m^3$<br>(d) gross calorific value (GCV): $kWh/m^3$<br>(e) energy: kWh (based on GCV)<br>(f) Wobbe-index: $kWh/m^3$ (based on GCV)<br><br>For pressure, the transmission system operators shall indicate whether it refers to absolute pressure (bar (a)) or gauge pressure (bar (g)).<br>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.<br>Whenever transmission system operators communicate data on the volume, GCV, energy and Wobbe-index, they shall specify under which reference conditions these values were calculated. | (a) pressure: bar<br>(b) temperature: °C (degree Celsius)<br>(c) volume: $m^3$<br>(d) gross calorific value (GCV): $kWh/m^3$<br>(e) energy: kWh (based on GCV)<br>(f) Wobbe-index: $kWh/m^3$ (based on GCV)<br><br>For pressure, the transmission system operators shall indicate whether it refers to absolute pressure (bar (a)) or gauge pressure (bar (g)).<br>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.<br>Whenever transmission system operators communicate data on the volume, GCV, energy and Wobbe-index, they shall specify under which reference conditions these values were calculated. |
| 3. In cases where one Member State is connected to only one other Member State, the adjacent transmission system operators and the parties they communicate with may agree to continue to use other reference conditions for data exchange in connection with Regulation (EC) No 715/2009, subject to the approval of their national regulatory authorities. | 3. In cases where one ~~Member State~~ **Contracting Party** is connected to only one other ~~Member State~~ **Contracting Party or one Member State of the European Union,** the adjacent transmission system operators and the parties they communicate with may agree to continue to use other reference conditions for data exchange in connection with Regulation (EC) No 715/2009, subject to the approval of their national regulatory authorities. |
| *Article 14*<br>*Additional units*<br>The transmission system operators and the parties they communicate with in connection with Regulation (EC) No 715/2009 may agree to use, in addition to the common set of units, additional units or reference conditions for data exchange or data publication. In such a situation conversion between reference conditions shall be done on the basis of the actual gas composition. If the relevant gas composition data is not available, the conversion factors used shall be consistent with the Annex based on EN ISO 13443 'Natural gas — Standard reference conditions' in | *Article 14*<br>*Additional units*<br>The transmission system operators and the parties they communicate with in connection with Regulation (EC) No 715/2009 may agree to use, in addition to the common set of units, additional units or reference conditions for data exchange or data publication. In such a situation conversion between reference conditions shall be done on the basis of the actual gas composition. If the relevant gas composition data is not available, the conversion factors used shall be consistent with the Annex based on EN ISO 13443 'Natural gas — Standard reference conditions' in |

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| the version applicable at the time. | the version applicable at the time. |
| CHAPTER IV<br>GAS QUALITY AND ODOURISATION | CHAPTER IV<br>GAS QUALITY AND ODOURISATION |
| *Article 15*<br>*Managing cross-border trade restrictions due to gas quality differences*<br>1. Transmission system operators shall cooperate to avoid restrictions to cross-border trade due to gas quality differences. These actions, initiated and carried out by the transmission system operators in their standard operations, may include, among others, swapping and co-mingling. | *Article 15*<br>*Managing cross-border trade restrictions due to gas quality differences*<br>1. Transmission system operators shall cooperate to avoid restrictions to cross-border trade due to gas quality differences. These actions, initiated and carried out by the transmission system operators in their standard operations, may include, among others, swapping and co-mingling. |
| 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, those authorities may require the transmission system operators to perform, within 12 months, the actions referred to in points (a) to (e) in sequence:<br>(a) 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;<br>(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;<br>(c) produce an estimate of the implementation time for each potential option;<br>(d) conduct a public consultation on identified feasible solutions and take into consideration the results of the consultation;<br>(e) submit a joint 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 other competent national authorities of each involved Member State for information.<br>Where the concerned transmission system operators do not reach an agreement on a solution, each transmission system operator shall promptly inform its national regulatory authority. | 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, those authorities may require the transmission system operators to perform, within 12 months, the actions referred to in points (a) to (e) in sequence:<br>(a) 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;<br>(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;<br>(c) produce an estimate of the implementation time for each potential option;<br>(d) conduct a public consultation on identified feasible solutions and take into consideration the results of the consultation;<br>(e) submit a joint 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 other competent national authorities of each involved ~~Member State~~ **Contracting Party** for information.<br>Where the concerned transmission system operators do not reach an agreement on a solution, each transmission system operator shall |

