



Making a positive difference
for energy consumers

Company Secretary
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Date: 9 December 2015

Dear Company Secretary,

Project Direction ref: ENWL / Celsius / 9 December 2015

Electricity North West Limited (ENWL) submitted the project Celsius (the Project¹) on 31 July 2015 to be considered for funding through the Electricity Network Innovation Competition (NIC). In this year's decision², we³ selected the Project for funding.

We have issued this Project Direction to ENWL. It contains the terms to be followed by ENWL as a condition of the Project receiving funding through the Electricity NIC. ENWL must comply with these terms, which can be found in the Schedule to this Project Direction.

Project Direction

Paragraph 5.66 of the Electricity NIC Governance Document states that a Project Direction will:

- set out the Project-specific conditions that the Network Licensee is committing to in accepting funding;
- require the Network Licensee to undertake the Project in accordance with the commitments it has made in the Full Submission. Where appropriate, the Project Direction may therefore include extracts from the Full Submission or refer to specific sections of the Full Submission;
- 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 Electricity NIC 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; and

¹ Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the [Electricity Network Innovation Competition Governance Document](#).

² <https://www.ofgem.gov.uk/publications-and-updates/electricity-network-innovation-competition-2015-funding-decision>.

³ The terms 'the Authority', 'Ofgem', 'we' and 'us' are used interchangeably in this letter. The Authority is the Gas and Electricity Markets Authority. Ofgem is the Office of the Authority.

- set out the mechanism for the Network Licensee receiving the Approved Amount as set out in the Funding Direction.

These are described for the Project in the schedule to this Project Direction.

Decision

Provided ENWL complies with the Electricity NIC Governance Document and with the schedule to this Project Direction, Celsius is deemed to be an Eligible NIC Project.⁴

This Project Direction constitutes notice pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.



Judith Ross
Head of Network Regulation Policy
For and on behalf of the Authority

⁴ Eligible NIC Project has the meaning given in definitions of the Electricity Distribution licence.

Schedule to Project Direction

1. TITLE

Project Direction ref: **ENWL / Celsius / 9 December 2015**

2. PREAMBLE

This Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to Electricity North West Limited (the "Funding Licensee") pursuant to the Electricity NIC Governance Document issued pursuant to Part E of Charge Restriction Condition 5A (The Network Innovation Competition) of the Electricity Distribution Licence (the "Licence"). It sets out the terms to be followed in relation to Celsius (the "Project") as a condition of it being funded under the NIC and the Funding Return Mechanisms.⁵

Unless otherwise specified, defined terms in this Project Direction are defined in Appendix 1 of the Electricity 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 funds from the Project Bank Account until it has signed contracts with the Project Partners named in Table 1.

Table 1 Project Partners

Ricardo-AEA Ltd
Ash Wireless Electronics
Impact Research
UK Power Networks

4. COMPLIANCE

The Funding Licensee must comply with Part E of Charge Restriction Condition 5A of the Licence and with the NIC Governance Document (as may be modified from time to time in accordance with Part E of Charge Restriction Condition 5A 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 Electricity NIC Governance Document) is deemed to be Disallowed Expenditure.

Pursuant to Charge Restriction Condition 5A.8, 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 Electricity NIC Governance Document or with those of the relevant Project Direction.

Pursuant to paragraph 8.48 of the Electricity NIC Governance Document, Disallowed Expenditure includes any funds that must be returned if the Project is halted without

⁵ The Funding Return Mechanism is defined in part C of Charge Restriction Condition 5A.

Ofgem's⁶ permission, any funds that have not been spent in compliance 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 £4,743,833.51.

6. PROJECT BUDGET

The Project Budget is set out in Annex 1. 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 8.17 of the Electricity NIC Governance Document. Ofgem will use the reported expenditure and explanation to assess whether the funding has been spent in accordance with the Electricity 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 Electricity 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 Electricity 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 £533,779.83;
- (iii) complete the Project on or before the Project completion date of 31 March 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 8.17 of the Electricity NIC Governance Document. The Funding Licensee must follow this guidance in preparing the reports required by paragraph 8.17 of the Electricity NIC Governance Document.

As required by paragraph 8.22 of the Electricity 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

⁶ Ofgem is the Office of the Gas and Electricity Markets Authority. The terms 'Ofgem' and 'Authority', 'we' and 'us' are used interchangeably in this Project Direction.

