

Company Secretary
Cadent Gas Limited
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Direct Dial: 0141 354 5416
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Date: 13 August 2020

Dear Sir/Madam,

Network Innovation Competition – decision on requested amendments on the Project Direction for Cadent Gas Limited’s (Cadent) Commercial BioSNG Demonstration Plant.

The Network Innovation Competition (NIC) funds a number of large-scale innovation projects and was set up to encourage network licensees to innovate in the design, development and operation of their networks.¹

Cadent (formerly National Grid Gas Distribution) was awarded NIC funding for the Commercial BioSNG Demonstration Plant project in the 2015 NIC.² The purpose of the project is to develop a commercially viable facility that can process waste, convert it to synthetic biogas and distribute it through the existing gas network to consumers.

On 9 October 2019, Cadent submitted a Change Request which, in summary, asked us to make changes to the Project Direction issued on 9 December 2015³ to:

- amend the end date of the project
- amend the date that project deliverables are achieved
- amend the project partners
- increase funding through the provision of contingency funds.

¹ See [Gas NIC Governance document v3.0](#)

² See [Gas Network Innovation Competition: 2015 Funding Decision](#)

³ Project Direction available here:

<https://www.ofgem.gov.uk/publications-and-updates/network-innovation-competition-project-direction-biosng>

However, further commercial discussions were necessary for Cadent to confirm these changes to project partners.

Following commercial discussions between Cadent and other project partners, Cadent confirmed to us on 28 July 2020 its proposed amendments to project partners. Through this process, Cadent has advised that COVID-19 has also had an impact on the project and project timelines.

The rest of this letter provides some further background, a summary of the requested changes, and our decisions on the requested changes. The amendments to the Project Direction to reflect our decision are set out in Schedule 1.

Background

On 9 December 2015, we issued a Project Direction to Cadent under the Gas NIC Governance Document. The Project Direction contains the terms the project must follow as a condition of it being funded under the NIC.

The project aims to demonstrate the commercial viability of producing sustainable, low carbon substitute natural gas (BioSNG) from waste using thermal processes. BioSNG could significantly increase renewable gas production in the UK. Successful roll-out could help the UK achieve its carbon emission targets and provide savings to gas consumers through the avoidance of costs associated with moving to other solutions for low carbon heat and transport.

The project was suspended in June 2018 and, in December 2018, Go Green Fuels, one of the project partners and owner of the plant became insolvent. Go Green Fuels is also the subsidiary of another project partner, Advanced Plasma Power.

We understand that the administrator carried out a marketing exercise and agreed that a new party, Advanced Biofuel Solutions Ltd, could purchase the project assets from Go Green Fuels. Advanced Biofuel Solutions Ltd is a new company, with entirely different ownership to Advanced Plasma Power, focussed on the production of low carbon fuels.

We understand that Cadent obtained commitments from Advanced Biofuel Solutions Ltd that the company would enter into a new collaboration agreement and seek to meet the Successful Delivery Reward Criteria (SDRC) of the project. Advanced Biofuel Solutions Ltd carried out a detailed engineering exercise to evaluate the cost of completing the project at £8m, and then allowed a further £2m for contingencies to bring the total required budget to £10m.

Advanced Biofuels Solutions Ltd has raised the majority of this amount through private sector investment and loans from the Department for Transport and the Swindon and Wiltshire Local Enterprise Partnership. They planned to raise part of the remaining requirement through £0.3m of NIC Contingency Funding.

Cadent suggested this will ultimately allow the plant to be commissioned and enter operation before November 2020.

Requested amendments to the Successful Delivery Reward Criteria

Cadent requested changes to the SDRC and to extend the project completion date because:

- the project was suspended in June 2018 and was placed in to administration in December 2018 and was restarted in September 2019, a delay of 14 months;
- around three months would be lost in remobilising the project; and
- the revised project plan allows additional time for plant commissioning.

