Biomethane System Entry Points Distribution Business Rules

Version 1.0

For Consultation

December 2021

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1. Introduction

1.1. This document sets out the Business Rules for the Distribution Network Code[1] associated with the introduction of biomethane entry points into the Northern Ireland arrangements for gas transportation.

1.2. These Business Rules set out the principles and rules for certain new and amended processes which are needed to accommodate biomethane injection into the Distribution Networks. It also refers to some new and amended processes needed in the NI Network Gas Transmission Code (referred to in this document as the NI Network Code) to support and enable biomethane injection into the Distribution Networks.

1.3. This document is published for consultation ending on 21st January 2022. Business Rules for the NI Network Code have been published in a separate document.

1.4. Responses from any interested parties are invited. There is a list of consultation questions at the end of this document which you may wish to use to structure your response, but any comments and views are welcome.

1.5. Following the end of this Business Rules consultation, the Distribution System Operators (DSOs) expect to continue to work with the Transporter, consider feedback received and to develop the Code text needed to implement the arrangements in the Distribution Network Code.

1.6. Capitalised terms are used in various places in these Business Rules and generally refer to terms which are defined in the Distribution Network Code or in some cases the NI Network Code, and also include terms which the DSOs intend to add or amend in the Distribution Network Code to reflect the inclusion of biomethane. An informal glossary of key terms and a diagram is included at Appendix 1 to aid the reader, but please note these may not be identical to the formal defined terms in the Distribution Network Code or the NI Network Code.

2. Context

2.1. Since October 2019 the Utility Regulator has overseen a programme of work comprising technical and regulatory workstreams to coordinate the development of the arrangements to accommodate the introduction of biomethane injection in Northern Ireland. This Business Rules Consultation has been developed primarily through the regulatory workstream.

2.2. The DSOs have received interest in connections for Biomethane System Entry Points (referred to in this document as BSEPs), but connections are not anticipated on the Transmission Networks at present. However, biomethane entry points on the Transmission Networks are being considered at this time to provide transparency for potential market entrants and to allow for co-ordination between the NI Network Code and the Distribution Network Code.

[1] There are three gas distribution licensed areas within Northern Ireland:
- Greater Belfast, Larne, East Down and Whitehead distribution licensed area – operated by Phoenix Natural Gas Limited
- Ten Towns distribution licensed area – operated by firmus energy (Distribution) Limited
- West distribution licensed area – operated by SGN Natural Gas Limited

Each of the above gas distribution businesses publish a Network Code for their licensed area. All three Network Codes are primarily identical and therefore for the purposes of these Business Rules, the Distribution Network Code will be referred to in the singular and it is expected that identical changes will be made to each of the three Distribution Network Codes.

2.3. In particular, the prospect of new BSEPs on the Distribution Networks raises certain issues concerning Shipper[2] and Network balancing. In order to accommodate the injection of gas at distribution level, the Transporter and DSOs are proposing an aggregate balancing approach. This requires changes to the NI Network Code to address the proposed balancing processes and associated information exchange, registration, credit and disbursement invoicing etc.

2.4. This document sets out the principles for the Distribution Network Code to introduce BSEPs. It also outlines the main features of the changes needed for aggregate balancing under the NI Network Code, incorporating distribution flows. This document should be read in conjunction with the Business Rules for the introduction of biomethane entry points into the NI Network Code.

2.5. Before the Business Rules are presented, below is an introduction to the aggregate balancing concept being proposed. Implementation issues, systems development and the expected phasing of implementation are discussed in section 21 towards the end of this document, just ahead of the consultation questions and details of how to respond.

3. Introduction to Aggregate Balancing across Distribution and Transmission

3.1. Biomethane injection into a Distribution Network will be a secondary source of supply into the Distribution Network and hence reduce the quantity of gas required from the Transmission Network.

3.2. The existing approach for Transmission Exit Allocations at DN Exit Points under the NI Network Code uses a pro-rata of the metered quantity at Transmission DN Exit Points (also referred to as 'Citygate meters') against the quantities nominated by Shippers at those DN Exit Points.

3.3. It is not possible for a Distribution BSEP User to perfectly match its own distribution demand within the same Distribution Network where the injection occurs, and it may not have any demand on that Distribution Network. This means that a Distribution BSEP Users' imbalances occurring on the Distribution Network could be pushed upstream to the Transmission Network, causing other Shippers to pick up imbalance charges and potentially increasing the need for balancing actions by the Transporter.

3.4. Therefore, the DSOs and Transporter propose to incorporate quantities injected at BSEPs on Distribution Networks into the calculation of the Aggregate NI Imbalance under the NI Network Code to ensure balancing costs are fairly targeted amongst all Shippers.

3.5. To enable this, it is proposed to amend the basis for determining Transmission Exit Allocations at DN Exit Points (referred to as DN Exit Allocations under the NI Network Code), to better distinguish between 'actual' demand quantities in the Distribution Networks and the gas flows treated as moving from the Transmission Network to Distribution Networks. In summary, a Shippers' DN Exit Allocations under the NI Network Code shall be deemed equal to their Distribution User Daily Quantity Output (UDQO i.e. DM plus NDM) plus their Users Daily Shrinkage Quantity, as determined by the DSOs and this figure for DN Exit Allocations shall be used for Imbalance Charging.

3.6. By deeming DN Exit Allocations under the NI Network Code in this way and including a Shipper's Distribution BSEP allocations in their overall Aggregate NI Imbalance position, this will mean that each Shipper has an Imbalance position which reflects their overall supplies and demand to the

[2] Signatories to the Distribution Network Code are referred to as Users, where signatories to the NI Network Code are referred to as Shippers. Both Users and Shippers are referred to as Suppliers under their respective licences to supply gas in Northern Ireland.

whole of the Northern Ireland gas network including their supplies and any demand on the Distribution Networks.

