

Company Secretary  
Scotland Gas Networks Plc  
Axis House  
5 Lonehead Drive  
Newbridge  
Edinburgh  
Scotland  
EH28 8TG

Direct Dial: 0141 354 5416

Email: Steven.McMahon@ofgem.gov.uk

Date: 17 December 2020

Dear Company Secretary,

**Project Direction ref: ScGN / H100 Fife / 17 December 2020<sup>1</sup>**

Scotland Gas Networks Plc (ScGN) submitted to Ofgem the project H100 Fife (the Project) in July 2020 to be considered for funding through the Gas Network Innovation Competition (NIC). In the 2020 NIC decision<sup>2</sup>, we selected the Project<sup>3</sup> for conditional funding.

ScGN must comply with the terms contained in this Project Direction as a condition of the Project receiving funding through the Gas NIC. These terms can be found in the Schedule to this Project Direction.

**Project Direction**

Chapter 5 of the Gas NIC Governance Document<sup>4</sup> states that a Project Direction will:

- set out the Project-specific conditions that the Network Licensee (which for this project is ScGN) is committing to in accepting funding;

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<sup>1</sup> This Project Direction constitutes notice pursuant to section 38A (Reasons for decisions) of the Gas Act 1986.

<sup>2</sup> <https://www.ofgem.gov.uk/publications-and-updates/network-innovation-competition-2020-funding-decision>

<sup>3</sup> Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the Gas NIC Governance Document.

<sup>4</sup> <https://www.ofgem.gov.uk/publications-and-updates/version-31-gas-network-innovation-competition-governance-document>

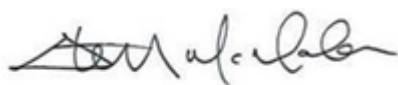
- require the Network Licensee to undertake the Project in accordance with the commitments it has made in the Full Submission<sup>5</sup>;
- set out the Approved Amount for the Project, that will form part of the calculation contained in the Funding Direction issued by the Authority under Chapter 7 of the Governance Document;
- set out the Project budget that the Network Licensee must report against and how variances against the Project budget will be reported and approved/rejected; and
- set out the mechanism for the Network Licensee receiving the Approved Amount as set out in the Funding Direction.

These requirements are described for the Project in the Schedule to this Project Direction.

## **Decision**

Provided ScGN complies with the Gas NIC Governance Document and with the Schedule to this Project Direction, the Project is deemed to be an Eligible NIC Project.<sup>6</sup>

This Project Direction constitutes notice pursuant to section 38A (Reasons for decisions) of the Gas Act 1986.



**Steven McMahon**

**Deputy Director, Electricity Distribution and Cross Sector Policy**

**For and on behalf of the Authority**

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<sup>5</sup> Where appropriate, the Project Direction may therefore include extracts from the Full Submission or refer to specific sections of the Full Submission.

<sup>6</sup> Eligible NIC Project has the meaning given in definitions of the Gas Transporter licence.

## Schedule to Project Direction

### 1. TITLE

Project Direction ref: ScGN / H100 Fife / 17 December 2020

### 2. PREAMBLE

This Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to Scotland Gas Networks Plc (the "Funding Licensee") pursuant to the Gas NIC Governance Document issued pursuant to Special Condition 1I (The Network Innovation Competition) of the ScGN Gas Transporter Licence (the "Licence"). It sets out the terms to be complied with in relation to H100 Fife (the "Project") as a condition of it being funded under the NIC and the Funding Return Mechanisms.<sup>7</sup>

Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the Gas NIC Governance Document.

References to specific sections of the Funding Licensee's Full Submission in this Project Direction are, for ease of reference, made by referring to the section number in the Funding Licensee's Full Submission pro-forma.

### 3. CONDITIONS PRECEDENT

In accepting funding for the Project, the Funding Licensee is subject to the following Project-specific conditions:

#### ***Condition 1***

The Funding Licensee will not access any NIC funds from the Project Bank Account until it has signed contracts with the Project Partners named in Table 1, signed a Memorandum of Understanding with Project Partners named in Table 2, and letters of commitment from the proposed project partners in Table 3.

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<sup>7</sup> The Funding Return Mechanism is defined in Part C of Special Condition 1I of the Licence.

