

Draft Modification Report
Modification to Codify Emergency Curtailment Quantity (ECQ) Methodology
Modification Reference Number 0098/0098a

Version 1.0

This Draft Modification Report is made pursuant to Rule 7.3 of the Modification Rules and follows the format required under Rule 9.6.

1. The Modification Proposal

Proposal 0098 was as follows:

"In Ofgem's decision letter to UNC Modification Proposal 044, it is stated that Ofgem see merit in the inclusion of a single ECQ methodology for all relevant transporters, within the Unified Network Code (UNC). This is what this proposal seeks to establish.

A common methodology, placed within the UNC and adopted by all transporters will guard against unnecessary fragmentation and make available a clear and consistent approach, providing greater certainty in the event of a Potential Gas Deficit Emergency or an actual Gas Deficit Emergency (GDE).

As a matter of principle, substantive commercial terms ought to be set out in a document that can be subject to the full jurisdiction of the code governance process.

We propose the following sequential steps for transporters to follow when calculating a User's ECQ, based on the revised ECQ Calculation Methodology, as agreed between National Grid Gas (NTS) and the Distribution Network Operators.

This proposal adds a further step to the methodology agreed by the transporters, in proposing that, where OPNs are unavailable, Nominations can also be used to calculate ECQs for day one of an emergency only. Through taking account of nominations on day one only of an emergency, the concern expressed by NGG NTS of zero nominations being submitted for day 2 of an 'interruption period' becomes obsolete. Including nominations within the sequential steps taken by transporters on day one of an emergency will ensure that transporters receive the most accurate information, which may be made available to them to calculate ECQs.

The process outlined within this proposal will give both Users and transporters sufficient confidence that the ECQ methodology will give an accurate as possible estimate of the associated quantities of gas, providing a better representation of individual portfolio positions and, consequently, representation of the system as a whole.

Methodology

The ECQ calculation methodology has defined steps that will be used to derive an ECQ estimate for the relevant Gas Day for which a site has been subject to Emergency Curtailment as defined in section Q.6.1.1 of the Uniform Network Code.

For the 1st Gas Day the estimate of the ECQ will be based on:

- i) For those relevant System Exit Points for which OPNs are provided to the Transporter the estimate will be based on the OPN prevailing at the time of the emergency curtailment;

- ii) Where no OPN is available and a Nomination has been submitted, the estimate will be based on the Nomination prevailing at the time of the emergency curtailment;
- iii) For those relevant System Exit Points that do not provide OPNs, or OPNs are not available; the estimate will be based on historical allocations;
- iv) Where OPNs, Nominations or historical allocations are unavailable, the estimate will be based on either scaled SOQs (where available) or, if unavailable, standard SOQs.

OPN Calculation Method

The following table represents the process for calculating the System Exit Point component of the Emergency Curtailment Quantity from an Offtake Profile Notice (OPN).

OPN Quantity Calculation Process	Curtailment on the first Gas Day of a GDE
Bi-directional System Points (European Interconnector and Storage sites)	The quantity will be calculated as the User's operational nomination provided by the interconnector or storage agent.
VLDMC System Exit Points	At single User System Exit Points the quantity calculation would be based solely on the Offtake Profile Notice (OPN) for the relevant gas day. At multi-User System Exit Points the agent would provide a default division of the quantity implied by the OPN.

Nomination Calculation Method

The following algorithm calculates an estimate of the ECQ Supply Point component from the prevailing nomination data at the time the ECQ estimate is made.

Repeat the following steps for each curtailed supply point:

- 1 Get the nominated quantity (kWh) for this site for the relevant Gas Day
- 2 Multiply the nominated quantity by the curtailment duration and divide by 24.

For the avoidance of doubt, the implied Nomination Flow Rate is the rate (in kWh/hour) determined as the nominated quantity applied for the curtailment duration, divided by 24.

For the 2nd and subsequent Gas Day(s) the ECQ for all System Exit Points will be based on:

- v) Historical allocations for all relevant System Exit Points; or;
- vi) Where historical allocations are not available for a relevant System Exit Point, the estimate will be based on either scaled SOQs (where available) or, standard SOQs.

Curtailment Duration

Curtailement will be assumed to have been initiated at the relevant Supply Point at a time after the time of the Emergency Interruption Notice or Firm Load shedding direction; this will be the Curtailement start time for the purposes of calculating the Curtailement duration. The lead-time between the Curtailement notice and the Curtailement start time will be based on information provided from the site along with other information available to the Transporter including operational experience. If no restoration time is provided then the Curtailement duration will be calculated from the Curtailement time up until the end of the relevant Gas Day. This is the curtailement duration.