3.7. To distinguish between transmission and biomethane entry flows into the Distribution Network, the DSOs shall determine a User's Transmission Daily Quantity Delivered (TDQD) by subtracting a User's Biomethane Daily Quantity Delivered (BDQD) into the Distribution Network from their DN Exit Allocations. The term User Daily Quantity Input (UDQI) in the Distribution Network Code shall be revised to be the sum of the TDQD and the BDQD. Where a User's BDQD exceeds their DN Exit Allocations, their TDQD shall be zero. Please see the diagram at the end of the Glossary for a representation of these terms.

3.8. For the purposes of Transmission Commodity Charging only, the Transporter will determine Final Adjusted T-DN Exit Allocations by pro-rating the metered quantity leaving the Transmission Network against the final TDQD figures from the DNOs. Any Shipper with a surplus of biomethane over its demand in the Distribution Network shall have a TDQD of zero and hence not incur any Transmission Commodity Charges at the relevant DN Exit Point.

3.9. An additional benefit of this arrangement is that it will enable a Distribution BSEP User to move gas injected into a Distribution Network to the Transmission Network and, for example, make use of virtual reverse flow to move gas into GB at Moffat IP or ROI at South North IP, or trade at the NIBP without needing to make any nominations from distribution to transmission in Northern Ireland.

3.10. Any party wishing to act as a User in respect of a Distribution BSEP will be required to be a Registered Shipper on the NI Gas Transmission Network and comply with the other requirements of the NI Network Code.

3.11. The DSOs and the Transporter shall put in place an information sharing agreement and procedures to share the necessary forecast, metered quantity and allocation information to enable these changes. How this impacts Users is described in the Business Rules below.

Business Rules for Distribution

4. Distribution Connection Agreements and Distribution Network Entry Agreements

4.1. Separately from this consultation, the DSOs are preparing changes to their Connection Policies to refer to the procedures for applying for a connection to a Distribution Network. Once a connection request has been received and processed, the technical/construction specifications and costs associated with connecting will be contained in a Connection Agreement between the DSO of the relevant Distribution Network and the producer/operator of the facility (referred to in this document as the Delivery Facility Operator, or DFO).

4.2. Once construction is complete, the operation of injection points and other aspects of the technical requirements (calorific value (CV) requirements, odorisation, emergencies, gas quality and any ongoing costs etc.) will be governed by a Network Entry Agreement (NEA) between the DSO and the DFO.

4.3. In addition, the NEA will provide for temporary (or, if necessary, permanent) suspension of gas flows in the event the DFO breaches the requirements of the NEA. The Distribution Network Code will therefore reflect the possibility of the suspension of a Users' right to make Biomethane Delivery Nominations (BDNs) and to receive allocations at the BSEP in this event.

5. Classification of Distribution Biomethane System Entry Points

5.1. Biomethane System Entry Points (BSEPs) on the Distribution Network will be classified under the Distribution Network Code as a sub-type of System Entry Point and will allow for the injection of biomethane into the Distribution Network.

5.2. The Distribution Network Code will be modified so that it is possible for a BSEP to accommodate:

a) a single production facility using a dedicated connection point; or

b) multiple production facilities using an injection hub arrangement at which different producers can bring biomethane in tankers to a dedicated series of stanchions where it can be treated if necessary and injected into the Distribution Network;

according to whichever arrangement is requested by the DFO at the time of connection and consistent with the physical arrangement of the connection[3].

5.3. A new BSEP will need to have a Registered User at the point before any gas, including commissioning gas, can be entered into the Distribution Network at the point.

5.4. Any BSEP will always need to have a Registered User at all times to accept responsibility for all gas entering the Distribution Network, otherwise the arrangements shall be suspended, or where applicable, terminated and gas will not be permitted to enter the Distribution Network at the point.

6. Registration Process

Distribution-related requirements

6.1. In order to register at a Distribution BSEP the User will need to request a registration from the relevant DSO.

6.2. A User should give 2 months' notice of intention to register prior to its desired Effective Date.

6.3. A User should submit its request for a registration no later than 4 weeks before its desired Effective Date.

6.4. The DSOs will provide a request form in an appropriate format for the User to complete and submit. A request for registration at a BSEP will include at least following information:

a) name of the BSEP;

b) name of the User and contact details for the User's representative;

c) Effective Date of the registration;

d) the date from which the User wishes to commence gas flows;

e) confirmation that the User has a contract with the DFO at the relevant BSEP;

[3] This document assumes only one User per BSEP. The detailed rules for multiple Users at a BSEP will be developed when interest is received by the DSOs for such an arrangement and may be subject to a further Network Code consultation.

f) confirmation that a request for a Registration at the relevant DBEP[4] on the Transmission Network has been submitted to the Transporter under the NI Network Code.

6.5. The DSOs will review the information submitted by the User and confirm the details with the Transporter. When the DSO is content the requirements have been met (and in the case of a new User, any other accession requirements are met), it shall issue a registration in respect of the relevant BSEP to the User within 5 Business Days.

6.6. Where applicable, under the Distribution Network Code, the DSO shall be entitled to terminate or temporarily suspend the registration of the User at the BSEP. Suspension may apply, for example, if quality provisions are not being met at the point but compliant flows are reasonably expected to be resumed after a certain period. The DSO will reject any BDNs made in respect of the point whilst the registration is suspended.