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| | promptly inform its national regulatory authority. |
| 3. Before adopting a decision pursuant to point (e) of paragraph 2, each national regulatory authority shall consult the national regulatory authorities of the concerned Member States. In adopting its decision, each national regulatory authority shall take account of the adjacent national regulatory authorities' opinion with a view to have a coordinated decision based on mutual agreement. | 3. Before adopting a decision pursuant to point (e) of paragraph 2, each national regulatory authority shall consult the national regulatory authorities of the concerned ~~Member States~~ **Contracting Parties**. In adopting its decision, each national regulatory authority shall take account of the adjacent national regulatory authorities' opinion with a view to have a coordinated decision based on mutual agreement. |
| *Article 16*<br>*Short term monitoring on gas quality — data publication*<br>Transmission system operators shall publish on their website for each interconnection point, with a frequency of at least once per hour during the gas day, the Wobbe-index and gross calorific value for gas directly entering their transmission networks at all physical interconnection points. Entsog shall publish on its Union-wide central platform established pursuant to point 3.1.1(1)(h) of Annex I of Regulation (EC) No 715/2009 a link to the relevant information on the websites of the transmission system operators. | *Article 16*<br>*Short term monitoring on gas quality — data publication*<br>Transmission system operators shall publish on their website for each interconnection point, with a frequency of at least once per hour during the gas day, the Wobbe-index and gross calorific value for gas directly entering their transmission networks at all physical interconnection points.<br>**Exceptionally, for the interconnection points without adequate measurement equipment in place at the moment of adoption of this Regulation, a frequency of publishing the Wobbe-index and gross calorific value shall be once per gas day. In such cases, the transmission system operator is obliged to submit a request for exemption without delay to the relevant regulatory authority. A request for exemption has to include a proposal on installing adequate measurement equipment with exact deadline of putting such equipment in operation, which cannot be longer than two years. An exemption has to be confirmed by the regulatory authorities having the jurisdiction over adjacent transmission system operators.**<br>Entsog shall publish on its ~~Union-wide~~ central platform established pursuant to point 3.1.1(1)(h) of Annex I of Regulation (EC) No 715/2009 a link to the relevant information on the websites of the transmission system operators**.** |
| *Article 17*<br>*Information provision on short-term gas quality variation*<br>1. In addition to interconnection points, this Article shall apply to other points on transmission networks where the gas quality is measured. | *Article 17*<br>*Information provision on short-term gas quality variation*<br>1. In addition to interconnection points, this Article shall apply to other points on transmission networks where the gas quality is measured. |

