

DSC Change Proposal Document

Customers to fill out all of the information in the sections coloured ■

Xoserve to fill out all of the information in the sections coloured ■

A1: General Details

Change Reference:	XRN5298		
Change Title:	H100 Fife Project - Phase 1 (Initial Assessment)		
Date Raised:	13/01/2021		
Sponsor Representative Details:	Organisation:	SGN	
	Name:	Joel Martin	
	Email:	joel.martin@sgn.co.uk	
	Telephone:	+44 (0)7966 317785	
Xoserve Representative Details:	Name:	Victoria mustard	
	Email:	victoria.mustard1@xoserve.com	
	Telephone:	07519605322	
	Business Owner:	tbc	
Change Status:	<input type="checkbox"/> Proposal	<input type="checkbox"/> With DSG	<input type="checkbox"/> Out for Review
	<input type="checkbox"/> Voting	<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Rejected

A2: Impacted Parties

Customer Class(es):	<input checked="" type="checkbox"/> Shipper	<input checked="" type="checkbox"/> Distribution Network Operator
	<input type="checkbox"/> NG Transmission	<input type="checkbox"/> IGT
	<input type="checkbox"/> All	<input checked="" type="checkbox"/> Other [solution dependant - could potentially impact all customer types]
Justification for Customer Class(es) selection	Unknown yet as will be solution dependent	

A3: Proposer Requirements / Final (redlined) Change

Problem Statement:	SGN's strategic ambition towards Net Zero includes a network innovation, 'proof of concept', project; H100 Fife. This project will see SGN injecting 100% hydrogen into a new, purpose-built network which will be located in parallel to the existing natural gas network. Initially, 300 existing domestic consumers will be invited to migrate their supplies from natural gas to hydrogen for their energy requirements.
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Ofgem has recently approved the SGN H100 Fife project as a Network Innovation Competition (NIC) candidate. The project is considered of national and strategic importance to demonstrating the capability to meet the UK Net Zero target ambition.

SGN's current plan anticipates H100 customers will commence offtaking hydrogen in Q2 2023.

Xoserve is to collaborate with SGN to initially assess the impacts and develop high-level solutions.

Important notes:

1. SGN will construct a bespoke hydrogen network alongside its existing gas network. Customers in the location of the hydrogen network will be able to 'opt in' to H100;
 - SGN will physically disconnect the customer from its existing gas network and connect it to the hydrogen network
 - For each H100 'opt-in' customer, their supply will be migrated from natural gas to hydrogen. There will be a bespoke hydrogen meter. There is the potential for new Hydrogen connections which do not currently have a natural gas supply.
 - A H100 customer may subsequently 'opt out' of H100, in which case, SGN will disconnect the customer from the hydrogen network and reconnect to its standard gas network (and meter)
2. The Thermal Energy Regulations require DNs to calculate a daily LDZ CV. The LDZ CV is used by Shippers/Suppliers to bill their customers within that LDZ. The intention of the project will be to keep the H100 MPRNs within Scotland LDZ in CDSP systems as creating a new LDZ is deemed cost prohibitive. The H100 CV (~11MJ/M3) will need to be excluded from the SC LDZ FWACV calculation to prevent LDZ capping (this requires a further discussion with Ofgem).
3. In comparison to standard mains gas, hydrogen has a lower Calorific Value (CV) and requires a greater volume of gas to pass through the customer's meter to achieve the same energy content. As the H100 MPRNs will remain within SC LDZ the solution will need to ensure energy settlements and Shipper charges for H100 MPRNs reflect what their energy consumption would have been if they were supplied with natural gas. We also need to consider how customer bills will be impacted by these changes and any solution implemented.
4. Xoserve will need to consider a solution that will adjust metered hydrogen volume into energy (kWh) whilst being cognisant of the existing processes e.g. daily LDZ CV

Change Description:	<p>Phase 1: Xoserve to undertake an initial assessment to develop high-level solution options and a delivery project plan that SGN will present to Ofgem in March 2021. Xoserve should consider the impacts on, but not be limited to:</p> <ul style="list-style-type: none"> • Shippers' daily Energy Balancing <ul style="list-style-type: none"> ○ including NDM forecasting/allocation • Meter Supply Point; Aqs, SOqs and reads • Invoicing; settlement & reconciliation • LDZ Shrinkage, CV shrinkage and UIG • Faster Switching and RGMA • Implications on DN LDZ daily CV calculation (FWACV); specifically, LDZ CV capping (Thermal Energy Regulations) • Impacts of any solution on customer end gas bills. [tbc] • Potential solution <i>might</i> include new MPRN correction factors <p>Phase 2: Xoserve will undertake the detailed assessment, design and development of an agreed solution design. Xoserve will implement the solution to support SGN's H100 Fife during Q2 2023.</p>	
Proposed Release:	April 2023	
Proposed Consultation Period:	<input type="checkbox"/> 10 Working Days	<input type="checkbox"/> 15 Working Days
	<input type="checkbox"/> 20 Working Days	<input checked="" type="checkbox"/> Other [Not known]