The original Change Request keeps the deliverables the same but moves the following dates:

- SRDC 9.4: Construction completed and commencement of commissioning amended to 31 March 2020
- SRDC 9.5: Successful operation of plant demonstrated amended to 31 October 2020
- SRDC 9.6: Dissemination of project learnings and commercialisation strategy amended to 30 November 2020.

The changes would not alter the project deliverables and we see the value of enabling the project to complete and demonstrate the commercial production of renewable, low carbon

methane (BioSNG) by gasification of household waste and the contribution this technology could have in meeting the 2050 net zero emissions target.

In subsequent correspondence with us in August 2020, Cadent noted that COVID-19 increases the risk of further delay the project beyond November 2020 given the associated impact on construction activity. As result, Cadent requested further amendments:

- SDRC 9.4: amended to 30 November 2020
- SDRC 9.5: amended to 28 February 2021
- SDRC 9.6: amended to 31 March 2021.

We agree to the requested change to SDRC 9.4. However, we note that the requested extensions to SDRC 9.5 and 9.6 are two years later than the original project end date specified in the 2015 Project Direction, which is the maximum delay allowed by the NIC Governance.⁴ Accordingly, we are unable to approve any extension to SDRC 9.5 and SDRC 9.6 beyond 30 November 2020. Cadent has suggested that it may be possible to catch up on some of this lost time during the commissioning stage, and therefore, we consider that a November 2020 deadline for all three deliverables is appropriate in the circumstances. We have amended SDRC 9.5 and SDRC 9.6 accordingly.

We expect Cadent to keep us updated on progress on SDRC 9.5 and SDRC 9.6. Specifically, we require that Cadent submit a detailed Change Request by end September 2020 if they consider that they are unable to meet the 30 November 2020 deadline for reasons specifically relating to COVID-19. In the Change Request, we encourage Cadent to provide information explaining the full impact that COVID-19 has had on the project and, where appropriate, associated evidence to show the cause of the delays. Having reviewed any information provided, we will then consider whether consulting on amendments to the NIC Governance to enable us to approve a further extension to the project end date would be appropriate in the circumstances.

Requested amendments to the Project Partners

As a result of Go Green Fuels going into administration and the subsequent sale of its project assets to Advanced Biofuel Solutions Ltd, Cadent requested to remove Go Green

⁴ Paragraph 8.25, Gas NIC Governance document v3.0

Fuels Ltd and Advanced Plasma Power as project partners and add Advanced Biofuel Solutions Ltd as a project partner.

Cadent advised us that they have reviewed the involvement of other project partners to ascertain if there is still value to the partner and project from their continued involvement. As a result, Cadent have requested CNG Services Ltd should be removed as a project partner as they have now chosen to step back from the project as the transport element of the project has evolved as a result of the DfT's involvement in the project. Cadent advised us that the project can continue without CNG Services Ltd's involvement.

Via subsequent conversations with Cadent, it has been confirmed that Progressive Energy Ltd and Wales & West Utilities will remain as project partners.

Based on our assessment and justification provided above, we agree with the requested changes to remove Go Green Fuels Ltd, Advanced Plasma Power and CNG Services Ltd as project partners, while adding Advanced Biofuel Solutions Ltd as a project partner.

We are also content that existing project partners Progressive Energy Ltd and Wales & West Utilities should continue in the project.

Request for additional of contingency funding

The project originally received £5,362k of NIC funding. In their Change Request, Cadent requested an additional 5% of contingency funding (£270k).

Cadent noted there has been a significant increase in the total project budget for the wider project. The reasons for the increases in the cost are due to:

- the movement in exchange rates
- the addition of a carbon dioxide liquefaction package to meet greenhouse gas emission reduction targets set by the DfT
- an increase in the cost of gasification and plasma furnace equipment because of high levels of demand at the time that orders we placed
- an increase in mechanical and electrical integration costs because project complexity was higher than expected

- cost increases driven by the project suspension such as remobilisation and remedial works
- additional contingency to allow for unexpected additional costs.

There have also been increases in the design and delivery costs because:

- the original budget allowed three months for commissioning the plant while the revised budget allows seven months
- additional design work is required to address the issues identified during the suspension period.
- additional allowance has been made for possible delays in commissioning.