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| 2. A transmission system operator may select one or several of the following parties to receive information on gas quality variation:<br>(a) final customers directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes or a network user acting on behalf of a final customer whose operational processes are adversely affected by gas quality changes, where a direct contractual arrangement between a transmission system operator and its directly connected final customers is not foreseen by the national rules;<br>(b) distribution system operators directly connected to the transmission system operator's network, with connected final customers whose operational processes are adversely affected by gas quality changes;<br>(c) storage system operators directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes. | 2. A transmission system operator may select one or several of the following parties to receive information on gas quality variation:<br>(a) final customers directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes or a network user acting on behalf of a final customer whose operational processes are adversely affected by gas quality changes, where a direct contractual arrangement between a transmission system operator and its directly connected final customers is not foreseen by the national rules;<br>(b) distribution system operators directly connected to the transmission system operator's network, with connected final customers whose operational processes are adversely affected by gas quality changes;<br>(c) storage system operators directly connected to the transmission system operator's network, whose operational processes are adversely affected by gas quality changes. |
| 3. Each transmission system operator shall:<br>(a) define and maintain a list of parties entitled to receive indicative gas quality information;<br>(b) cooperate with the parties identified in the above list in order to assess:<br>(i) the relevant information on gas quality parameters to be provided;<br>(ii) the frequency for the information to be provided;<br>(iii) the lead time;<br>(iv) the method of communication. | 3. Each transmission system operator shall:<br>(a) define and maintain a list of parties entitled to receive indicative gas quality information;<br>(b) cooperate with the parties identified in the above list in order to assess:<br>(i) the relevant information on gas quality parameters to be provided;<br>(ii) the frequency for the information to be provided;<br>(iii) the lead time;<br>(iv) the method of communication. |
| 4. Paragraph 3 shall not impose an obligation on transmission system operators to install additional measurement or forecasting equipment, unless otherwise required by the national regulatory authority. The information under paragraph 3(b)(i) of this Article shall be provided as the transmission system operator's best estimate at a point in time and for the internal use of the recipient of the information. | 4. Paragraph 3 shall not impose an obligation on transmission system operators to install additional measurement or forecasting equipment, unless otherwise required by the national regulatory authority. The information under paragraph 3(b)(i) of this Article shall be provided as the transmission system operator's best estimate at a point in time and for the internal use of the recipient of the information. |
| *Article 18* | *Article 18* |

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| *Long-term monitoring on gas quality in transmission systems* | *Long-term monitoring on gas quality in transmission systems* |
| 1. Entsog shall publish every two years a long-term gas quality monitoring outlook for transmission systems in order to identify the potential trends of gas quality parameters and respective potential variability within the next 10 years. The first long-term gas quality monitoring outlook shall be published along with the Ten-Year Network Development Plan of 2017. | 1. Entsog shall publish every two years a long-term gas quality monitoring outlook for transmission systems in order to identify the potential trends of gas quality parameters and respective potential variability within the next 10 years. The first long-term gas quality monitoring outlook shall be published along with the Ten-Year Network Development Plan of 2017. |
| 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(1) of Regulation (EC) No 715/2009. | 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(1) of Regulation (EC) No 715/2009. |
| 3. The long-term gas quality monitoring outlook shall cover at least the Wobbe-index and gross calorific value. Additional gas quality parameters may be included after consultation with the stakeholders referred to in paragraph 8. | 3. The long-term gas quality monitoring outlook shall cover at least the Wobbe-index and gross calorific value. Additional gas quality parameters may be included after consultation with the stakeholders referred to in paragraph 8. |
| 4. The long-term gas quality monitoring outlook shall identify potential new supply sources from a gas quality perspective. | 4. The long-term gas quality monitoring outlook shall identify potential new supply sources 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 stakeholders' engagement process referred to in paragraph 8. | 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 stakeholders' engagement process referred to in paragraph 8. |
| 6. For every gas quality parameter considered and every region, the analysis shall result in a range within which the parameter is likely to evolve. | 6. For every gas quality parameter considered and every region, the analysis shall result in a range within which the parameter is likely to evolve. |
| 7. The long-term gas quality monitoring outlook shall be consistent and aligned with the Entsog Union-wide Ten-Year Network Development Plan under preparation at the same time. | 7. The long-term gas quality monitoring outlook shall be consistent and aligned with the Entsog Union-wide Ten-Year Network Development Plan under preparation at the same time. |
| 8. The stakeholders' consultation process used for the Union-wide Ten-Year Network Development Plan shall be expanded 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. | 8. The stakeholders' consultation process used for the Union-wide Ten-Year Network Development Plan shall be expanded 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. |

