

NATIONAL GAS TRANSMISSION PLC  
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Date: 16 February 2024

Dear NATIONAL GAS TRANSMISSION PLC,

**SIF Project Direction ref:** NGT/HyNTS Maritime/SIFWSPFAR/Rd3\_Discovery

National Gas Transmission PLC submitted HyNTS Maritime (the Project) to be considered for funding through the Discovery Phase of round 3 of the Strategic Innovation Fund (SIF). In our<sup>1</sup> SIF Funding Decision finalised on 16 February 2024, we selected the Project<sup>2</sup> for conditional funding for the round 3 Discovery Phase and as a result we are now issuing this SIF Project Direction to implement that decision.

National Gas Transmission PLC must comply with the conditions contained in this SIF Project Direction as a condition of the Project receiving funding through the SIF. These conditions can be found in the Schedule to this document.

**Progression through SIF Phases**

The SIF consists of a multi-phase approach for Projects in order to mitigate the risk associated with innovations. The Discovery Phase focuses on feasibility, the Alpha Phase on experimental development, and the Beta Phase on deployment and demonstration. This Project Direction is for the round 3 Discovery Phase of the SIF.

**Role of UK Research & Innovation (UKRI)**

As per Chapter 1 of the SIF Governance Document<sup>3</sup> the role of UKRI is to deliver the SIF in line with the SIF Governance Document - administering the funding programme,

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<sup>1</sup> The terms 'we', 'us', 'our' refer to the Gas and Electricity Markets Authority. Ofgem is the office of the Authority.

<sup>2</sup> Unless otherwise specified, defined terms in this SIF Project Direction have the meaning given to them in Appendix 1 of the SIF Governance Document.

<sup>3</sup> <https://www.ofgem.gov.uk/publications/updated-sif-governance-document>

monitoring the delivery of Projects, collating data from Projects on benefits, making recommendations to Ofgem on operational matters, supporting third-party innovators and, where possible, supporting successful Projects to become 'business as usual' activities. To support the success of the Projects and the SIF programme, we expect that the Funding Party and Project Partners collaborate with Ofgem and UKRI.

### **SIF Project Direction**

Paragraph 5.14 of the SIF Governance Document states that a SIF Project Direction will:

- Set out the Project-specific conditions, to which the Funding Party is committing in accepting SIF Funding.<sup>4</sup>
- Require the Funding Party to undertake the Project in accordance with the commitments made in the Application. Where appropriate, the SIF Project Direction may therefore include extracts from the Application or refer to specific sections of the SIF Application.<sup>5</sup>
- Where applicable, set out conditions (such as Project stage gates) linked to milestones and deliverables, which Projects must meet.<sup>6</sup>
- Set out the SIF Approved Amount for the Project, that will form part of the calculation contained in the SIF Funding Direction issued by the Authority under chapter 7 of the SIF Governance Document.<sup>7</sup>
- Set out the Project budget that the Funding Party must report against and how variations in the Project budget will be reported.<sup>8</sup>
- Where applicable, set out special information sharing requirements applicable to the Project.<sup>9</sup>
- Set out the mechanism for the Funding Party receiving the SIF Approved Amount as set out in the SIF Funding Direction.<sup>10</sup>

All SIF Project Direction requirements are detailed in the Schedule to this SIF Project Direction.

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<sup>4</sup> 'Project specific conditions' detailed under Point 3 – 'Condition Precedent' of this SIF Project Direction.

<sup>5</sup> 'Project specific conditions' detailed under Point 3 – 'Condition Precedent' of this SIF Project Direction.

<sup>6</sup> 'Project specific conditions' detailed under Point 3 – 'Condition Precedent' of this SIF Project Direction.

<sup>7</sup> 'SIF Funding Amount' detailed under Point 5 – 'Condition Precedent' of this SIF Project Direction.

<sup>8</sup> 'Annex 1 – Project Budget.

<sup>9</sup> 'Project specific conditions' detailed under Point 3 – 'Condition Precedent' of this SIF Project Direction.

<sup>10</sup> 'SIF Funding Amount' detailed under Point 5 – 'Condition Precedent' of this SIF Project Direction.

## **Decision**

Provided the Funding Party complies with the SIF Governance Document and with the Schedule to this SIF Project Direction, the Project is deemed to be an Eligible SIF Project<sup>11</sup>.