We do not believe it is not clear how these additional funds will be used on network innovation activities, rather than to support wider non-network aspects of the project where there has been an increase in costs. Additionally, it is not clear that the provision of additional funds is supported by robust risk management to ensure that they will deliver benefits to network customers.⁵ Therefore, based on our assessment of the Change Request, we disagree with the provision of contingency funding.

Decision

Request to amend Project Timeline, SDRC and amendment to the Project Partners

We consider that amendments to project timelines, the SDRC and amendment of project partners to be in the interest of network customers, as these changes will enable the project to continue with the aim of delivering the expected benefits and outcomes outlined in the Full Submission when the project was funded in 2015. Therefore, we approve these amendments.

Rejection of additional Contingency Funding request

As set out above, we do not believe the request for additional contingency funding has been sufficiently justified as it has not been supported with a robust project risk

⁵ As noted in paragraph 8.51 of the Gas NIC Governance Document, "the Authority is unlikely to be minded to provide additional funding for a Project where it has concerns about the quality of Project management that, in its opinion, outweigh any benefits expected to be generated by the provision of additional funding."

management, nor is it evident it will be spent on network innovation activities in scope of the NIC project.

Additionally, as Cadent applied for contingency Funding, as per paragraph 8.52 of the Gas NIC Governance Document, they will no longer be eligible to receive any NIC Successful Delivery Reward for this project after its completion.

In accordance with paragraph 13 of the Project Direction, we hereby amend the Schedule to the Project Direction in the manner set out in Schedule 1 to this letter. This letter constitutes notice of reasons for our decision pursuant to section 38A of the Gas Act 1986. We have published the amended Project Direction in Schedule 1, which supersedes all previous versions of the Commercial BioSNG Project Direction.

If you would like to discuss any of the issues raised in this letter, please contact Graeme Barton (graeme.barton@ofgem.gov.uk).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Steven McMahon', written in a cursive style.

Steven McMahon

Deputy Director, Electricity Distribution & Cross Sector Policy, Networks Price Controls

For and behalf of the Authority

Schedule 1 - Project Direction

1. TITLE

Project Direction ref: NGG DN / Commercial BioSNG Demonstration Plant/ ~~09 December 2015~~13 August 2020

2. PREAMBLE

This Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to ~~National Grid Gas plc (Distribution Networks)~~ Cadent Gas Limited (the "Funding Licensee") pursuant to the Gas NIC Governance Document issued pursuant to Special Condition 1I (Network Innovation Competition) of the Gas Distribution Licence (the "Licence"). It sets out the terms to be followed by the Funding Licensee in relation to Commercial BioSNG Demonstration Plant ("the Project") as a condition of the Project being funded under the Network Innovation Competition ("NIC") and the Funding Return Mechanisms⁶.

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. CONDITION PRECEDENT

The Funding Licensee will not access any further funds from the Project Bank Account until it has signed contracts with the original Project Partners named in Table 1.

⁶ The Funding Return Mechanism is defined in Special Condition 1I (Network Innovation Competition).

Table 1. Project Partners (as amended)

	Company Name
1.	Wales & West Utilities
2.	Progressive Energy Ltd
3.	Advanced Biofuel Solutions Ltd CNG Services Ltd
	Advanced Plasma Power
	Go Green Fuels Ltd

4. COMPLIANCE

The Funding Licensee must comply with Special Condition 1I of the Licence and with the NIC Governance Document (as may be modified from time to time in accordance with Special Condition 1I and as modified and/or augmented in respect of the Project by this Project Direction) 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 with the Gas NIC Governance Document) is deemed to be Disallowed Expenditure.

Pursuant to Special Condition 1I, Disallowed Expenditure is revenue received (whether by the Funding Licensee or by another Licensee) under the NIC and Funding Return Mechanisms that the Authority determines not to have been spent in accordance with the provisions of the Gas NIC Governance Document or those of the relevant Project Direction.