6.7. If at any stage a User's registration under the Distribution Network Code ceases or is suspended, the DSO shall inform the Transporter and the DFO accordingly. Where a suspension is lifted, the DSO shall further notify the Transporter and the DFO.

Transmission-related requirements

6.8. As mentioned above, the User at a BSEP will also need to have registered as a Shipper under the NI Network Code and have been issued with a Registration at the relevant DBEP under the NI Network Code before its Registration at a BSEP with the DSO will be confirmed.

6.9. If at any stage a User ceases to be a Shipper under the NI Network Code, the Transporter shall inform the DSO and the DSO shall submit a Termination Notice to the User under the Distribution Network Code.

7. Capacity at a Biomethane System Entry Point

7.1. Currently, under the Distribution Network Code, System Entry Capacity can be Firm or Interruptible and is treated as being held by Users in the total quantities for which they hold Supply Meter Point Capacity.

7.2. The available entry capacity at a BSEP shall be set out in the NEA and under the Distribution Network Code the relevant quantity of entry capacity shall be treated as allocated to the User registered at the point.

7.3. At present, the intention is that there shall be no other consequences associated with the allocation of capacity to a User at a BSEP under the Distribution Network Code.

[4] DBEP is the term proposed for the notional point representing Distribution Biomethane Entry Points under NI Network Code. Please see the NI Network Code Business Rules.

8. Charging

Distribution-related requirements

8.1. At present, the intention is that Commodity Charges shall not be payable on the quantity of the gas flow at a BSEP under the Distribution Network Code. However, Commodity Charges shall continue to be payable on the quantity of the gas flow at a Supply Meter Point.

8.2. At present, the intention is that Customer Charges shall not be applied at a BSEP under the Distribution Network Code.

8.3. At present, the intention is that Capacity Charges shall not apply at a BSEP, and consequently capacity Overrun charges shall not apply at a BSEP under the Distribution Network Code.

8.4. As per section B6.1 of the Distribution Network Code, charges may vary during the period in which a User holds any System Capacity (i.e. charges could be introduced at a later date). Any changes to charging will be subject to a future industry consultation. Any applicable charges would then be set out in the Conveyance Charge Statement which would need the approval of the Authority.

Transmission-related requirements

8.5. A User at a BSEP will be liable to pay disbursement charges (i.e. Imbalance Charges and Balancing Gas Costs) under the NI Network Code in respect of their gas flows into the Distribution Network at a BSEP. At present, the intention is that Scheduling Charges shall not be applicable in respect of flows at a DBEP. Please see the NI Network Code Business Rules for more information.

9. Demand Forecasts, Nominations & Renominations

Distribution-related requirements

9.1. A User registered at a BSEP will be required to forecast its entry flows and make corresponding Biomethane Delivery Nominations (or BDN) and Renominations in respect of, and during, each Gas Flow Day.

9.2. BDNs should be submitted by the relevant User by the Nomination Time in respect of the Gas Flow Day (i.e. 08:00 on the Preceding Day).

9.3. As for other Nominations, a BDN may not, without the approval of the DSO, be withdrawn or replaced following its submission.

9.4. Each BDN shall specify:

a) the Gas Flow Day;

b) the identity of the User;

c) the BSEP;

d) the quantity of gas nominated for delivery to the Distribution Network;

e) where requested by the DSO, the hourly flow rate for each hour of the Gas Flow Day.

9.5. A User may revise a BDN by submitting a Renomination at any time between the Nomination Time and 01:00 hours on the Gas Flow Day which shall specify:

a) the BDN in respect of which it is made;

b) the Renomination Effective Time (which shall be not less than 2 hours after the time the Renomination was submitted);

c) the quantity of gas nominated for delivery to the System;

d) where requested by the DSO, the hourly flow rate for each hour of the Gas Flow Day.

9.6. The DSO may, but nothing in the Distribution Network Code shall oblige it to, accept into the Distribution Network flows at hourly flow rates other than 1/24th of the total daily quantity.

9.7. The DSO may reject, or at its discretion, approve a Renomination which does not meet the requirements above or which implies a negative quantity to be delivered. Approval does not waive any requirements of the Distribution Network Code irrespective of whether the BDN complies with such requirement.

9.8. Where the DSO approves a Renomination, it shall replace any earlier BDN or Renomination made in respect of the BSEP.

9.9. A BDN which has not been rejected by within 60 minutes of the Nomination Time shall be deemed to be accepted.

9.10. A BDN/Renomination which has not been rejected by within 60 minutes of its submission shall be deemed to be accepted.

9.11. For the purposes of the Distribution Network Code, it shall be assumed that any change in the rate of delivery shall occur on the hour and the Renomination Effective Time of any Renomination shall occur on the hour.

9.12. Where the DSO requires or ceases to require interruption of deliveries under the Distribution Network Code, the User shall make a Renomination consistent with that requirement.

9.13. By no later than 3 hours after the Nomination Time the DSO will determine the Transmission Delivery Nomination Required (or 'TDNR') of the User in respect of the relevant Distribution Network as the sum of:

a) the Nomination Quantity under the User's NDM Offtake Nominations;

b) the sum of the Nomination Quantities under each of the User's DM Offtake Nominations;

c) the Users Daily Shrinkage Quantity (calculated in respect of the Users' NDM and DM Offtake Nominations as it is currently using the Shrinkage Factor);

minus

d) the sum of the quantities in any BDNs made by the User;

provided always that:

where the sum of a + b + c is less than d, the Transmission Delivery Nomination Required shall be zero.