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| *Article 19*<br>*Managing cross-border trade restrictions due to differences in odourisation practices* | *Article 19*<br>*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 cannot be avoided by the concerned transmission system operators and is recognised by national authorities, the authorities may require the concerned transmission system operators to reach an agreement within six months, which may include swapping and flow commitments, to solve any restriction recognised. The concerned adjacent transmission system operators shall provide their respective national authorities with the agreement for approval. | 1. Where a restriction to cross-border trade due to differences in odourisation practices cannot be avoided by the concerned transmission system operators and is recognised by national authorities, the authorities may require the concerned transmission system operators to reach an agreement within six months, which may include swapping and flow commitments, to solve any restriction recognised. The concerned adjacent transmission system operators shall provide their respective national authorities with the agreement for approval. |
| 2. Where no agreement can be reached between the concerned transmission system operators after the six-month period referred to in paragraph 1 or where the national 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 national authorities, shall, within the following 12 months, define a detailed plan setting out the most cost effective method to remove a recognised restriction at the specific cross-border interconnection point. | 2. Where no agreement can be reached between the concerned transmission system operators after the six-month period referred to in paragraph 1 or where the national 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 national authorities, shall, within the following 12 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, the concerned transmission system operators shall in sequence:<br>(a) develop options to remove the restriction by identifying and assessing:<br>(i) a conversion towards cross-border physical flow of non-odourised gas;<br>(ii) the potential physical flow of odourised gas into the non-odourised transmission network or part thereof and interconnected downstream systems;<br>(iii) an acceptable level of odourant for cross-border physical gas flow.<br>(b) jointly carry out a cost-benefit analysis on the technically feasible options to define economically efficient solutions. That analysis shall:<br>(i) take into account the level of safety;<br>(ii) include information on projected volumes of gas to be transported | 3. For the purpose of fulfilling the obligations under paragraph 2, the concerned transmission system operators shall in sequence:<br>(a) develop options to remove the restriction by identifying and assessing:<br>(i) a conversion towards cross-border physical flow of non-odourised gas;<br>(ii) the potential physical flow of odourised gas into the non-odourised transmission network or part thereof and interconnected downstream systems;<br>(iii) an acceptable level of odourant for cross-border physical gas flow.<br>(b) jointly carry out a cost-benefit analysis on the technically feasible options to define economically efficient solutions. That analysis shall:<br>(i) take into account the level of safety;<br>(ii) include information on projected volumes of gas to be transported |

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| and details of costs of necessary infrastructure investments;<br>(iii) specify the breakdown of costs and benefits between the categories of affected parties;<br>(c) produce an estimate of the implementation time for each potential option;<br>(d) conduct a public consultation and take into consideration the results of such consultation;<br>(e) submit the feasible solutions including the cost recovery mechanism and implementation timing to the national authorities for approval.<br>Once a solution is approved by the national authorities, that solution shall be implemented in accordance with the timeframe provided for in point (e). | and details of costs of necessary infrastructure investments;<br>(iii) specify the breakdown of costs and benefits between the categories of affected parties;<br>(c) produce an estimate of the implementation time for each potential option;<br>(d) conduct a public consultation and take into consideration the results of such consultation;<br>(e) submit the feasible solutions including the cost recovery mechanism and implementation timing to the national authorities for approval.<br>Once a solution is approved by the national authorities, that solution shall be implemented in accordance with the timeframe provided for in point (e). |
| 4. If the national authorities do not approve any solution submitted under point (e) of paragraph 3 within six months from its submission or if the concerned transmission system operators fail to propose a solution within the 12 months' framework of paragraph 2, a shift towards the cross-border physical flow of non-odourised gas shall be implemented within a time-frame approved by the national authorities, but not exceeding four years. After a full technical shift towards non-odourised gas, transmission system operators shall accept technically unavoidable levels of successively reducing residual amounts of odourants in cross-border flows. | 4. If the national authorities do not approve any solution submitted under point (e) of paragraph 3 within six months from its submission or if the concerned transmission system operators fail to propose a solution within the 12 months' framework of paragraph 2, a shift towards the cross-border physical flow of non-odourised gas shall be implemented within a time-frame approved by the national authorities, but not exceeding four years. After a full technical shift towards non-odourised gas, transmission system operators shall accept technically unavoidable levels of successively reducing residual amounts of odourants in cross-border flows. |
| CHAPTER V<br>DATA EXCHANGE | CHAPTER V<br>DATA EXCHANGE |
| *Article 20*<br>*General provisions*<br>1. For the purposes of this Chapter, 'counterparties' means network users active at:<br>(a) interconnection points; or<br>(b) both interconnection points and virtual trading points. | *Article 20*<br>*General provisions*<br>1. For the purposes of this Chapter, 'counterparties' means network users active at:<br>(a) interconnection points; or<br>(b) both interconnection points and virtual trading points. |
| 2. The data exchange requirements foreseen by point 2.2 of Annex I to Regulation (EC) No 715/2009, Commission Regulation (EU) No | 2. The data exchange requirements foreseen by point 2.2 of Annex I to Regulation (EC) No 715/2009~~, Commission Regulation (EU) No~~ |