Pursuant to paragraph 8.4866 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 on the completion of the Project.

5. APPROVED AMOUNT FOR THE PROJECT

The Approved Amount is £5,361,686.64.

6. PROJECT BUDGET

The Project Budget is set out in Annex 1 to this Project Direction. The Funding Licensee must not spend more than 110% of any category total (e.g. "Labour") in Annex 1 without the Authority's prior written consent (such consent is not to be unreasonably withheld).

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 at least every six months, in accordance with paragraph 8.175 of the Gas NIC Governance Document. Ofgem will use the reported expenditure and explanation to assess whether the funding has been spent in accordance with the Gas NIC Governance Document and in accordance with this Project Direction.

For the avoidance of doubt this reporting requirement does not change or remove any obligations on the Funding Licensee with respect to reporting that are set out in the Gas NIC Governance Document.

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);
- (ii) provide a Network Licensee Compulsory Contribution of £600,000;
- (iii) complete the Project on or before the Project completion date of 30 November ~~2018~~2020; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

8. REPORTING

Ofgem will issue guidance (as amended from time to time) about the structure and content of the reports required by paragraph 8.175 of the Gas NIC Governance Document. The Funding Licensee must follow this guidance in preparing the reports required by paragraph 8.175 of the Gas NIC Governance Document.

As required by paragraph 8.221 of the Gas NIC Governance Document, the Funding Licensee must inform the Authority promptly in writing of any event or circumstance likely to affect its ability to deliver the Project as set out in its Full Submission.

9. COST OVERRUNS

The maximum amount of Contingency Funding that the Funding Licensee can request as additional funding for cost overruns on the Project is 5%⁷ of the Approved Amount.

10. 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.

11. SUCCESSFUL DELIVERY REWARD CRITERIA

The Project will be judged by the Authority for the purposes of the NIC Successful Delivery Reward against the Successful Delivery Reward Criteria ("SDRCs") set out in Table 2 below (that comply with paragraphs 5.286 – 5.3129 of the Gas NIC Governance Document).⁸

Table 2. Successful Delivery Reward Criteria (updated to reflect amended timeline)

Successful Delivery Reward criterion	Evidence
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⁷ This is the amount requested by the Funding Licensee in its Full Submission, or the default of 5%.

⁸ These are the Successful Delivery Reward Criteria set out in the Funding Licensees Full Submission.

<p>SDRC 9.1: Planning and permitting completed and commercial contracts agreed and finalised by 1 May 2016.</p> <p>Tasks 1 and 3 in the Project Plan.</p>	<p>This includes:</p> <ul style="list-style-type: none"> • the completion of the planning and environmental permitting processes, and • gaining agreement for the necessary trade effluent discharge consent. <p>These will be evidenced by obtaining the relevant documentation.</p> <p>This includes the:</p> <ul style="list-style-type: none"> • collaboration agreement between the partners, • construction Manager contract, • waste supply and the gas grid Network Entry Agreement, and • electric and water grid connection agreements. <p>These will be evidenced by the signature of all of the relevant contracts.</p>
<p>Detailed design and safety review completed (9.2) by 1 September 2016.</p> <p>Task 2 in the Project Plan.</p>	<p>This involves the completion of:</p> <ul style="list-style-type: none"> • process flow diagrams, • mass and energy balance documentation, and • plant layouts. <p>These will be supported, inter alia, by output from the primary testing phase of the Pilot Plant.</p> <p>This also covers:</p> <ul style="list-style-type: none"> • process and instrumentation diagrams, • control philosophy and electrical system specifications, • data sheets for major items of equipment, • project management manuals, and • completion of HAZOP and other safety reviews. <p>These will be evidenced by sign off of all relevant documents.</p>
<p>Equipment procurement process completed (9.3) by 1 May 2017.</p>	<p>This involves the:</p> <ul style="list-style-type: none"> • finalisation of work package definitions,