Further Curtailement

Should further Emergency Curtailement be required within the relevant Gas Day then each relevant Transporter will calculate a revised (i.e. increased) ECQ element. National Grid NTS will initiate further ECQ trades to reflect any changes in the ECQs.

Restoration

Should the offtake of gas be restored at System Exit Points where Emergency Curtailement had earlier been initiated within the relevant Gas Day then each relevant Transporter would calculate a revised (i.e. reduced) ECQ element based on the revised restoration time. National Grid NTS will initiate further ECQ trades to reflect any changes in the ECQs.

Subsequent days of an Emergency

This methodology will be applied separately for each day of a GDE. The list of relevant System Exit Points for each day of the GDE may be the same or may be different due to restoration and further curtailement notices.

Historical allocation calculation method

The following algorithm estimates the ECQ Supply Point component from historical allocation data.

Step 1

Identify whether Curtailement occurred during the last 28 days and note which days were curtailed.

Repeat the following steps for each curtailed Supply Point

Step 2

Identify relevant Gas Day...

If Curtailement did not occur on D-7, use D-7 otherwise...

If Curtailement did not occur on D-14, use D-14 otherwise...

If Curtailement did not occur on D-21, use D-21 otherwise...

If Curtailement did not occur on D-28, use D-28 otherwise...

Start at D-8 and work backwards to D-28 until a gas day is found where Curtailement did not occur.

If all days are curtailed, do not set estimate of curtailement using this method.

Step 3

Having identified which day is to be used, get the allocated quantity (kWh) for this site for the relevant Gas Day.

Step 4

Multiply the allocated quantity by the curtailment duration and divide by 24.

4. SOQ (scaled)

The following algorithm calculates an estimate of the ECQ Supply Point component from the Flexi-SOQ.

Repeat the following for each curtailed Supply Point

Step 1

Obtain Flexi-SOQ for the relevant System Exit Points.

The Flexi-SOQ is calculated from a Scaling Ratio (SR) that allows for forecast demand to be less than the 1-in-20 peak forecast demand i.e. the Registered Supply Point Capacity. The Ratio is calculated from the aggregated forecast demand divided by the aggregated Registered Supply Point Capacity, i.e. the SOQ, for the relevant System Exit Points.

SOQi ~ Supply Point Offtake Quantity at Exit Point i (kWh)

Flexi-SOQ ~ Flexi Supply Point Offtake Quantity at Exit Point i (kWh)

SRj ~ Scaling Ratio for LDZ j (-)

SRj = (Aggregate Forecast Demand for all relevant System Exit Points) / (Sum of RSPC for all relevant System Exit Points)

Flexi- SOQi = SRi * SOQi

Step 2

Calculate an estimate...

CDi ~ Curtailment Duration at Exit Point i (hours)

ECQij ~ Emergency Curtailment Quantity component for Exit Point i in LDZ j(kWh)

ECQij = Flexi- SOQi * (CDi/24)

Supply Point Offtake Quantity (Registered Capacity) ~ SOQ

The following algorithm calculates an estimate of the ECQ Supply Point component from the SOQ.

Repeat the following for each curtailed Supply Point

Step 1

Obtain Registered Supply Point Capacity for the relevant System Exit Point.

RSPCi ~ Registered Supply Point Capacity at Exit Point i (kWh)

Step 2

Calculate estimate...

CDi ~ Curtailment Duration at Exit Point i (hours)

ECQi ~ Emergency Curtailment Quantity component for Exit Point i (kWh)

$$ECQi = RSPCi * (CDi/24)$$

Shared Supply Meter Points

For non VLDMC Shared Supply Meter Points, the Users (or agent on behalf of the Users) can provide a User allocation method, on notification of a relevant Emergency, which applies unless Users have called User "interruption". If no User allocation method is available a Transporter derived ECQ element would be used e.g. historical allocation.

For VLDMC Shared Supply Meter Points, the Users (or agent on behalf of the Users) can provide an allocation method, on notification of a relevant Emergency, which applies unless Users have called User "interruption". If no User allocation method is available, a Transporter derived ECQ element would be used e.g. historical allocation.

