Section D: High Level Solution

D1: The Proposed Solution

Solution Option Summary:	Distribution Networks have identified an opportunity to reduce carbon emissions and costs to consumers, by removing and/or reducing propane that is required to be injected to enrich the Calorific Value (CV) of biomethane that supplied into the gas Networks. At present, biomethane entry points are required to inject propane to varying contents, so that the energy value of the gas meets the current LDZ average daily Calorific Value (Flow Weighted Average Calorific Value or FWACV) levels. From a gas Settlement perspective, the primary consequence of reducing propane from any biomethane injected into the gas Network is that it will also reduce the Calorific Value content of gas passing through a Supply Meter Point. This in turn will see a greater volume of gas passing through the meter to generate the required energy being consumed at a property. Energy (and consequently the attributed Annual and Supply Offtake Quantity), is calculated when meter reads are received for individual Supply Meter Points – using the volume of gas that has passed through the meter and applying various factors to derive the energy used between meter reads. One critical factor that is applied is the Calorific Value (cv) of gas that is being supplied to the property, which is attributed at Local Distribution Zone (LDZ) level, based on the Flow Weighted Average Calorific Value (FWACV). **Solution Description** To support a reduction in propane on closed parts of the gas Networks being supplied by alternative gas sources (such as Biomethane), the Calorific Value attributed to the gas being supplied to any recognised MPRNs would need to be made available and used in the energy calculation within CDSP systems, to ensure the LDZ Flow Weighted Average Calorific Value is not applied. In addition, the CDSP solution will need to ensure that any meter read that is supplied at recognised MPRNs within the closed Network are processed using their site-specific Calorific Value, whilst also ensuring that an appropriate energy value for these sites continues to be made available for Energy Balancing purposes. To support these objectives, the CDSP solution would need to be amended, to ensure energy is calculated, fed to downstream processes and charged to gas Shippers. To achieve these objectives, we are proposing to introduce the following capabilities within the CDSP systems; • An Indicator within UK Link to confirm presence of a MPRN that has site specific Calorific Value • Mechanism needs to be established to allow site specific Calorific Value to be supplied to UK Link for recognised MPRNs daily – to do this a new interface will need to be established • Interfaces changes to support receipt and response to new site specific CV data flows between Xoserve and relevant DNs • Rules to confirm how this CV information is validated and responded to need to be confirmed as part of solution design • Code changes to calculate energy post read receipt based on profile values for LDZ sites with Site specific CV flag • User Interface to ensure new screen capability is available to support setting and amending CV values • Reporting capability to ensure sites can be actively monitored and data is accessible to relevant stakeholders • Changes to existing reports to include details of site specific CV status The solution will also need to ensure downstream processes continue to operate in accordance with the current arrangements – these include, and are not limited to, the following processes;

	• Gemini – will continue to be supplied with aggregate energy data in the same mechanism and format as it is today (.CON file) • Meter Reading processes are not to be impacted and will continue to be supplied for recognised MPRNs as per current arrangements • Invoicing charges reflect accurate energy charges, based on combination of volume and CV associated to relevant MPRNs Further information on the Solution Option being proposed can be found within the **HLSO** **Assumptions and other considerations** . Several assumptions and additional considerations have been identified during the High Level Solution Option assessment. These are outlined below and will be developed and clarified as part of a Detailed Design project phase. • Any impacts to sites in Class 3 or 4 have not been considered as part of this assessment. • Impacts/changes required to FWACV – currently managed by National Grid – have not been considered. • Estimated reads will be calculated/adjusted using the site specific CV. • For class 2 sites there will be a combination of MPRNs within each LDZ (Biomethane/ Normal). Energy calculation for the MPRNs will happen individually (Normal site based on the FWACV received in CVV file and Biomethane site with the site specific CV). Aggregate Energy will be sent to Gemini in CON file. • The CON file issued to Gemini and invoicing will contain the FWACV not site specific CV. • If daily site specific CV reduction data is not received, use default D-1 CV. • Any changes to the CV will follow the normal amendment process. • Additional analysis may be needed to ensure no impacts to Gemini UIG process. • No impacts to Demand Estimation have been identified at this stage. • Solutions only considered for closed parts of the gas Network being fed by biomethane, and where site specific CV is being delivered to recognised MPRNs
Xoserve preferred option: (including rationale)	Single High-Level Solution Option – as outlined above (detailed within HLSO).
DSG preferred solution option: (including rationale)	
Consultation closeout:	31/08/2021

Impact on Service Line(s) and funding (A6) for each Solution Option:	(If differ from original assessment in A6)

Section E: Industry Response Solution Options Review

E1: Organisation's preferred solution option

User Contact Details:	Organisation:	EDF
	Name:	Eleanor Laurence
	Email:	eleanor.laurence@edfenergy.com
	Telephone:	07875117771
Organisation's preferred solution option, including rationale taking into account costs, risks, resource etc.	Our primary concern is how the impacts is suppliers & shippers is being considered (following the lack of this in the HyDeploy trial) The use of site specific calorific value by CDSP for settlements, AQ etc is fine, however shippers may have systems that use and load the CV for settlement invoice validation purposes, customer billing purposes etc. Therefore consideration must be given to how these values might be received by shippers/suppliers and how they might be used. Suppliers may have automated processes that loads and bills to CVs received using standard industry processes and therefore discussions should happen many months in advance of any trial solution being decided to give all impacted parties a chance to consider impacts and feed in to the process. In addition where a party may not be a supplier/shipper to any of the trial sites at go-live, they may during the trial take supply of one of these sites, therefore consideration should be given to that.	
Implementation Date:	Defer	
Xoserve preferred solution option:	Defer	
DSG preferred solution option:	Defer	
Publication of consultation response:	N/A	