**Table 1. Licenced Project Partners**

Cadent Gas Ltd
Northern Gas Networks Ltd
Wales and West Utilities Ltd

**Table 2. Established non-licensed Project Partners**

Baxi Heating UK Ltd
Bosch Thermotechnology Ltd

**Table 3. Project Partners currently in the Hy4Heat consortium**

HyCookers (Consortium led by Enertek International Ltd) or derivative thereof
HyFires (Consortium led by Enertek International Ltd) or derivative thereof

The Licensee will not be able to access NIC funding pertaining to Project Deliverable 5 until it has signed contracts with all Project Partners named in Table 1, Table 2 and Table 3.

### **Condition 2 – Value for money**

The Funding Licensee must submit a report to the Authority by 18 January 2021, demonstrating cost reductions and value adding opportunities to the Project for network customers without detriment to the network-specific learnings of the project. This condition may be met in a number of ways. The evidence provided to the Authority must include the following:

- A report providing a detailed narrative of proposed amendments, how they have been or will be achieved in the course of the Project, plus a revised justification of the value for money that the Project represents to network customers.
- Confirmation of funding and/or budget changes, including a commitment to a minimum reduction of £100k to the NIC Funding Request set out in this condition.
- An engagement strategy for the continued review of further external funding opportunities, which must include demonstration of engagement with partners, supporters and other potential funders, and a timeline for the investigation of funding opportunities.

- If applicable: changes to Project budget allocations, set out in a revised Full Submission Spreadsheet; proposed changes to Project Deliverables, plus their expected impact; and proposed additional stage gates or points of funding return.

Our review of these materials will be informed by our assessment of the Project against the value for money criterion, set out in the NIC Gas Governance Document. The Authority will provide its decision on the outcome of this condition no later than three weeks from receipt of the report. If approved, the Authority will update this Project Direction in line with the Funding Licensee's proposals, as confirmation that this condition has been fulfilled. The Funding Licensee will not access NIC funding until this condition has been fulfilled.

### **Condition 3 – Evidence of satisfactory regulatory model**

The Funding Licensee is required to develop an end-to-end regulatory framework plan, including regulatory issues identified, proposals to resolve these, clear indicators of what the Funding Licensee considers should constitute evidence of resolution, and an estimated date of resolution for each issue. This plan should be submitted to Ofgem for approval no later than three months from the date of issue of this Project Direction and should cover (but not be limited to) the following regulatory issues identified:

- i) Retail and commodity balancing proposals, including:
  - Evidence of engagement with licensed suppliers/shippers, including plans for how the terms of commodity balancing will be established and agreed to ensure participating customers pay the same per unit of energy for hydrogen as they would for natural gas.
  - Details on potential methodologies for the manner in which a specific Calorific Value will be determined to calculate energy consumed at hydrogen premises and communication of this to suppliers.
  - Evidence of an understanding of the legal basis for supplier/shipper participation in the project and whether industry licence derogations or code modifications are required.
  - Details on changes required to Xoserve's systems as part of any proposed billing arrangements and anticipated industry code modifications.

ii) Other outstanding issues across the gas network and the supply chain, including those related to retail, charging and access matters. The regulatory approvals plan should ensure they have considered impacts and interactions with the regulatory framework applicable to the gas network and to the supply of gas, including where relevant with reference to the Gas Act 1986, other relevant legislation and the licence conditions of all licensees engaged in this Project. The plan must demonstrate:

- Evidence of wider industry engagement, including with the Oil and Gas Authority, code administrators, suppliers and (third party) shippers.
- Confirmation of any interactions with current balancing arrangements on the network at a whole system level.
- Detailed analysis of industry licences following engagement with relevant licensees including confirmation that licensees are able to meet their existing licence obligations and if any derogations or additional licence obligations would be required to facilitate the project; including the Funding Licensee, participating suppliers and shippers.
- Demonstration of the interactions between suppliers and shippers within the project, including what regulatory proposals will need to be agreed with these parties as separate entities.
- Details of third party shippers appointed to assume licensable activities under the Gas Act and their associated appointments of Metter Asset Managers (MAM).
- Confirmation of whether appointed MAM's will require additional qualification to work on hydrogen meters.
- Detailed analysis of industry codes across all sectors engaged with through this project, that will require amendment, including but not limited to consideration of the Uniform Network Code, the Retail Energy Code, the Smart Energy Code, the Supply Point Administration Agreement, the Master Registration Agreement, relevant metering codes of practice and consumer protection regulations. This should also consider if changes are required to accommodate third-party shipping.