9.14. At each Demand Forecast Time, after revising the NDM Delivery Nominations of the User in accordance with current practice, taking into account the latest DM Delivery Nominations and BDNs, the DSO shall redetermine the TDNR for the User according to the calculation in section 9.13 above.

9.15. The DSO shall provide details of BDNs and TDNR for each User on D-1, and at each update within the Gas Flow Day, to the User and also to the Transporter under the information sharing agreement between them, so that quantities may be displayed on Delphi. Please see the NI Network Code Business Rules for more information.

9.16. A User shall not be permitted to submit a BDN or Renomination if maintenance is affecting the BSEP, unless it is for no more than the quantity that can be accommodated by the Distribution Network during the maintenance.

9.17. Where a User at a BSEP intends that there shall be zero flow into the Distribution Network on a Gas Flow Day, the User shall be required to submit a BDN for a quantity of zero, including but not limited to where this applies as a result of maintenance.

9.18. The existing indemnities and provisions in the Distribution Network Code concerning the Demand Forecast Information shall apply in respect of BDNs (i.e. no claims may be made and the DSOs will act as a Reasonable and Prudent Operator but take no liabilities).

Transmission-related requirements

9.19. Users shall be advised under the NI Network Code to nominate in line with the Total Transmission Delivery Nomination Required (i.e. the aggregate of the User's TDNR for all Distribution Networks) but shall not be required to do so.

10. Daily Quantities

10.1. The User Daily Quantity Output (UDQO) shall continue to be determined as it is currently, i.e.:

UDQO = the sum of:

a) Supply Meter Point Daily Quantity for the User's DM Supply Meter Points (i.e. DM allocations);

b) the Aggregate Demand of the User's NDM Supply Meter Points determined in accordance with section F3 of the Distribution Network Code (i.e. the last run of the demand forecast algorithm, i.e. NDM allocations);

and

c) User's Delivery Proportion of any amounts of gas vented in accordance with G4.6 of the Distribution Network Code (which is generally zero in practice).

10.2. The Users Daily Shrinkage Quantity (UDSQ) shall continue to be determined as it is currently (i.e. related to demand on the Distribution Network):

UDSQ = UDSF * ShF

where

UDSF = the User's Final UDQO for the relevant Day; and

ShF = the Shrinkage Factor for the Gas Year in which such Day falls.

10.3. To date in the Distribution Network Code the User Daily Quantity Input (UDQI) has been determined as:

UDQI = UDQO + USDQ

However, with the introduction of BSEPs, it is necessary to distinguish between the quantities input at the DN Exit Points from the quantities input at a BSEP, and all this information shall be transferred to the Transporter which shall provide it to each User on Delphi both ahead of, during and after the Gas Flow Day.

The DSOs propose that the UDQI term should continue to represent the total quantities delivered by a User to the System on a Gas Flow Day. Therefore, the following approach is proposed.

After the Gas Flow Day, at D+1, provisional UDQIs shall be determined by the DSO as follows:

a) A User's provisional Biomethane Daily Quantity Delivered (BDQD) shall be the metered quantity at the BSEP;

and

b) A User's provisional Transmission Daily Quantity Delivered (TDQD) shall be:

provisional TDQD = provisional UDQO + Users (initial) Daily Shrinkage Quantity – provisional BDQD

and where this is a negative number, the provisional TDQD = zero

and

c) provisional UDQI = provisional TDQD + provisional BDQD

10.4. The DSO shall provide the following information for each User to the Transporter (and to the Users) by a target time of 12.00 on D+1 (deadline to be 16:00) as follows:

a) provisional UDQO (i.e. provisional DM and NDM quantities, provided separately)

b) Users (initial) Daily Shrinkage Quantity

c) the sum of a) and b) above, i.e. Initial DN Exit Allocations

d) provisional BDQD (or total BDQD if the User is registered at more than one BSEP on the Distribution Network)

e) provisional TDQD determined as set out in section 10.3 above

10.5. Following the month-end process for User submission of EUC3 meter reads (i.e. for monthly read meters) and correction (where applicable) of DM data, by 16:00 on M+6 Business Days, the DSO shall determine final values for each User for the items set out in section 10.3 above and provide the following information for each User to the Transporter (and to the Users):

a) final UDQO (i.e. sum of final DM and NDM quantities) and its components

b) Users (allocated) Daily Shrinkage Quantity

c) final BDQD (and total BDQD if the User is registered at more than one BSEP on the Distribution Network)

d) final TDQD determined using final values in the formula set out in section 10.3 above.

10.6. The System Daily Quantity Delivered shall continue to be determined as the aggregate quantity of gas delivered to the Distribution Network on a Gas Flow Day, which shall be the same as the sum of all Users' UDQIs. This means it will include flows from BSEPs connected to the Distribution Network.

10.7. Please see the NI Network Code Business Rules for details of the treatment of a User's daily quantities as part of a Shippers' Imbalance Position and the calculation of charges under the NI Network Code.

10.8. Given that an extended period is now proposed before the confirmation of final daily quantities set out above, after M+6 Business Days any subsequent changes to daily quantities as a result of Supply Meter Point reconciliations shall be reconciled in accordance with section E of the Distribution Network Code, but no further changes shall be made to Final Exit Allocations or Final Adjusted T-DN Allocations under the NI Network Code.

10.9. Consequently, under the NI Network Code, disbursement and commodity charges shall be calculated and invoiced during M+1 as currently, and then shall be 'closed out' with effect from the date of invoice issue. Only in the event of a significant and material error would any subsequent changes to disbursement charges be made, and only at the sole discretion of, and by mutual agreement of, the relevant DSO and the Transporter.