E2: Xoserve' s Response

Xoserve Response to Organisations Comments:	Thank you for your representation. Xoserve anticipates the communication of LDZ embedded 'decarbonisation' site-specific Calorific Values to gas Shippers/Suppliers will form part of the solution that we take forward with those involved in these initiatives. The detailed design phase for this change will consider the wider implications on shipper/supplier systems and will include the options available to ensure daily LDZ/site-specific CV data is made available to relevant parties. We welcome your comments relating to the importance engagement and communication will play in ensuring that the objectives of new and innovative decarbonisation initiatives, and will take these into consideration when planning the activities that need to take place during the detailed design phase of this change.

E1: Organisation's preferred solution option

User Contact Details:	Organisation:	SSE Energy Supply Limited
	Name:	Mark Jones
	Email:	mark.jones@sse.com
	Telephone:	07810858716
Organisation's preferred solution option, including rationale taking into account costs, risks, resource etc.	The solution discusses changes to Xoserve's systems, but makes no mention of the issue it could cause for shipper and supplier systems, and processes as they are often built with a single CV value allowed for each LDZ. How would these new CV values be communicated to shippers and could this solution lead to some customers receiving 'off-spec' gas.	
Implementation Date:	Defer	
Xoserve preferred solution option:	Defer	
DSG preferred solution option:	Defer	

Publication of consultation response:	N/A

E2: Xoserve' s Response

Xoserve Response to Organisations Comments:	Thank you for your representation. Xoserve anticipates the communication of LDZ embedded 'decarbonisation' site-specific Calorific Values to gas Shippers/Suppliers will form part of the solution that we take forward with those involved in these initiatives. The detailed design phase for this change will consider the wider implications on shipper/supplier systems and will include the options available to ensure daily LDZ/site-specific CV data is made available to relevant parties.

E1: Organisation's preferred solution option

User Contact Details:	Organisation:	EON
	Name:	Clare Manning
	Email:	clare.manning@eonenergy.com
	Telephone:	07812 3667271
Organisation's preferred solution option, including rationale taking into account costs, risks, resource etc.	There is only a single solution proposed. We have yet to fully scope out the impact of this solution but it is likely that there will need to be changes to our billing systems to support this (suppliers will need to use the site specific CV rather than FCAW in billing calculations for relevant sites). We expect this could be a fairly significant and costly change for Shippers/suppliers, but the change pack does not include the detail on this, nor how the file transfers will work. The impacts to Shippers and Suppliers need to be considered and clearly communicated.	
Implementation Date:	No implementation date proposed	
Xoserve preferred solution option:	Support with comments	

DSG preferred solution option:	N/A
Publication of consultation response:	N/A

E2: Xoserve' s Response

Xoserve Response to Organisations Comments:	Thank you for your representation. Xoserve anticipates the communication of LDZ embedded 'decarbonisation' site-specific Calorific Values to gas Shippers/Suppliers will form part of the solution that we take forward with those involved in these initiatives. At this stage, we have identified a single solution option which caters for the reduction of propane on Class 1 and Class 2 sites only, whilst also minimising disruption to existing industry processes. The detailed design phase for this change will consider the wider implications on shipper/supplier systems and will include the options available to ensure daily LDZ/site-specific CV data is made available to relevant parties to support your billing processes.

E1: Organisation's preferred solution option

User Contact Details:	Organisation:	Barrow Green Gas
	Name:	Tim Davis
	Email:	tdavis@barrowshipping.co.uk
	Telephone:	+44 (0)1782 250268
Organisation's preferred solution option, including rationale taking into account costs, risks, resource etc.	This is just to say how strongly we welcome and support this change proposal. We envisage that it will be relevant at a large proportion of the existing biomethane entry points and can deliver significant operational benefits as well as the identified financial and environmental benefits. Our only concern is to ensure that implementation is non-discriminatory and so is available to all sites and is not offered on a trial basis to select sites only.	
Implementation Date:	Approve	

Xoserve preferred solution option:	Approve
DSG preferred solution option:	Approve
Publication of consultation response:	N/A

E2: Xoserve' s Response

Xoserve Response to Organisations Comments:	Thank you for your representation. We will ensure this is considered in the solution option discussion at the Change Management Committee on 8th September; prior to the option being approved into detailed design.

Section F: Approved Solution Option

F1: Approved Solution Option

XRN Reference:	XRN4900
Solution Details:	Option 1: Receipt of site specific CV through New file, for sites impacted due to Biomethane / propane reduction, in UK Link and Gemini to receive LDZ CVs in CON files as per BAU logic
Implementation Date:	TBC
Approved By:	Change Management Committee
Date of Approval:	08/09/2021