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| 984/2013, Commission Regulation (EU) No 312/2014, Commission Regulation (EU) No 1227/2011 and this Regulation between transmission system operators and from transmission system operators to their counterparties shall be fulfilled by common data exchange solutions set out in Article 21. | ~~984/2013, Commission Regulation (EU) No 312/2014, Commission Regulation (EU) No 1227/2011~~ and this Regulation between transmission system operators and from transmission system operators to their counterparties shall be fulfilled by common data exchange solutions set out in Article 21. |
| *Article 21*<br>*Common data exchange solutions*<br>1. Depending on the data exchange requirements under Article 20(2), one or more of the following types of data exchange may be implemented and used:<br>(a) document-based data exchange: the data is wrapped into a file and automatically exchanged between the respective IT systems;<br>(b) integrated data exchange: the data is exchanged between two applications directly on the respective IT systems;<br>(c) interactive data exchange: the data is exchanged interactively through a web application via a browser. | *Article 21*<br>*Common data exchange solutions*<br>1. Depending on the data exchange requirements under Article 20(2), one or more of the following types of data exchange may be implemented and used:<br>(a) document-based data exchange: the data is wrapped into a file and automatically exchanged between the respective IT systems;<br>(b) integrated data exchange: the data is exchanged between two applications directly on the respective IT systems;<br>(c) interactive data exchange: the data is exchanged interactively through a web application via a browser. |
| 2. The common data exchange solutions shall comprise the protocol, the data format and the network. The following common data exchange solutions shall be used for each of the types of data exchange listed in paragraph 1:<br>(a) For the document-based data exchange:<br>(i) protocol: AS4;<br>(ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability. Entsog shall publish such an equivalent data format.<br>(b) For the integrated data exchange:<br>(i) protocol: HTTP/S-SOAP;<br>(ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability. Entsog shall publish such an equivalent data format.<br>(c) For the interactive data exchange, the protocol shall be HTTP/S.<br>For all data exchange types set out in points (a) to (c), the network shall | 2. The common data exchange solutions shall comprise the protocol, the data format and the network. The following common data exchange solutions shall be used for each of the types of data exchange listed in paragraph 1:<br>(a) For the document-based data exchange:<br>(i) protocol: AS4;<br>(ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability**, as published by** Entsog ~~shall publish such an equivalent data format.~~<br>(b) For the integrated data exchange:<br>(i) protocol: HTTP/S-SOAP;<br>(ii) data format: Edig@s-XML, or an equivalent data format ensuring identical degree of interoperability, **as published by** Entsog ~~shall publish such an equivalent data format.~~<br>(c) For the interactive data exchange, the protocol shall be HTTP/S.<br>For all data exchange types set out in points (a) to (c), the network shall |