Information Flow

The UNC places an obligation on all relevant Transporters to calculate the ECQ component for each relevant System Exit Point and pass the data, aggregated by User, on to National Grid NTS. Each Transporter will aim to provide its element of a User's ECQ to National Grid NTS in its role as residual system balancer, as soon as is reasonably practicable after Curtailment has been initiated. The residual system balancer would be responsible for collating and aggregating the ECQ elements from all Transporters, generating the trade price and initiating the trades, based on the aggregated Transporter ECQ components, and calculating the trade payments. Payments will be made via xoserve. National Grid NTS will endeavour to enter the ECQ trade as soon as reasonably practicable after Curtailment has been initiated and will update the quantity as each Transporters' component of the ECQ becomes available.

Impact and Notification of User "Interruption"

A User should notify the Transporter of User "interruption" only if the Supply Point stops the offtake of gas under any commercial arrangement with that User. If a User offers demand reduction via a physical or locational action on the OCM then the initiated demand "interruption" should be covered by a P70.

If a User "interrupts" a Shared Supply Meter Point then it should not issue a P70 if it intends to act as the User for that System Exit Point under other contractual arrangements such as the purchase of gas by the end-consumer. If a Supply Point was subject to an operationally validated P70 notification, prior to the time of the Curtailment notice sent under the powers of the NEC, then the ECQ component will be set to zero.

Consequences of not implementing this Modification Proposal (0098)

If this proposal is not implemented, then the ECQ methodology can only be changed by transporters. Through including the ECQ Methodology within the UNC, a level playing field is established, to allow those directly affected by the ECQ calculation to influence the methodology used, as appropriate.

Incorporating the uniform methodology for calculating ECQ within the Code ensures that any proposed changes to the methodology are progressed through an established governance process, promoting certainty and transparency. To do otherwise would run the risk that changes to the methodology might be made at times of system stress or all or a selection of transporters may chose not to follow the sequential steps, jeopardising certainty at times when it is of the utmost importance to the system to minimise the duration of an emergency.

The set process proposed should limit the number of potential claims, once the system is restored after an emergency, through ensuring a more accurate representation of a User's ECQ and consequently, the balance of the system as a whole."

Alternative Proposal 0098a was as follows:

"The purpose of the proposal is to include the methodology, as defined in version 1.1, with the UNC governance arrangements. The entire methodology would not be drafted into the UNC but it would be referenced as a UNC ancillary document. As such, changes would be placed under the oversight of the UNC committee, with recourse to modification procedure if the committee could not make determination. For the avoidance of doubt, it is proposed that, at any stage of the change process, any UNC party could propose a change to the methodology using either the committee route or the modification process route, thereby alleviating a concern raised by the Authority in its decision letter on Modification Proposal 0054 / 0054a.

We believe that it is the governance process that controls change that is more important than the physical location of the words and that our proposal provides an excellent fit with arrangements approved by the Authority in their decision over the governance of other UNC referenced documents established during Network Code Modification Proposal 0730."

2. Extent to which implementation of the proposed modification would better facilitate the relevant objectives

The Proposer of **Modification Proposal 0098** has suggested that implementation would better facilitate the relevant objectives for the following reasons:

- "(a) the efficient and economic operation of the pipeline system, through ensuring that transporters have the best estimate available to them in a GDE of the quantity gas, which may have been offtaken, had an ECQ not been taken, thus enabling transporters to better balance the system in an emergency.
- (b) the coordinated, efficient and economical operation of (i) the combined pipeline system and/or (ii) the pipeline system of one or more other relevant gas transporters, though ensuring a consistent and coordinated approach for all transporters to calculate a User's ECQ and ensuring the most accurate ECQ to better enable each transporter to balance their system in the event of an GDE.
- (d) the securing of effective competition between relevant shippers and between relevant suppliers, through ensuring each shipper/supplier is subject to the same calculation process when the transporter determines their ECQ. As stated in Ofgem's decision letter to Modification Proposal 044, 'where different methodologies co-exist, this could result in shipper uncertainty as to the treatment of particular loads (and potentially differential treatment of loads connected to different networks).' We

accept that the transporters have agreed to a uniform revised ECQ calculation methodology, however, as the methodology remains outside the Code, Users are not provided with adequate assurance that different methodologies may not materialise or that the methodology itself may change, without the appropriate governance framework.

- (f) the promotion of efficiency in the implementation and administration of the network code and or the uniform network code through ensuring that key methodologies, which have significant commercial impacts on Users, are subject to code governance procedures."