11. Biomethane System Entry Point Metering Adjustments

11.1. BSEP Measurement Equipment will be installed, commissioned and maintained by the Delivery Facility Operator in conjunction with the DSO. See also section 18 below for more information.

11.2. Errors in BSEP metering are anticipated to be very rare. In the event of a meter error, the DSO will determine the quantity of the error in conjunction with the DFO under the NEA and the BDQD for the User will be adjusted accordingly. Only in the event of a significant and material meter error would there be any changes to disbursement charges under the NI Network Code, and only at the discretion of, and by mutual agreement of, the relevant DSO and the Transporter.

12. NDM Demand Estimation & Demand Forecasting

12.1. The actual and forecast quantities to be delivered at a BSEP shall be taken into account:

a) in the operation of the NDM Demand Model under section F2.4 of the Distribution Network Code; and

b) in the calculation of the Scaling Factor under section F3.3 of the Distribution Network Code.

13. Entry Requirements and Non-compliant Gas

13.1. Delivery of gas at a BSEP will have to comply with all the relevant requirements of section G of the Distribution Network Code, as for other System Entry Points.

13.2. Biomethane being tendered for delivery to the Distribution Network will need to meet the same GS(M)R standards as contained in the Annex G with the exception of the Oxygen Limit, which is subject to the granting of an exemption by the Health and Safety Executive Northern Ireland. Biomethane gas delivered at the BSEP will be assumed to be a single homogenous gas stream for the purposes of the Distribution Network Code.

13.3. The Delivery Proportion for a Delivering User at a BSEP shall be the metered quantity for the BSEP .

13.4. The Delivery Proportion for a User at any other (non-biomethane) System Entry Point shall be the proportion which its TDQD bears to the overall quantity treated as delivered i.e. the total TDQD of all Users at the System Entry Point.

13.5. The DSO shall have the right to refuse to accept delivery/accept part of a delivery and to take steps to limit the delivery of non-compliant gas, including operating the Remote Operable Valve (ROV) at the point pursuant to the NEA. The rights of Users to make BDNs/Renominations may be suspended or terminated in such circumstances, for example for repeated breach of the Distribution Code or NEA requirements, at the sole discretion of the DSO.

13.6. The DSO will set a target CV for a BSEP (in accordance with the terms of the NEA) with a small range of acceptable deviation lying within the bounds of GS(M)R standards. Paragraph 13.6 above will apply in circumstances of deviation of the CV of the gas entering the network from the acceptable range set out in the NEA.

13.7. The DSO will inform Users if it becomes aware that non-compliant gas has entered the Distribution Network and costs have been incurred which will need to be recovered. No failure by the DSO to inform Users will affect its rights to take the actions set out here.

13.8. Payments in respect of non-compliant gas will apply to BSEPs as for other entry points. Payments are capped at 10% of amount of the User's BDQD at the relevant point multiplied by the GMO Gas Price.

13.9. Amounts payable for non-compliant gas will include costs and expenses incurred in cleaning any part of the Distribution Network and/or taking reasonable measures to secure that the Distribution Network can be operated in accordance with applicable legal requirements.

13.10. The DSO will accept gas at a BSEP provided the conditions of section G of the Distribution Network Code are complied with.

13.11. The DSO will be relieved of its obligation to accept gas at a BSEP in the event of a constraint, notwithstanding any obligations to provide capacity under the NEA.

13.12. The DSO may take steps to curtail delivery of gas at a BSEP if a constraint is imminent.

14. Title to Gas on the Distribution Network

14.1. Each User at a BSEP shall warrant to the DSO that it has title and risk to the gas to be delivered at the point.

14.2. Title and risk to gas on entry to the Distribution Network from a BSEP shall be allocated to a User on the basis of their Final BDQD at the relevant BSEP and shall pass to the DSO at the BSEP.

14.3. To the extent that it is necessary to determine, title and risk to gas on entry to the Distribution Network from the Transmission Network shall be allocated to Users on the basis of their Final TDQD as determined by the DSO at the relevant System Entry Point under the NI Network Code and shall pass to the DSO at the relevant System Entry Point.

14.4. To the extent that it is necessary to determine, where a Registered User at a BSEP has an individual position in respect of a Gas Flow Day such that its BDQD exceeds its final DN Exit Allocations (i.e. final UDQO + Shrinkage quantities) and its TDQD is therefore zero, it shall be treated as putting gas into the NI Gas Transmission Network at the relevant DN Exit Point(s). The quantity for which the User is treated as transferring title and risk to gas in the NI Gas Transmission Network as a result of this position shall be determined by calculating the quantity which is the difference between their total BDQD and their DN Exit Allocations (i.e. final UDQO + Shrinkage quantities) in respect of a Distribution Network.

14.5. The provision in section 14.4 above also facilitates the transfer of gas on behalf of a User from a Distribution Network to the Transmission Network, to the extent that the User's demand in that Distribution Network is less than its BDQD into that Distribution Network. This, in conjunction with the aggregate balancing arrangement, avoids the need for explicit nominations between Distribution and Transmission Networks.

15. Maintenance

15.1. A BSEP will be a subcategory of System Entry Point which means that provisions concerning maintenance at System Entry Points would also apply.

15.2. The DSO will be relieved of its obligations to accept gas into the Distribution Network if maintenance is affecting the BSEP (and hence it is a Maintenance Affected Point under section I2.4 of the Distribution Network Code).

15.3. The DSO will co-ordinate maintenance on the Distribution Network to the extent necessary with the DFO of a BSEP in accordance with the NEA.