A4: Benefits and Justification

Benefit Description:	<p>SGN's H100 Fife is a strategic Net Zero project that has received approval (and funding) from Ofgem. H100 Fife is initially a 'proof of concept', primarily to assess safety, physical network operation and the effects on customers' energy use.</p> <p>The commercial arrangements e.g. Xoserve meter reconciliation, settlement, need to be adapted to support and ensure a successful outcome for H100 Fife.</p> <p><i>What, if any, are the tangible benefits of introducing this change? What, if any, are the intangible benefits of introducing this change?</i></p>
Benefit Realisation:	<p>The benefits will be realised immediately upon a successful CDSP solution delivery.</p> <p><i>When are the benefits of the change likely to be realised?</i></p>
Benefit Dependencies:	<p>SGN will need to consider;</p> <ul style="list-style-type: none"> • if changes are required to statutory/regulatory arrangements e.g. Thermal Energy Regulations, UNC, DSC • potential dependency on Ofgem's CSS/Faster Switching programme <p><i>Please detail any dependencies that would be outside the scope of the change, this could be reliance on another delivery, reliance on some other event that the projects has not got direct control of.</i></p>

A5: Final Delivery Sub-Group (DSG) Recommendations – Removed

(see Section C for DSG recommendations)

A6: Service Lines and Funding

Service Line(s) Impacted - New or existing	Service Area 1: Manage supply point registration		
Level of Impact	Major/ Minor/ Unclear/ None		
If None please give justification			
Impacts on UK Link Manual/ Data Permissions Matrix			
Level of Impact	Major/ Minor/ Unclear/ None		
If None please give justification			
Funding Classes :	Customer Classes/ Funding	Delivery of Change	On-going Budget Amendment
	<input type="checkbox"/> Shipper	XX %	XX %
	<input type="checkbox"/> National Grid Transmission	XX %	XX %
	<input type="checkbox"/> Distribution Network Operator	XX %	XX %
	<input type="checkbox"/> IGT	XX %	XX %
	<input type="checkbox"/> Other <please specify>	XX %	XX %
ROM or funding details:			
Funding Comments:			

A7: ChMC Recommendation – Initial Review

Change Status:	<input checked="" type="checkbox"/> Approve	<input type="checkbox"/> Reject	<input type="checkbox"/> Defer
DSC Consultation Issue:	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No
Meeting Date:	10/02/2021		

A8: ChMC Recommendation – Solution Review

Change Status:	<input checked="" type="checkbox"/> Approve	<input type="checkbox"/> Reject	<input type="checkbox"/> Defer
Industry Consultation:	<input type="checkbox"/> 10 Working Days		<input checked="" type="checkbox"/> 15 Working Days
	<input type="checkbox"/> 20 Working Days		<input type="checkbox"/> Other [Specify Here]
DSC Consultation Issue:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No

Date Issued:	18/10/2021	
Comms Ref(s):	2918.4 - MT - PO	
Number of Responses:	3 approval and 2 rejected representations	
Solution Voting:	<input checked="" type="checkbox"/> Shipper	Approve
	<input type="checkbox"/> National Grid Transmission	Please select.
	<input checked="" type="checkbox"/> Distribution Network Operator	Approve
	<input type="checkbox"/> IGT	Please select.
Meeting Date:	10/11/2021	
Release Date:	Release: Proposed Nov 22	

A9: ChMC Recommendation – Detailed Design

Change Status:	<input type="checkbox"/> Approve	<input type="checkbox"/> Reject	<input type="checkbox"/> Defer
Industry Consultation:	<input type="checkbox"/> 10 Working Days	<input type="checkbox"/> 15 Working Days	
	<input type="checkbox"/> 20 Working Days	<input type="checkbox"/> Other [Specify Here]	
DSC Consultation Issue:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Date Issued:	Click here to enter a date.		
Comms Ref(s):			
Number of Responses:			
Solution Voting:	<input type="checkbox"/> Shipper	Please select.	
	<input type="checkbox"/> National Grid Transmission	Please select.	
	<input type="checkbox"/> Distribution Network Operator	Please select.	
	<input type="checkbox"/> IGT	Please select.	
Meeting Date:	Click here to enter a date.		
Release Date:	Release: Feb / Jun / Nov XX or Adhoc DD/MM/YYYY or NA		