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

**Marzia Zafar**

**Deputy Director, Decentralisation & Digitalisation**

**For and on behalf of the Authority**

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<sup>11</sup> 'Eligible SIF Project' is a defined term in the SIF Governance Document. See also, paragraph 5.13 of the SIF Governance Document.

## Schedule to SIF Project Direction

### 1. PROJECT DETAILS

SIF Project Direction reference: NGT/HyNTS Maritime/SIFWSPFAR/Rd3\_Discovery

Application number: 10098733

Project title: HyNTS Maritime

Innovation Challenge/Project Phase: Whole system planning and utilisation of networks to facilitate faster and cheaper network transformation and asset rollout / Discovery Phase round 3

Project start date: 01 March 2024

Project end date: 31 May 2024

SIF Approved Amount for SIF Funding: £150,000

### 2. PREAMBLE

This SIF Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to National Gas Transmission PLC (the "Funding Party") pursuant to the SIF Governance Document issued pursuant to Special Condition 5.7 of the Gas Transporter licence (the "Licence"). It sets out the conditions to be complied with in relation to HyNTS Maritime (the "Project") as a condition of it being funded under the SIF Funding Mechanism.<sup>12</sup>

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

References to specific sections of the Funding Party's Application in this SIF Project Direction are, for ease of reference, made by referring to the section number in the Funding Party's Application.

### 3. PROJECT SPECIFIC CONDITIONS

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

#### **Condition 1**

The Funding Party must not spend any SIF Funding until contracts are signed with the Project Partners named in Table 1 for the purpose of completing the Project.

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<sup>12</sup> The SIF Funding Return Mechanism is defined in the SIF Governance Document.

**Table 1. Project Partners**

GEMSERV LIMITED
CARBON280 PTY LTD
UNIVERSITY OF WARWICK
WSP UK LIMITED
IKIGAI CAPITAL LIMITED
PORT OF LONDON AUTHORITY
H2 SITE

**Condition 2**

The Funding Party must report on the financial contributions made to the Project as set out in its Application. Any financial contributions made over and above that stated in its Application should also be reported and included within the Project costs template.

**Condition 3**

The Funding Party must make reasonable endeavours to participate in all meetings related to the Project that they are invited to by Ofgem, UKRI and DESNZ during the Discovery Phase.

**Condition 4**

Prior to the completion of the Discovery Phase, the Funding Party must provide evidence to the Monitoring Officer that it has considered linkages with other Discovery Round 3 Projects (SeaChange and Electric Thames) and understands the duplication risk or knowledge sharing opportunity of the scope of this Project.

**Condition 5**

Prior to the start of the Discovery Phase, the Funding Party must provide an updated Stakeholder Engagement strategy to the Monitoring Officer, to identify stakeholders beyond the core areas (e.g. cargo sector, freeports).

**4. COMPLIANCE**

The Funding Party must comply with Special Condition 5.7 of the Gas Transporter licence (the "Licence"), the SIF Governance Document and with this SIF Project Direction.

## **5. SIF APPROVED AMOUNT**

The SIF Approved amount of £150,000 (as detailed under Section 1: Project details of this Project Direction) will be recovered by National Gas Transmission from GB customers and transferred to the Funding Party. The Funding Party is responsible for notifying National Gas Transmission of the bank account details to which transfers must be made, in addition to completing Annex 2 of this SIF Project Direction. If a Funding Party is required to return funding to National Gas Transmission, the reverse applies. The Funding Party must provide bank account details to National Gas Transmission within two weeks of accepting this SIF Project Direction.

## **6. PROJECT BUDGET**

The Project budget is set out in Annex 1 of this SIF Project Direction.

The Funding Party must report on expenditure against each line under the category total in the Project Budget and explain any projected variance against each line as part of its detailed report which will be provided, in accordance with Chapter 7 of the SIF Governance Document. The Funding Party must report variations in the Project budget as outlined in Chapter 6 of the SIF Governance Document.

## **7. PROJECT IMPLEMENTATION**

The Funding Party must undertake the Project in accordance with the commitments it has made in the Application and with the conditions of this SIF Project Direction. These include (but are not limited to) the following:

- (i) To undertake the Project in accordance with its Application,
- (ii) To complete the Project on or before the Project completion date as detailed under Section 1 of the Schedule to this SIF Project Direction, and
- (iii) To disseminate the learning from the Project at least to the level described in chapter 3 of the SIF Governance Document. Dissemination of learning must be carried out whether the Project was concluded successfully or otherwise.