16. Emergencies

16.1. BSEPs will be subject to the provisions of section J of the Distribution Network Code regarding Emergencies.

16.2. Emergency Steps will be agreed between the DSO and the DFO as required by and covered in the NEA.

16.3. Emergency Contacts for the DFO at a BSEP shall be provided (and updated as applicable) under the Distribution Network Code by a User. Emergency procedures of the DFO and the User shall be

established, co-ordinated and maintained by the User and consulted upon with the other parties as necessary.

16.4. The User shall provide a copy of their emergency procedures to the DSO on request.

16.5. In line with the current provisions under section J6 of the Distribution Network Code, in respect of a Day/part of a Day during a Network Gas Supply Emergency:

a) section C (Nominations) of the Distribution Network Code may not apply;

b) determination of UDQO, UDQI, TDQD and BDQD and other daily quantities may be deferred;

c) the Close-out date may be deferred; and

d) non-compliant gas may be delivered if requested/permitted by the DSO.

17. Invoicing & Payment

17.1. There shall be no invoicing as regards BSEPs under the Distribution Network Code. However as noted above, Users will be obliged to pay disbursement charges in respect of entry flows at Distribution BSEPs under the NI Network Code. Please see the NI Network Code Business Rules for more information.

18. Metering at a Biomethane System Entry Point

18.1. For the avoidance of doubt, section L of the Distribution Network Code (Supply Meter Points) will not apply in respect of BSEPs.

18.2. Section M of the Distribution Network Code (Metering) shall be expanded to set out the standards for measurement requirements as further outlined below.

18.3. Measurement Equipment at a BSEP shall include:

a) Gas quality (calorimeter/ gas chromatograph);

b) Metering equipment;

c) Communication system;

d) Dedicated flow computer; and

e) any other associated equipment required to fulfil the DFOs obligations under the NEA.

18.4. Measurement Equipment and associated computer and communications equipment will be installed, commissioned, maintained and operated by the DFO in conjunction with the DSO, to meet the requirements of the Measuring Instruments Gas (Meters) Regulations 2006, the Gas Safety (Management) Regulations (Northern Ireland) 1997, the Gas (Northern Ireland) Order 1996 and the principles of the Gas (Calculation of Thermal Energy) Regulations 1996 (as amended).

18.5. Measurement Equipment (including equipment for measuring gas quality, energy and the delivered volume) must meet the relevant specified British Standards, ISO technical standards or other relevant national or international standards as updated from time to time. For the purposes of this Business Rules consultation, these include but are not limited to those shown in the table below:

Reference	**Subject/Topic**
ISO 9951:1993/COR 1:1994	Measurement of gas flow in closed conduits / for turbine meters
ISO 5168: 2005	Measurement of fluid flow: procedures for the evaluation of uncertainties
BS 7965: 2013	Guide to the selection, installation, operation and calibration of diagonal path transit time ultrasonic flowmeters for industrial gas applications
ISO 12213: 2006	Calculation of the compression factor
ISO 6976: 2016	Natural gas: Calculation of calorific values, density, relative density and Wobbe indices from composition
ISO 10723: 2012	Natural Gas: Performance evaluation for analytical systems

18.6. The DSO shall require that a gas quality risk assessment is completed by the DFO using procedures or standards specified by the DSO, before permitting a connection to the Distribution Network or signing an NEA. The NEA will contain provisions concerning notifications by the DFO of changes to the type of waste to be processed at the production site.

18.7. The NEA shall provide that the DSO and the Registered User at the BSEP shall have access, given reasonable notice periods, to inspect the equipment and data records, witness meter installation, calibration, commissioning and validation processes and perform tests on the equipment.

18.8. Live/real time telemetry is required to provide measurement information to the DSO as well as the DFO.

18.9. Measurement Equipment shall be independently validated in accordance with the provisions of NEA at intervals no greater than annually.

18.10. The NEA shall include obligations for the replacement or adjustment of equipment as required following validations, and assumptions for the adjustment of measured quantities in the event of components being out of range or needing replacement.

18.11. The NEA shall include appropriate settings for alarms for CV, Wobbe, Sooting Index, Incomplete Combustion Factor, Specific Gravity, Carbon Dioxide and Odorant levels, and procedures for determining quantities in the event of a failed reading.

18.12. Volumes shall be corrected to metric standard temperature and standard pressure conditions (as defined in the NEA) and reported as cubic metres of gas. Measurement of volume shall be without bias and with an uncertainty of plus or minus 1.0% of the volume reading over the specified flow range.

18.13. Energy shall be corrected to metric standard temperature and standard pressure conditions (as defined in the NEA) and reported as kWh. The uncertainty of the energy flow must be better than plus or minus 1.1% of the energy flow over the specified flow range.

18.14. The NEA shall specify Local Operating Procedures and provisions for the closure of the ROV in the event of excursion from the required gas specification, including the target CV.

18.15. The NEA shall require that the DFO keeps records for a period of a minimum of six years for the purposes of adjusting or reconciling any error. The DFO shall not be permitted to make modifications to the Measurement Equipment without giving a minimum of three months' notice and with the approval of DSO.

19. Dispute Resolution

19.1. For the avoidance of doubt section N (Dispute Resolution) will apply in respect of Users at BSEPs as for Users at any other point on the Distribution Network. Disputes between the DSO and the DFO shall be governed by the terms of the NEA.

20. General

20.1. For a new User who wishes to be a User in respect of a BSEP, User admission will operate as it does now under section O of the Distribution Network Code, and the User will need to apply to be the Registered User at the BSEP in accordance with section 6 above.