The Proposer of **Alternative Modification Proposal 0098a** stated "We believe that the incorporation of this document under the governance of the UNC would assist transparency and accountability. It also has the means of providing efficient consultation. These factors would contribute both to the efficient and economic operation by transporters the combined pipeline system and increase the certainty and confidence of all UNC parties, thereby facilitating competition between shippers and suppliers. Therefore, we consider that implementation of this proposal would further the relevant objectives of the proposed UNC."

3. The implications of implementing the Modification Proposal on security of supply, operation of the Total System and industry fragmentation

Both Proposals:

Each proposal provides a view that UNC governance for the ECQ methodology would assist efficient and economic operation of the pipeline system.

The Proposer of **Modification Proposal 0098** suggested that the inclusion of a further step to the methodology "will give an accurate as possible estimate of the associated quantities of gas, providing a better representation of individual portfolio positions and, consequently, representation of the system as a whole".

In respect of **Modification Proposal 0098** the Proposer suggested that by placing a common methodology within the UNC implementation "will guard against unnecessary fragmentation and make available a clear and consistent approach, providing greater certainty in the event of a Potential Gas Deficit Emergency or an actual Gas Deficit Emergency (GDE)."

Alternative Modification Proposal 0098a is confined to proposing governance of the existing ECQ Methodology Statement (version 1.1). and UNC governance "should contribute to efficient and economic operation of the pipeline system."

4. The implications for Transporters and each Transporter of implementing the Modification Proposal, including

a) implications for operation of the System:

Modification Proposal 0098

Implementation would potentially safeguard consistent calculation of ECQs by the Transporters in the event of an actual or potential GDE and would “give an accurate as possible estimate of the associated quantities of gas, providing a better representation of individual portfolio positions and, consequently, representation of the system as a whole”.

The SME makes the following observations in relation to the detail of the proposed revised methodology : -

- Methodology 1st Gas Day iii) is inconsistent with the rest of the proposal unless Nominations are included.
- The **Historical allocation calculation method** is not explicit about what should happen in the event that all days were curtailed in Step 2.
- **SOQ (scaled)** algorithm seems to contain an error. The term SRj is defined but SRi appears in the equation and the latter is not defined.

Alternative Modification Proposal 0098a

Implementation would have the effect of reflecting prevailing operational practice in a UNC governed document.

The SME observes that the Proposal is not explicit regarding the mechanism by which a UNC party could propose a change to the UNC Committee and what the voting arrangements would be.

b) development and capital cost and operating cost implications:

Modification Proposal 0098

The Proposer “accepts that transporters are currently unable to view User Nominations on Gemini.” and suggests for this coming winter NG NTS might “submit an automated report to transporters, detailing User Nominations, once a potential or actual GDE has been called”.

Alternative Modification Proposal 0098a

As the proposal relates to governance only no development, capital cost and operating cost implications have been identified. The Proposals reflects prevailing operational practice.

c) extent to which it is appropriate to recover the costs, and proposal for the most appropriate way to recover the costs:

Both Proposals:

Neither Proposer has suggested a cost recovery mechanism.

d) analysis of the consequences (if any) this proposal would have on price regulation:

Both Proposals:

No such consequences on price regulation have been identified.

5. The consequence of implementing the Modification Proposal on the level of contractual risk of each Transporter under the Code as modified by the Modification Proposal

Both Proposals:

Neither Proposer has identified any such consequences in their respective proposals.

6. The high level indication of the areas of the UK Link System likely to be affected, together with the development implications and other implications for the UK Link Systems and related computer systems of each Transporter and Users

Modification Proposal 0098

The Proposer “accepts that transporters are currently unable to view User Nominations on Gemini.” and suggests for this coming winter NG NTS might “submit an automated report to transporters, detailing User Nominations, once a potential or actual GDE has been called”. No impact assessment is available at present to clarify timescales or costs for this piece of work.

Alternative Modification Proposal 0098a

The Proposer did not anticipate any system changes as the proposal relates to governance only and the proposed governance model already exists.

7. The implications of implementing the Modification Proposal for Users, including administrative and operational costs and level of contractual risk

Both Proposals

By implementing a common methodology under UNC governance arrangements that allows any UNC party to propose a change to the methodology, it might be anticipated that Users' levels of contractual risk would be better identified and reduced.