<p>Task 4 in the Project Plan.</p>	<ul style="list-style-type: none"> • development of functional specifications and an interface register, • preparation of tenders for packages, • negotiation of commercial conditions, and • appointment of suppliers. <p>These will be followed by:</p> <ul style="list-style-type: none"> • management of suppliers through equipment manufacture, • factory Acceptance Testing of equipment, and • a pre-construction Hazop. <p>These will be evidenced by:</p> <ul style="list-style-type: none"> • issuing of ITT information, • placement of orders, • delivery of materials to manufacturers, and • completion of FATs.
<p>Construction completed and commissioning started (9.4) by <u>30 November 1 February 2018 2020</u></p> <p>Task 5 in the Project Plan.</p>	<p>This will involve the:</p> <ul style="list-style-type: none"> • mobilisation of resources, • civils and building modifications, • gas grid connection, and • on-site installation of equipment including interconnecting pipework, electrical and control installation. <p>This will be evidenced by:</p> <ul style="list-style-type: none"> • photographs of the installation of equipment on site, and • site visits.
<p>Successful operation of plant demonstrated (9.5) by <u>30 November 1 July 2018 2020</u></p> <p>Tasks 6, 7 and 8 in the Project Plan.</p>	<p>This will involve:</p> <ul style="list-style-type: none"> • control system testing, • pre-commissioning checks, • cold and hot commissioning, • extended operational tests, • confirmation of performance of plant,

	<ul style="list-style-type: none"> • delivery of in-specification pipeline gas, and • monitoring of product quality and system performance. <p>This will be evidenced by delivery of in-specification gas to WWU network and by KPI reports on plant operations.</p>
<p>Dissemination of project learnings and commercialisation strategy (9.6) by 30 November 2018<u>2020</u>.</p> <p>Tasks 9 and 10 in the Project Plan.</p>	<p>This will involve:</p> <ul style="list-style-type: none"> • maintaining and updating the 'gogreengas' website, • showcasing the facility by organising site visits for government, industry and potential investors, • preparation of process and Project final reports, and • presentations, technical papers and journal articles. <p>This will also include preparation of an outline design of, and commercial assessment for, a full-scale commercial plant.</p> <p>This will be evidenced by:</p> <ul style="list-style-type: none"> • reports on the 'gogreengas' website, • customer feedback, • the Project final report, and • the documentation supporting a full-scale plant.

The maximum amount of the Gas NIC Successful Delivery Reward (which will not exceed the Network Licensee Compulsory Contribution) that the Project will be eligible for is £600,000.

12. USE OF LOGO

The Funding Licensee and Project Partners, External Funders and Project Supporters⁹ may use the NIC logo for purposes associated with the Project but not use the Ofgem or Ofgem E-Serve logos in any circumstances.

⁹ As listed in Box 1.6 in Section 1 of the Full Submission pro-forma.

13. AMENDMENT OR REVOCATION

As set out in 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 (paragraph 8.2~~13~~ of the Gas NIC Governance Document); or
- (ii) if Ofgem agrees to provide Contingency Funding, which requires the re-issue of the Project Direction (paragraph 8.4~~92~~ of the Gas NIC Governance Document); or
- (iii) if the Funding Licensee applies for Contingency Funding to cover a decrease in Direct Benefits and the Authority decides it would be in the best interest of customers to make changes to the Project Direction before the Contingency Funding would be awarded (paragraph 8.4~~92~~ of the Gas NIC Governance Document).

14. HALTING OF PROJECTS

This Project Direction is subject to the provisions contained in paragraphs 8.~~4330~~ to 8.~~4734~~ 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 Special Condition 1I.

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 Special Condition 1I of the Licence the Authority hereby issues this Project Direction to the Funding Licensee in relation to the Project.

This Project Direction constitutes notice of reasons for the Authority’s decision pursuant to section 38A of the Gas Act 1986.

ANNEX 1: PROJECT BUDGET

Cost Category	Cost(£k)
Labour	769
Equipment	3,844
Contractors	725
IT	-
IPR Costs	-
Travel & Expenses	42
Payments to users	-
Contingency	585
Decommissioning	-
Other	35
Total	6,000