20.2. Since there are currently no charges relating to a BSEP proposed under the Distribution Network Code, a User shall not require any additional credit under the Distribution Network Code.

20.3. Where a User is a Discontinuing User or is subject to Termination under the Distribution Network Code, the DSO shall inform the DFO and the Transporter.

20.4. In respect of information and confidentiality, it is anticipated that the existing provisions of the Distribution Network Code will apply to information concerning BSEP Users. The Distribution Network Code shall clarify that the DSO is permitted to share information with the Transporter to enable the aggregate balancing arrangements.

20.5. The User at a BSEP will be permitted to appoint Agents in accordance with section O8 of the Distribution Network Code.

20.6. No changes in respect of liabilities and indemnities or Force Majeure are anticipated under the Distribution Network Code as a result of the introduction of BSEPs.

20.7. Currently, section O12 of the Distribution Network Code uses the term Delivery Facility Operators to refer to the upstream Transmission Network operators and includes indemnities in relation to them. It is anticipated that the same indemnities would extend to DFOs at a BSEP. Users may wish to note that the Distribution Network Code currently requires that no User shall make any commitment to any DFO purporting to bind the DSO, and this would therefore also apply in respect of the DFO at a BSEP.

20.8. It is anticipated that there would be no other changes to the remaining clauses of section O (General) of the Distribution Network Code, such as assignment and governing law.

21. Implementation of these Arrangements

Distribution Network Code Modification

21.1. These Business Rules set out principles for the Distribution Network Code needed to accommodate new BSEP connections to Distribution Networks as well highlighting certain changes needed in the NI Network Code to address aggregate balancing.

21.2. Following this consultation, the associated consultation on the Business Rules for the NI Network Code and consideration of all feedback received, the DSOs expect to develop the required Distribution Network Code text to implement these arrangements, for consultation during Q1 2022 with a view to the required changes being in place in April 2022, subject to approval by the Authority. The DSOs also expect to work with the Transporter on the development of the Code Modification for the NI Network Code, on the same timescales.

Systems Implementation and Transition Rules

21.3. These Business Rules set out changes to the Northern Ireland gas balancing regime and to disbursement charges under the NI Network Code, which will require systems development of Delphi for full implementation. The timescales for accomplishing this development are expected to extend beyond April 2022. Therefore, it should be noted that the Transporter plans to implement an interim arrangement using manual workarounds to manage the information exchange with the DSOs and to calculate charges for invoicing using DN Exit Allocations and making the necessary adjustments for transmission charges. This is expected to be feasible on the assumption that the number of potential BSEPs remains small, and also on the assumption that certain existing functionality can be readily adapted by GMO NI to support the manual processes and display some information to Shippers.

21.4. Please see the NI Network Code Business Rules for more details of the phased implementation of the required systems functionality.

22. Consultation Questions & How to Respond

Views on any aspect of these Business Rules are invited. Suppliers and any other interested parties are invited to consider the following questions in formulating their response:

a) What are your views on the proposed aggregate balancing regime? Do you consider it will be beneficial to all Users in ensuring balancing costs are fairly targeted?

b) Do you have any views on the contents of Connection Agreements or NEAs? Are there any topics you believe should also be covered?

c) What are your views on the proposed registration process? Are there any other aspects the DSOs should consider?

d) Do you have any comments on the proposals for the treatment of System Entry Capacity and (no) charges under the Distribution Network Code?

e) What are your views on the proposed nominations processes and timescales including the derivation of the Transmission Delivery Nomination Required (TDNR)? Are there any aspects you feel have not been considered?

f) Do you have any views or comments on the proposed determination of daily quantities?

g) What are your views on using distribution final daily quantities as DN Exit Allocations at M+6 Business Days? Do you consider this a beneficial change?

h) Do you have any concerns over the sharing of information between the DSOs and the Transporter? Is there any information you consider should not be shared? If so, please explain why.

i) What are your views regarding the proposals for metering adjustments?

j) What are your views on the proposals for entry requirements? Are there any other considerations for BSEPs the DSOs should take into account?

k) Do you have any other views or comments on the remaining sections of the Business Rules?

l) Do you have any general views on the co-ordination between Transmission and Distribution arrangements which the network operators are jointly seeking to deliver?

m) Do you have any views or comments on the proposals for implementation of the proposed arrangements? Are there any parts of the proposals that you particularly support or disagree with? Please explain your views so that the DSOs can fully consider all points raised.

Please send responses by no later than 21st January 2022 to:

lmccarthy@firmusenergy.co.uk; mary.okane@sgn.co.uk; and christopher.doherty@phoenixnaturalgas.com

Appendix 1: Glossary & Diagram

The explanations below are intended to aid the reading of this Business Rules consultation only. Please note that draft Code text will be prepared and consulted upon, and it is possible that different terminology may be used and/or other changes made to existing Distribution Code terms as part of that process.