- This list is not exhaustive and the Funding Licensee must identify and consider all relevant regulatory considerations relating to the gas network and to the supply of gas. The Authority may contact the Funding Licensee during the three month plan development period to request further evidence and information in relation to the regulatory issues arising in respect of this Project, including the issues set out in the Funding Licensee's Full Submission and the Regulatory Analysis paper received by the Authority on 19<sup>th</sup> October 2020.
- iii) For each regulatory concern identified, a detailed timetable of deadlines for securing the relevant agreements with the relevant parties on the required regulatory arrangements with the above parties.

The Licensee must engage with the Authority on a monthly basis to provide updates in the course of developing its regulatory plan and will be expected to provide evidence of its engagement with wider stakeholders.

The Authority will provide its decision no later than one month from receipt of the plan and, if approved, amend this direction to set further conditions on the basis of the regulatory approval plan submitted. This will define which evidence the Licensee will need to provide to prove adequate resolution of regulatory issues if necessary, including the deadlines within which this evidence needs to be submitted to the Authority.

The Licensee will not be able to access funding pertaining to Project Deliverable 4 onwards until the regulatory model has been approved and the Authority is satisfied that all regulatory issues are resolved.

#### **Condition 4 - Security of hydrogen supply**

The Funding Licensee is required, no later than its deadline for Project Deliverable 1, to provide notice to the Authority of its contingency plans in the event of electrolyser failure and insufficient storage capacity. The notice should include what redundancy measures have been considered in the procurement of electrolysers as well as protections for customers that experience an interruption (eg Guaranteed Standards of Performance should still apply).

#### **Condition 5 - Safety**

The Funding Licensee is required to provide Ofgem with evidence of engagement with the HSE in relation to its Safety Management Framework, no later than one week from the closure of its stated objection window in Project Deliverable 3. In the event that the HSE has an objection to the Project, the Funding Licensee must pause all project activities until objections have been resolved to the satisfaction of the Health and Safety Executive.

#### **Condition 6 – Minimum household engagement**

The Funding Licensee is required to ensure that sufficient households have signed up to the trials in order to achieve statistical representation, and will be required to ensure that the number of households opted-in is representative throughout the trial. The Funding Licensee is required to report to the Authority if the number of participating households falls below statistically representative levels or, alternatively, 270 households, during the course of the four-year trial. The Funding Licensee must report within one week of each occasion in which this threshold is triggered, and include in its correspondence to the potential effect that this fall in numbers could have on project outputs if sustained. Ofgem may deem Project Deliverable 4 to be incomplete if household representation cannot be maintained to a sufficient level throughout the course of the trial.

#### **4. COMPLIANCE**

The Funding Licensee must comply with Special Condition 1I of the Licence, the Gas NIC Governance Document (as may be modified from time to time in accordance with Part E of Special Condition 1I) and with this Project Direction.

Any part of the Approved Amounts that the Authority determines not to have been spent in accordance with this Project Direction (or in accordance with the Gas NIC Governance Document) is deemed to be Disallowed Expenditure.

Pursuant to Special Condition 1I of the Licence, Disallowed Expenditure is any revenue received (whether by the Funding Licensee or by another Licensee) from the NTS Operator under the NIC Funding Mechanism that the Authority determines not to have been spent in accordance with the applicable provisions of the Gas NIC Governance Document or the terms of the relevant Project Direction.

Pursuant to Chapter 8 of the Gas NIC Governance Document, Disallowed Expenditure includes any funds that must be returned if the Project is halted without Ofgem's

permission, any funds that have not been spent in accordance with the approved Project Budget contained within the Project Direction, and any unspent funds for completed Projects, and any Directly Attributable Costs that the Authority deems to have been misreported following a Project audit. In particular, it includes the proportion of funds associated with a Project Deliverable (as proposed by the Network Licensee), where the Network Licensee is deemed by Ofgem to be at fault for the non-delivery of that Project Deliverable.

## **5. APPROVED AMOUNT FOR THE PROJECT**

The Approved Amount is **£18,100,669**. The Authority will update the Approved Amount as appropriate upon receipt of the Funding Licensee's report as required under Condition 2 of this Project Direction.