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| be internet. | be internet. |
| 3. Where a potential need to change the common data exchange solution is identified, Entsog, on its own initiative or on the request of ACER, should evaluate relevant technical solutions and produce a cost-benefit analysis of the potential change(s) that would be needed including the analysis of the reasons that make a technological evolutional step necessary. A public consultation involving all stakeholders shall be carried out by Entsog including the presentation of the result of the evaluation and proposal(s) based on the cost-benefit analysis realised. | ~~3. Where a potential need to change the common data exchange solution is identified, Entsog, on its own initiative or on the request of ACER, should evaluate relevant technical solutions and produce a cost-benefit analysis of the potential change(s) that would be needed including the analysis of the reasons that make a technological evolutional step necessary. A public consultation involving all stakeholders shall be carried out 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 (EC) No 715/2009. | ~~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 (EC) No 715/2009.~~ |
| *Article 22*<br>*Data exchange system security and availability*<br>1. Each transmission system operator and each counterparty shall be responsible for ensuring that the appropriate security measures are undertaken. In particular, they shall:<br>(a) secure the communication chain in order to provide secured and reliable communications, including the protection of the confidentiality by encryption, integrity and the authenticity by signature of the sender and non-repudiation by a signed confirmation;<br>(b) implement appropriate security measures in order to prevent unauthorised access of their IT infrastructure;<br>(c) notify the other parties it communicates with, without delay, in regard to any unauthorised access which has or may have occurred on his own system. | *Article 22*<br>*Data exchange system security and availability*<br>1. Each transmission system operator and each counterparty shall be responsible for ensuring that the appropriate security measures are undertaken. In particular, they shall:<br>(a) secure the communication chain in order to provide secured and reliable communications, including the protection of the confidentiality by encryption, integrity and the authenticity by signature of the sender and non-repudiation by a signed confirmation;<br>(b) implement appropriate security measures in order to prevent unauthorised access of their IT infrastructure;<br>(c) notify the other parties it communicates with, without delay, in regard to any unauthorised access which has or may have occurred on his own system. |
| 2. Each transmission system operator shall be responsible for ensuring the availability of its own system and shall:<br>(a) take appropriate measures to prevent that a single point of failure causes an unavailability of the data exchange system, including up to the network connection(s) with the internet service provider(s);<br>(b) obtain the appropriate services and support from its internet service | 2. Each transmission system operator shall be responsible for ensuring the availability of its own system and shall:<br>(a) take appropriate measures to prevent that a single point of failure causes an unavailability of the data exchange system, including up to the network connection(s) with the internet service provider(s);<br>(b) obtain the appropriate services and support from its internet service |

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| provider(s);<br>(c) keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform its counterparties in a timely manner, prior to the planned unavailability. | provider(s);<br>(c) keep the downtime, as a consequence of planned IT maintenance, to a minimum and shall inform its counterparties in a timely manner, prior to the planned unavailability. |
| *Article 23*<br>*Implementation of the common data exchange solutions*<br>1. Depending on the data exchange requirements under Article 20(2), transmission system operators shall make available and use the common data exchange solutions defined in Article 21. | *Article 23*<br>*Implementation of the common data exchange solutions*<br>1. Depending on the data exchange requirements under Article 20(2), transmission system operators shall make available and use the common data exchange solutions defined in Article 21. |
| 2. Where data exchange solutions between a transmission system operator and concerned counterparties are in place on the date of entry into force of this Regulation and provided that the existing data exchange solutions are compatible with Article 22 and with data exchange requirements under Article 20(2), the existing data exchange solutions may continue to apply after consultation with network users and subject to the approval of the national regulatory authority of the transmission system operator. | 2. Where data exchange solutions between a transmission system operator and concerned counterparties are in place on ~~the date of entry into force of this Regulation~~ **1 October 2018** and provided that the existing data exchange solutions are compatible with Article 22 and with data exchange requirements under Article 20(2), the existing data exchange solutions may continue to apply after consultation with network users and subject to the approval of the national regulatory authority of the transmission system operator. |
| *Article 24*<br>*Development process for common network operation tools*<br>1. For each data exchange requirement under Article 20(2), Entsog shall develop a common network operation tool in accordance with Article 8(3)(a) of Regulation (EC) No 715/2009 and shall publish it on its website. A common network operation tool shall specify the common data exchange solution relevant for the respective data exchange requirement. A common network operation tool may also include business requirement specifications, release management and implementation guidelines. | *Article 24*<br>*Development process for common network operation tools*<br>1. For each data exchange requirement under Article 20(2), ~~Entsog shall develop~~ a common network operation tool **developed by Entsog** in accordance with Article 8(3)(a) of Regulation (EC) No 715/2009 **exists**. A common network operation tool shall specify the common data exchange solution relevant for the respective data exchange requirement **as mentioned in article 21**. A common network operation tool may also include business requirement specifications, release management and implementation guidelines. |
| 2. Entsog shall establish a transparent process for the development of all common network operation tools. Entsog shall conduct a consultation for each common network operation tool. | ~~2. Entsog shall establish a transparent process for the development of all common network operation tools. Entsog shall conduct a consultation for each common network operation tool.~~ |
| CHAPTER VI<br>FINAL PROVISIONS | CHAPTER VI<br>FINAL PROVISIONS |