Modification Proposal 0098 if implemented would make the changes to the ECQ methodology subject to the full modification process whereas for **Alternative Modification Proposal 0098a** such changes “would be placed under the oversight of the UNC committee, with recourse to modification procedure if the committee could not make determination.”

Modification Proposal 0098 would “give an accurate as possible estimate of the associated quantities of gas, providing a better representation of individual portfolio positions...”

The SME observations in relation to the detail of the proposed revised methodology may also be relevant to Users.

8. The implications of implementing the Modification Proposal for Terminal Operators, Consumers, Connected System Operators, Suppliers, producers and, any Non Code Party

Both Proposals:

Implementation would provide a higher level of assurance and consequently might reduce the level of contractual risk for consumers at Supply Points impacted by the ECQ process.

Modification Proposal 0098 puts forward a further step and detail regarding System Exit Points that provide Nominations suggesting that this would improve accuracy and confidence.

9. Consequences on the legislative and regulatory obligations and contractual relationships of each Transporter and each User and Non Code Party of implementing the Modification Proposal

Both Proposals:

No such consequences have been identified.

10. Analysis of any advantages or disadvantages of implementation of the Modification Proposal

Both Proposals

The following advantage of implementation has been identified:

- It would guard against unnecessary fragmentation and make available a clear and consistent approach, providing greater certainty in the event of a potential or an actual GDE

The following disadvantage should be acknowledged:

- Requiring any change in the ECQ methodology to go through code governance would limit the ability of Transporters to quickly make changes where experience had shown them to be necessary.

The Proposer of **Modification Proposal 0098** has identified the following specific advantages of implementation:

- It would set out the substantive commercial terms relating to ECQ calculation in a document that would be subject to the full jurisdiction of the modification process.
- The process outlined would give both Users and transporters sufficient confidence that the ECQ methodology will give an accurate as possible estimate of the associated quantities of gas, providing a better representation of individual portfolio positions and, consequently, representation of the system as a whole.

The Proposer of **Modification Proposal 0098** identified the following which may be viewed as a disadvantage.

- Transporters other than National Grid NTS are currently unavailable to view User Nominations on Gemini and therefore there would be some operational impact.

The Proposer of **Alternative Modification Proposal 0098a** has identified the following specific advantages of implementation:

- It would provide an efficient means of consultation on the ECQ Methodology and provide “an excellent fit with the arrangements approved by the Authority in their decision over the governance of other UNC referenced documents established during [Transco] Network Code Modification Proposal 0730”
- It would allow “at any stage of the change process, any UNC party could propose a change to the methodology using either the [UNC] Committee route or the modification process route.”

The Proposer of **Alternative Modification Proposal 0098a** has not identified any disadvantages.

11. Summary of representations received (to the extent that the import of those representations are not reflected elsewhere in the Modification Report)

Written Representations are now sought in respect of this Draft Report

12. The extent to which the implementation is required to enable each Transporter to facilitate compliance with safety or other legislation

Both Proposals

Implementation is not required to enable each Transporter to facilitate compliance with safety or other legislation.

13. The extent to which the implementation is required having regard to any proposed change in the methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence

Both Proposals

Implementation is not required having regard to any proposed change in the methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence.

14. Programme for works required as a consequence of implementing the Modification Proposal

Modification Proposal 0098

The Proposer “accepts that transporters are currently unable to view User Nominations on Gemini.” and suggests for this coming winter NG NTS might “submit an automated report to transporters, detailing User Nominations, once a potential or actual GDE has been called”.

Alternative Modification Proposal 0098a

No programme for works would be required as a consequence of implementing the Modification Proposal.

15. Proposed implementation timetable (including timetable for any necessary information systems changes)

Modification Proposal 0098

The Proposer put forward a Proposed Implementation Date of September 2006.

Alternative Modification Proposal 0098a

The Proposer suggested implementation as soon as possible.

16. Implications of implementing this Modification Proposal upon existing Code Standards of Service

Both Proposals:

No such implications of implementation have been identified.

- 17. Recommendation regarding implementation of this Modification Proposal and the number of votes of the Modification Panel**

19. Text

Representations are now sought in respect of this Draft Report and prior to the Transporters finalising the Report

Subject Matter Expert sign off:

I confirm that I have prepared this modification report in accordance with the Modification Rules.

Signature:

Date :

Signed for and on behalf of Relevant Gas Transporters:

Tim Davis
Chief Executive, Joint Office of Gas Transporters

Signature:

Date :