Distribution terms

Aggregate Demand of the User's NDM Supply Meter Point Group – means the quantity attributed to the User's NDM meter points for a Day via the last run of the demand forecast algorithm i.e. NDM allocations

Biomethane Daily Quantity Delivered (BDQD) – the metered quantity delivered into the Distribution Network at a BSEP

Biomethane Delivery Nomination /Renomination (BDN) – a User's Nomination or Renomination for gas quantities expected to be delivered at a BSEP in respect of a Gas Flow Day

Biomethane System Entry Point (BSEP) – the point at which a biomethane production facility is connected to the Distribution Network

Citygate meter – the meter(s) at the connection point(s) between the Transmission Network and the Distribution Network

Connection Agreement – an agreement which will be needed between the DFO and the DSO in relation to the construction of a new BSEP

Connection Policy – the policy of the DSO setting out how connection requests will be handled and how costs will be treated

Distribution Network – the gas network of a Distribution System Operator – see also footnote 1

DM & NDM – refers to Daily Metered and Non-daily Metered Supply Meter Points on the Distribution Network, and DM here also includes Very Large DM Customers (VLDMs)

DFO – Delivery Facility Operator, the operator of a biomethane production facility

DSO – Distribution System Operator

Effective Date (of a registration) – the date from which the User is registered at the BSEP and after which gas may flow into the Distribution Network at that point (N.B. gas flow date may be a later date)

Measurement Equipment – the meter and other associated equipment for measuring the energy and volume delivered to the Distribution Network at a BSEP

Network Entry Agreement (NEA) – an agreement between the DFO and DSO governing the operation and maintenance of the connection point between a BSEP and the Distribution Network

Registered User – currently refers to a User registered at a Supply Meter Point – will be expanded to include Users registered at BSEPs

Renomination Effective Time – currently refers to the time at which DM Renominations are treated as being effective (i.e. on the hour bar after their submission), will be expanded to also refer to BDNs

Shrinkage – gas which is used by the DSO or otherwise lost or unaccounted for in the operation of the Distribution Network

Supply Meter Point Daily Quantities – the quantities metered each day at each of the User's Registered DM Supply Points i.e. DM allocations

System Daily Quantity Delivered – current Distribution Network Code term for the total quantity delivered into a Distribution Network at the System Entry Point (which equates to the sum of the metered quantities at the Citygate meters into a given Distribution Network), will be amended to include the sum of all Users' BDQD

System Entry Point – the current Distribution Network Code term for the point at which gas is treated as flowing out of the Transmission Network and into a Distribution Network, refers to the same point as a DN Exit Point in the NI Network Code

Transmission Daily Quantity Delivered (TDQD) – the new proposed term for a User's quantity treated as being delivered from the Transmission Network to the Distribution Network

User – a party who is signed up to the Distribution Network Code (other than the DSO) and thereby allowed to use the Distribution Network

User Daily Quantity Input (UDQI) – currently means the User's share of the quantity treated as being delivered from the Transmission Network to the Distribution Network, will be amended to include any Biomethane Daily Quantity Delivered (BDQD) as well

User Daily Quantity Output (UDQO) – the sum of a User's DM and NDM allocations for a Gas Flow Day

Users Daily Shrinkage Quantity – the quantity of shrinkage gas that the User is required to nominate for entry, and the term is also currently used to refer to the quantity allocated to the User after the Gas Flow Day. The distinction between forecast and allocated Shrinkage will be clarified in the Distribution Network Code.

Additional Transmission terms

Biomethane Non-IP Entry Point(s) – the point at which a biomethane production facility is connected to the Transmission Network

DBEP Entry Allocations – a Shipper's Entry Allocations at a DBEP (will be = BDQD under the Distribution Network Code)

Delphi – the gas transportation management and billing computer system of the Transporter

DFO – Delivery Facility Operator, the operator of a biomethane production facility

Distribution Biomethane Entry Point (DBEP) – a notional point (to be set up on Delphi) for the purposes of transmission charging, one DBEP per Distribution Network

DN Exit Allocations – current NI Network Code term for transmission allocations at a DN Exit Point, currently determined by the Transporter by pro-rata of the Citygate metered quantities, will be amended so that DN Exit Allocations = UDQO + Shrinkage as provided by the DSOs

DN Exit Point(s) – the points at which gas flows out of the Transmission Network into the Distribution Networks. They are treated as a single point per Distribution Network, even though there may be more than one connection point and hence more than one Citygate meter point in practice.

DNOs – Distribution Network Operators, the NI Network Code term for the DSOs

Final Adjusted T-DN Exit Allocations = pro-rata of Citygate metered quantity against the final TDQD figures as provided by the DSO

Initial Adjusted T-DN Exit Allocations = pro-rata of Citygate metered quantity against the initial TDQD figures as provided by the DSO (and pro-rata to TDNR nominations during the interim period)

Moffat IP – Moffat Interconnection Point, the point at which gas flows into the Transmission Network from the GB network (via the GNI (UK) network) near Moffat in Scotland, and where virtual reverse flow from Northern Ireland to GB is also possible

Network Entry Agreement (NEA) – an agreement between the DFO and Transporter governing the operation and maintenance of the connection point between a Biomethane Non-IP Entry Point and the Transmission Network

NIBP – the Northern Ireland Balancing Point, the point at which Registered Shippers may trade gas with each other

Registered Shipper – a Shipper who is Registered at a particular point on the Transmission Network which will include a DBEP and a Biomethane Non-IP Entry Point

Shippers – a party who is signed up to the NI Network Code (other than the Transporter) and thereby allowed to use the Transmission Network. All Users (on the Distribution Network) must also be Shippers (on the Transmission Network)

South North IP – South North Interconnection Point, the point at which gas can flow into the Transmission Network from the ROI network and where virtual reverse flow from Northern Ireland into the ROI is also possible

Transmission Commodity Charges – charges levied by the Transporter at all Exit Points on the Transmission Network except at VRF Exit Points

Transmission Network – used in this document to refer to the NI Gas Transmission Network, the collective term for the gas networks of the four operators

Transporter – the collective name for the four operators of the Transmission Networks (PTL, BGTL, GNI (UK) and WTL) in Northern Ireland, which contract to work together as GMO NI

Diagrammatic Representation of Key Terms