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| *Article 25*<br>*Implementation monitoring*<br>1. By 30 September 2016 at the latest, Entsog shall monitor and analyse how transmission system operators have implemented Chapters II to V of this Regulation in accordance with its monitoring and reporting obligations under Article 8(8) and (9) of Regulation (EC) No 715/2009 and submit to the Agency all necessary information allowing the Agency to comply with its obligations under Article 9(1) of Regulation (EC) No 715/2009. | *Article 25*<br>*Implementation monitoring*<br>1. ~~By 30 September 2016 at the latest Entsog~~, **Six months after the expiry of the deadline for transposing and implementing this Regulation, the Energy Community Secretariat** shall monitor and analyse how transmission system operators have implemented Chapters II to V of this Regulation ~~in accordance with its monitoring and reporting obligations under Article 8(8) and (9) of Regulation (EC) No 715/2009 to the Agency all necessary information allowing the Agency to comply with its obligations under Article 9(1) of Regulation (EC) No 715/2009.~~ **and submit its report to the Energy Community Permanent High Level Group.** |
| 2. By 31 July 2016 at the latest transmission system operators shall communicate to Entsog all necessary information enabling Entsog to comply with its obligations under paragraph 1. | 2. ~~By 31 July 2016 a~~**A**t the latest **three months after the expiry of the deadline for transposing and implementing this Regulation,** transmission system operators shall communicate to ~~Entsog~~ **the Energy Community Secretariat** all necessary information enabling ~~Entsog~~ **the Energy Community Secretariat** to comply with its obligations under paragraph 1. |
| *Article 26*<br>*Entry into force*<br>This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.<br>It shall apply from 1 May 2016 without prejudice to Article 5.<br>This Regulation shall be binding in its entirety and directly applicable in all Member States.<br>Done at Brussels, 30 April 2015 | **Not applicable** [replaced by relevant provision of the PHLG Decision implementing this Regulation]<br>~~Entry into force~~<br>~~1. This Regulation Decision shall enters into force upon its adoption. on the twentieth day following that of its publication in the Official Journal of the European Union.~~<br>~~This Regulation shall be binding in its entirety and directly applicable in all Member States Contracting Parties.~~ |

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| For the Commission<br>The President<br>Jean-Claude JUNCKER | |

*ANNEX*

***Conversion factors between reference conditions***

| Reference temperature in °C (combustion, volume) | 25/20 to 25/0 | 25/20 to **15/15** | 25/20 to 0/0 | 25/0 to **15/15** | 25/0 to 0/0 | **15/15** to 0/0 |
|---|---|---|---|---|---|---|
| Volume-basis real superior calorific value | 1,0738 | 1,0185 | 1,0766 | 0,9486 | 1,0026 | 1,0570 |
| Volume-basis real inferior calorific value | 1,0738 | 1,0176 | 1,0741 | 0,9477 | 1,0003 | 1,0555 |
| Real Wobbe index | 1,0736 | 1,0185 | 1,0764 | 0,9487 | 1,0026 | 1,0569 |

*Source:* EN ISO 13443 'Natural gas — Standard reference conditions'