The Approved Amount will be recovered by the System Operator from GB customers and transferred to the Network Licensee in the Relevant Year following the issue of the Project Direction. The Relevant Year is a period of twelve months beginning on 1 April in any calendar year and ending on 31 March of the next calendar year. Transfer of revenue between the System Operator and one or more Network Licensees must be made monthly on an equal basis, for the entirety of the Relevant Year, on the day of the month agreed by the Network Licensee making the transfer. The Network Licensee is responsible for notifying the System Operator of the bank account details to which transfers must be made. If a Network Licensee is required to return funding to the System Operator, the reverse applies.

## **6. PROJECT BUDGET**

The Project Budget is set out in Annex 1 of this Project Direction. The Authority will update the Project Budget upon the receipt of the Funding Licensee's report as required under Condition 2 of this Project Direction.

The Funding Licensee will report on expenditure against each line under the category total in the Project Budget, and explain any projected variance against each line total in excess of 5% as part of its detailed report which will be provided, in accordance with Chapter 8 of the Gas NIC Governance Document. Ofgem will use the reported expenditure and the

explanation to assess whether the funding has been spent in accordance with the Gas NIC Governance Document and with this Project Direction.

## **7. PROJECT IMPLEMENTATION**

The Funding Licensee must undertake the Project in accordance with the commitments it has made in the Full Submission approved by the Authority pursuant to the Gas NIC Governance Document and with the terms of this Project Direction. These include (but are not limited to) the following:

- (i) undertake the Project in accordance with the description set out in Section 2 (Project Description) of the Full Submission;
- (ii) provide a Network Licensee Compulsory Contribution of £2,043,103;
- (iii) complete the Project on or before the Project completion date of 31 March 2027; and
- (iv) disseminate the learning from the Project as a minimum to the level described in Section 5 (Knowledge Dissemination) of the Full Submission.

## **8. REPORTING**

Ofgem may issue guidance (and amend it from time to time) about the structure and content of the Project Progress Report required by Chapter 8 of the Gas NIC Governance Document. The Funding Licensee must follow this guidance in preparing the reports.

As required by Chapter 8 of the Gas NIC Governance Document, the Funding Licensee must inform the Authority promptly in writing of any material event or circumstance likely to affect its ability to deliver the Project as set out in its Full Submission.

## **9. INTELLECTUAL PROPERTY RIGHTS (“IPR”)**

In Section 5 of its Full Submission (Knowledge Dissemination) the Funding Licensee has stated that the Project conforms to the default IPR arrangements set out in Chapter 9 of the Gas NIC Governance Document. The Funding Licensee must therefore undertake the Project in accordance with the default IPR arrangements.

## **10. PROJECT DELIVERABLES**

At the end of a Project, the Funding Licensee must commission a report from an independent third party that verifies whether the Project Deliverables set out in Table 2 below (which comply with Chapter 5 of the Gas NIC Governance Document) have been achieved.

After it has received the report, the Funding Licensee must send it to the Authority. Where a Project Deliverable has not been achieved we will consider whether funding should be returned to customers using the Funding Return Mechanism. If the Network Licensee is deemed by Ofgem to be at fault for the non-delivery of the Project Deliverable, it is the proportion of funding assigned to it within Table 2 below, which may be returned to customers.

**Table 2. Project Deliverables**

<b>Reference</b>	<b>Project Deliverable</b>	<b>Deadline</b>	<b>Evidence</b>	<b>NIC funding request (100%)</b>
1	Detailed designs and specifications produced.	22 September 2021	<ol style="list-style-type: none"> <li>1. Approved and appraised design packs (tender versions)</li> <li>2. Signed off versions of tender documentation including detailed specifications and award criteria.</li> </ol>	6.6%
2	Demonstration facility constructed	10 March 2022	<ol style="list-style-type: none"> <li>1. Build completion certificate.</li> <li>2. Certified hydrogen appliances installed and commissioned</li> </ol>	3.7%

<b>Reference</b>	<b>Project Deliverable</b>	<b>Deadline</b>	<b>Evidence</b>	<b>NIC funding request (100%)</b>
3	Pre-construction activities completed	07 April 2022	<ol style="list-style-type: none"> <li>1. H100 Fife QRA produced</li> <li>2. Local Operating Procedures produced and approved</li> <li>3. Safety Management Framework completed</li> <li>4. Training delivered and training and competency records produced</li> <li>5. HSE window for objection closes</li> <li>6. Regulatory model agreed</li> <li>7. Project insurance in place and documentation available</li> </ol>	7.3%
4	Procurement phase completed	20 October 2022	<ol style="list-style-type: none"> <li>1. Signed contracts completed (including from the Project Partners listed in condition 1 of this Project Direction)</li> <li>2. Evidence of customer commitment</li> </ol>	0.8%
5	Construction phase completed	15 December 2022	<ol style="list-style-type: none"> <li>1. Distribution network installed and commissioned</li> <li>2. Hydrogen production system installed and commissioned</li> <li>3. AGI including storage, PRS, control and ancillary systems and buildings constructed and commissioned</li> <li>4. As built documentation produced</li> <li>5. Monthly progress reports available</li> </ol>	24.3%