## **8. REPORTING**

Ofgem and UKRI may issue guidance (and amend it from time to time) about the structure and content of the Project reporting required by Chapter 6 of the SIF Governance Document. The Funding Party must follow this guidance in preparing the reports.

As set out in chapter 6 of the SIF Governance Document, the Funding Party may be required to submit an end of Phase report to the UKRI monitoring officer for the round 3 Discovery Phase. An end of Phase report is required for the round 3 Discovery Phase if the Project is not planning on submitting an Application to the round 3 Alpha Phase and, if the Funding Party submits an Application for the Project for the round 3 Alpha Phase but is not successful. Within this report, the Funding Party must submit information related to questions on Project delivery as detailed in chapter 6, table 6 of the SIF Governance Document.

## **9. MONITORING**

The Funding Party must comply with any reasonable request for information by its monitoring officer at UKRI and related deadlines. Ofgem, with the support of UKRI, will together monitor Project delivery, impacts and benefits. Throughout the term of the Project, progress is monitored by UKRI through a monitoring officer. The monitoring officer is the first point of contact for official notifications, queries and correspondence with UKRI and the Authority, unless otherwise required by this SIF Project Direction.

As detailed in Chapter 6 of the SIF Governance Document, meetings with the monitoring officer will take place at regular intervals, as advised by Ofgem or the monitoring officer during the delivery of the Project, and at the end of each Project Phase.

## **10. EVALUATION**

The Funding Party has acknowledged when it submitted its Application for this Project, that reporting information and data gathered during the Project's timescales (as detailed in Section 1 of the Schedule to this SIF Project Direction) will be used to evaluate Project performance. In addition, the Funding Party may be required to provide requested information outside of the Project timescales and, in particular, for the period from the Project end date to the end of the SIF Programme. Further data and reporting information may be requested (frequency and method based on requirement) outside of standard monitoring and reporting requirements as deemed necessary. Further data and information requirements must be complied with by the Funding Party and Project Partners.

## **11. DATA SHARING**

As set out in Chapter 3 of the SIF Governance Document, the Funding Party must follow Data Best Practice Guidance with regards to all data gathered or created in the course of a Project. We expect the Funding Party to document any reasons, such as commercial

sensitivities, for desensitising data. As defined by, and in accordance with, Data Best Practice Guidance, Funding Parties must have a data triage process. Where multiple Project Partners are collaborating on a Project, the consortium must adopt a consistent Open Data Triage for the data related to the Project. Ofgem may require that Project information and data is also shared with other specified parties, such as parties working on complementary innovation funding programmes (subject to redaction of sensitive data).

## **12. CYBER SECURITY**

It is the responsibility of the Funding Party and all Project Partners to implement and maintain appropriate security measures to protect personal data in accordance with The General Data Protection Regulation<sup>13</sup> and Data Protection Act 2018<sup>14</sup>.

Protection of computer systems from unauthorised access or being otherwise damaged or made inaccessible must be in place alongside effective working practices. These must be maintained in line with the Funding Party's IT Management Strategies and policies.

## **13. PROJECT MILESTONES**

The Funding Party must provide an outline in its end of Project Phase meeting with its UKRI monitoring officer that verifies the Project milestones have been achieved or explains why they have not.

Project milestones are outlined below in Table 3, based upon details contained within Question 7 and Appendix Question 9 in the Funding Party's Application.

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<sup>13</sup> [https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu\\_en](https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en)

<sup>14</sup> <https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>

**Table 3. Project milestone<sup>15</sup>**

Reference	Project milestone	Deadline	Overall objectives and key tasks	SIF Funding Request
Milestone 1	Work package 1: Project Management	31 May 2024	<p>Overall objective: This Work Package will support the successful completion of the Discovery phase and enable the application to the Alpha phase. All partners will be engaged in this activity but the work package will be led by WSP and National Gas.</p> <p>Key tasks:</p> <ol style="list-style-type: none"> <li>1. Weekly project meetings</li> <li>2. Gantt chart developed. Risks and issues log developed Lesson capture process in place</li> <li>3. Steering meeting</li> <li>4. Development of the Alpha phase bid</li> <li>5. Sharepoint site created and data sharing plan in place</li> <li>6. Stakeholder engagement requirements and planned approach</li> <li>7. Regular status reporting and quarterly finance review</li> </ol>	£14,373

<sup>15</sup> As outlined in in the Application or Project Plan appendix.

Milestone 2	Work package 2: Business Case & Requirements	31 May 2024	<p>Overall objective: This work package will develop the requirements for the interaction between the gas networks and ports and determine how the technologies need to be deployed to meet these requirements in an optimised format.</p> <p>Key tasks:</p> <ol style="list-style-type: none"> <li>1. Review past work on ammonia for maritime applications, Ru-free low cost catalysts &amp; ammonia fuel cells for maritime applications.</li> <li>2. "Determine potential volumes for different ports across the UK and how they could interface with the NTS - entry point vs exit point Links into SA-UK PACT ammonia import project"</li> <li>3. Volumes needed to decarbonise maritime freight (e-Methanol)</li> <li>4. What is the impact on the conventional liquid fuel bunkering solutions used today</li> <li>5. Worldwide port activities and demonstrations - port of Rotterdam</li> <li>6. Concept design of what Beta could look like</li> <li>7. Suitable Port determination and assessment</li> <li>8. Determination of link to future plans and current business approach</li> </ol>	£27,119
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			<p>9. Links to HyNTS Transport project and Deblending</p> <p>10. Determine the safety and sustainability credentials for each option considered</p>	
Milestone 3	Work package 3: Ammonia and Hydrogen Carrier Investigation	31 May 2024	<p>Overall objective: This work package will investigate the hydrogen carrier options and how these interact with the hydrogen gas network. The work package will determine the transfer of hydrogen gas to hydrogen carrier and the transfer of hydrogen carrier to hydrogen gas. It will determine the most efficient and cost-effective solutions available.</p> <p>Key tasks:</p> <ol style="list-style-type: none"> <li>1. Provide insight into the testing and challenges that could be considered as we progress to Alpha/Beta</li> <li>2. Compare techno-economic characteristics for hydrogen liquid derivatives including but not limited to, ammonia, methanol, LOHC &amp; metal hydride in a liquid form</li> <li>3. Determine if Carbon 280 is a technology that could be a part of the maritime HyNTS link</li> <li>4. Technical requirements and scale of cracking facility</li> <li>5. Concept design</li> <li>6. Technical requirements and scale required for future needs</li> </ol>	£79,588

Milestone 4	Work package 4: NTS Connection Design	31 May 2024	<p>Overall objective: This work package will determine how the volumes of import and export of hydrogen can be managed by the UK gas networks and the connections required to enable this.</p> <p>Key tasks:</p> <ol style="list-style-type: none"> <li>1. Review current connection processes and systems to determine usability for ammonia connections. Review LNG terminal activities and links today</li> <li>2. Technical requirements and scale of ammonia facility</li> <li>3. Concept design</li> </ol>	£12,148
Milestone 5	Work package 5: Stakeholder Engagement, Strategy & Implementation	31 May 2024	<p>Overall objective: This work package will consider the wider impact of the interaction with ports to the energy system and determine any safety, environmental or competitiveness concerns. This work package will determine the implementation approach for this project.</p> <p>Key tasks:</p> <ol style="list-style-type: none"> <li>1. How do the ports link into the Union activities New connections and network requirements Wider energy system impact</li> <li>2. Develop a network of ports and maritime stakeholders to attain customer insights</li> </ol>	£16,773

			<ol style="list-style-type: none"><li>3. How to deploy across the UK ports and networks</li><li>4. Determine how the project ensures the competitive market</li><li>5. Determine how to proceed with interactions to approve safety etc...</li><li>6. Determine regulatory requirements to enable implementation and demonstration</li></ol>	
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#### **14. USE OF LOGO**

The Funding Party, Project Partners, External Funders and Project Supporters including any of their subcontractors<sup>16</sup> must not use the Innovate UK/UKRI and/or Ofgem logo for purposes associated with the Project in any circumstances.

As an alternative for use of both Ofgem and UKRI logos, all external Project communications must include the following standard form of wording:

- (i) "this project is funded by network users and consumers under the Strategic Innovation Fund, an Ofgem programme managed in partnership with UKRI."

For additional guidance, refer to the communications and media guidelines for competition winners, detailed as part of your delivery pack. These guidelines are designed to help with some suggestions and encourage you to take a proactive approach to communicating about your Project.