<b>Reference</b>	<b>Project Deliverable</b>	<b>Deadline</b>	<b>Evidence</b>	<b>NIC funding request (100%)</b>
6	Customer works completed	29 December 2023	<ol style="list-style-type: none"> <li>1. Services to participating properties installed and commissioned</li> <li>2. Appliances installed in participating properties</li> <li>3. Any required upgrades or mitigation measures carried out in participating properties</li> <li>4. Installation certificates available</li> <li>5. Monthly progress reports available</li> </ol>	15.7%
7	Operational phase completed	31 March 2027	<ol style="list-style-type: none"> <li>1. Maintenance, emergency, and repair records available for phase.</li> <li>2. Monthly progress reports available</li> </ol>	37.2%
8	Project Exit Strategy Finalised	30 April 2026	<ol style="list-style-type: none"> <li>1. Approved project exit strategy executed and complete</li> </ol>	2.1%
9	Stakeholder Engagement and Comms completed	31 March 2027	<ol style="list-style-type: none"> <li>1. Stakeholder engagement final report produced</li> <li>2. Comms final report produced</li> </ol>	2.3%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (100%)
N/A	Comply with knowledge transfer requirements of the Governance Document.	End of project	<ol style="list-style-type: none"> <li>1. Annual Project Progress Reports which comply with the requirements of the Governance Document.</li> <li>2. Completed Close Down Report which complies with the requirements of the Governance Document.</li> <li>3. Evidence of attendance and participation in the Annual Conference as described in the Governance Document.</li> </ol>	N/A

## 11. USE OF LOGO

The Funding Licensee and the Project Partners, External Funders and Project Supporters<sup>8</sup> may use the NIC logo for purposes associated with the Project but not use the Ofgem logo in any circumstances.

## 12. AMENDMENT OR REVOCATION

As set out in Chapter 8 of the Gas NIC Governance Document and this Project Direction, this Project Direction may be amended or revoked under the following circumstances:

- (i) if the Funding Licensee considers that there has been a material change in circumstance that requires a change to the Project Direction, and the Authority agrees; or
- (ii) to reflect amendments made to the Licence.

## 13. HALTING OF PROJECTS

<sup>8</sup> As listed in Box 1.6 in Section 1 of the Full Submission pro-forma.

This Project Direction is subject to the provisions contained in Chapter 8 of the Gas NIC Governance Document relating to the halting of projects. By extension, this Project Direction is subject to any decision by the Authority to halt the Project to which this Project Direction relates and to any subsequent relevant Funding Direction issued by the Authority pursuant to Part E of Special Condition 1I of the Licence.

In the event of the Authority deciding to halt the Project to which this Project Direction relates, the Authority may issue a statement to the Funding Licensee clarifying the effect of that halting decision as regards the status and legal force of the conditions contained in this Project Direction.

**NOW THEREFORE:**

In accordance with the powers contained in the Gas NIC Governance Document issued pursuant to Part E of Special Condition 1I of the Licence the Authority hereby issues this Project Direction to the Funding Licensee in relation to the Project.

This constitutes notice of reasons for the Authority's decision pursuant to section 38A (Reasons for decisions) of the Gas Act 1986.

## ANNEX 1: PROJECT BUDGET

<b>Cost Category</b>	<b>Cost</b>
<b>Labour</b>	
	£2,665,362.00
<b>Equipment</b>	
	£5,037,479.35
<b>Contractors</b>	
	£8,370,667.71
<b>IT</b>	
	-
<b>IPR Costs</b>	
	-
<b>Travel &amp; Expenses</b>	
	-
<b>Payments to users</b>	
	£4,192,000.00
<b>Contingency</b>	
	£665,519.30
<b>Decommissioning</b>	
	-
<b>Other</b>	
	-
<b>Cost Category</b>	<b>£20,931,028.36</b>