#### **15. SHARING OF LESSONS LEARNED**

The Funding Party is required to ensure that the sharing of lessons learned and the facilitation of knowledge transfer is conducted as effectively as possible, to ensure that all parties, and therefore all consumers including future consumers, can benefit from Projects.

As contained within Chapter 3 of the SIF Governance Document, we require the Funding Party to work collaboratively to maintain the ENA Smarter Networks Portal so that all reporting and dissemination of learnings on Projects (as required by chapter 6 of the SIF Governance Document) is available via the ENA Smarter Networks Portal.

#### **16. COLLABORATION**

The Funding Party must collaborate with third-party innovators as Project Partners, as well as work closely with other parties in the energy supply chain, as set out in Chapter 3 of the SIF Governance Document.

The Funding Party must collaborate with other parties and with UKRI to organise an annual conference in a format appropriate to enabling the building of consortiums and the dissemination of learning widely. The conference may be a single event for gas and electricity, or more than one event, as appropriate.

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<sup>16</sup> As detailed in the Application.

## **17. AMENDMENT OR REVOCATION**

As set out in Chapter 7 of the SIF Governance Document, this SIF Project Direction may be amended or revoked under the following circumstances:

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

## **18. HALTING OF PROJECTS**

This SIF Project Direction is subject to the provisions contained in Chapter 7 of the SIF Governance Document relating to the halting of Projects. By extension, this SIF Project Direction is subject to any decision by the Authority to halt the Project to which this SIF Project Direction relates and to any subsequent relevant SIF Funding Direction issued by the Authority pursuant to Special Condition 5.7 of the Gas Transporter licence.

Further to the requirements in Chapter 7 of the SIF Governance Document, in the event the Authority decides to halt the Project, to which this SIF Project Direction relates, the Authority may issue a statement to the Funding Party clarifying the effect of that halting decision as regards to the status and legal force of the conditions contained in this SIF Project Direction.

### **NOW THEREFORE:**

In accordance with the SIF Governance Document issued pursuant to Special Condition 5.7 of the Gas Transporter licence of the Licence the Authority hereby issues this SIF Project Direction to the Funding Party 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.

Failure to comply with the conditions of this SIF Project Direction means that Ofgem may treat all or part of the SIF Approved Amount received by the Funding Party as SIF Disallowed Expenditure.

## ANNEX 1: PROJECT BUDGET

<b>SIF Project Direction costs</b>	
Cost Category	Total Project costs (£)
Labour	162,402
Materials	0
Subcontracting	0
Travel and subsistence	800
Other costs	2,000
<b>Total</b>	<b>165,202</b>

Project Partner	Total Project costs (£)	Project contribution (£)	Total SIF Funding requested (£)	Project contribution (%)
National Gas Transmission PLC	26,316	15,202	11,114	57.77
University of Warwick	14,971	0	14,971	0.00
GEMSERV LIMITED	34,680	0	34,680	0.00
WSP UK LIMITED	49,628	0	49,628	0.00
IKIGAI CAPITAL LIMITED	2,000	0	2,000	0.00
Port of London Authority	2,625	0	2,625	0.00
H2SITE	29,982	0	29,982	0.00



Making a positive difference  
for energy consumers

Carbon280 Pty Ltd	5,000	0	5,000	0.00
<b>Total</b>	<b>165,202</b>	<b>15,202</b>	<b>150,000</b>	<b>10.1</b>

**ANNEX 2 TO SCHEDULE: TEMPLATE OF BANK ACCOUNT DETAILS TO BE PROVIDED TO EITHER NGT ([BOX.GSOSETTLEMENTS@NATIONALGRID.COM](mailto:BOX.GSOSETTLEMENTS@NATIONALGRID.COM)) OR NG ESO ([revenue.invoice@nationalgrideso.com](mailto:revenue.invoice@nationalgrideso.com))**

**Company name:**

**Primary Contact Details (only one contact permitted)**

First Name:

Last Name:

Email address:

Mobile phone number:

Work phone number:

**Address details**

Address name:

Street address:

City:

State / region:

Post code:

PO box: (if applicable)

PO box post code: (if applicable)

**Banking details**

These should be evidenced in non-editable format. The evidence provided must show company name and bank details and it should be dated within the last 6 months.

Any of the below documents will suffice:

- Bank statement (scanned document)
- Void cheque
- Paying in slip
- Screenshot of online banking (showing a logged in account with bank account and sort code, with browser visible)