The maximum amount of Discretionary Funding that the Funding Licensee can request as additional funding for cost overruns on the Project is 0%.⁷

10. INTELLECTUAL PROPERTY RIGHTS (IPR)

In Section 5 (Knowledge Dissemination) the Funding Licensee has stated that the Project conforms to the default IPR arrangements set out in Section Five of the Electricity NIC Governance Document. It 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 5.26 – 5.29 of the Electricity NIC Governance Document).⁸

Table 2. Successful Delivery Reward Criteria

Successful Delivery Reward criterion	Evidence
Technology work stream	
<ul style="list-style-type: none"> • Install and commission monitoring equipment. • Hold retrofit cooling workshop with DNOs to vote on technology options. • Install and commission retrofit cooling technologies. 	<ul style="list-style-type: none"> • Publish equipment specifications and installation reports by September 2017. • Hold retrofit cooling workshop by May 2017. • Review of highest scoring technologies, circulate workshop outcomes to DNOs and publish on the Celsius website by July 2017. • Publish cooling equipment specifications and installation reports by November 2018.
Customer work stream	
<ul style="list-style-type: none"> • Develop Customer Engagement Plan and data protection strategy. • Design, create and test customer communication materials using a customer focus group. • Deliver the customer surveys and report the findings. 	<ul style="list-style-type: none"> • Send Customer Engagement Plan and data protection strategy to Ofgem by June 2016. • Deliver customer focus group workshop by July 2017. • Publish lessons learned from testing customer communication materials on Celsius website by December 2017. • Publish customer survey report quantifying the acceptability of innovative retrofit cooling techniques on the Celsius website by September 2019. • Publish additional customer survey analysis evaluating the change, if any, in the acceptability of innovative retrofit cooling techniques by educating customers, on the Celsius website by September 2019.
Trials and analysis work stream	
<ul style="list-style-type: none"> • Monitoring data collected and analysed. 	<ul style="list-style-type: none"> • Raw temperature monitoring data to be available from July 2017; and retrofit

⁷ This is the amount requested by the Funding Licensee in its Full Submission.

⁸ These are the Successful Delivery Reward Criteria set out in the Funding Licensee's Full Submission

<ul style="list-style-type: none"> • Thermal flow study. • Develop functional specification for low cost monitoring solution. • Develop, deliver and validate the Thermal Ratings Tool using outputs from the monitoring and cooling intervention trials. • Undertake Cost Benefit Analysis and Carbon Impact Assessment. • Conduct Asset Health Study. 	<p>cooling monitoring data to be available from September 2018.</p> <ul style="list-style-type: none"> • Publish asset temperature behaviour analysis report on Celsius website by September 2018. • Publish thermal flow study report and initial recommendations for substation design on Celsius website by November 2017. • Publish low cost monitoring solution specification on the Celsius website by September 2019. • Develop Thermal Ratings Tool using monitoring data to evaluate site capacity on Celsius substations by October 2018. • Develop and validate Thermal Ratings Tool using retrofit cooling trial data, and publish on Celsius website by November 2019. • Develop and validate Thermal Ratings Tool, combining input data from the monitoring and cooling trials, and publish user guide on Celsius website by January 2020. • Publish the Cost Benefit Analysis and Carbon Impact Assessment reports, Celsius Business Case and buy order of retrofit cooling techniques on Celsius website by December 2019. • Publish Asset Health Study report on Celsius website by October 2018.
Learning and dissemination work stream	
<ul style="list-style-type: none"> • Develop and launch the Celsius Project website. • Produce internal general awareness materials. • Produce a series of advertorials detailing Celsius and its progress. • Attend annual LCNI conference. • Hold knowledge sharing events. • Issue Celsius six-monthly Project progress reports to Ofgem and on Celsius website. 	<ul style="list-style-type: none"> • Launch Celsius Project website by July 2016. • Publicise Celsius within Electricity North West via the Volt intranet site, email bulletins and/or Newswire company magazine by June 2016, March 2017, March 2018, March 2019 and March 2020. • Publish advertorials annually by October 2016, October 2017, October 2018 and October 2019. • Participate at four annual LCNI conferences from 2016 to 2019. • Hold annual knowledge sharing events in September 2016, 2017, 2018 and December 2019. Provide one-to-one briefing sessions. • Issue Project progress reports in accordance with Ofgem's June and December production cycle and publish on the Celsius website.
Closedown and business as usual	
<ul style="list-style-type: none"> • Produce and initiate peer review of the Celsius closedown report. • Update Electricity North West's 	<ul style="list-style-type: none"> • Produce Celsius closedown report by January 2020. • Complete and publish peer review of

<p>codes of practice for design standard and operation of distribution substations.</p> <ul style="list-style-type: none"> • Draft necessary change proposals to ENA Engineering Recommendations (ENA ER) P15 (Transformer Loading Guide) and P17 (Distribution Cable Ratings) and submit proposals to the Energy Networks Futures Group (ENFG). 	<p>Celsius closedown report by March 2020.</p> <ul style="list-style-type: none"> • Publish Electricity North West's approach to managing thermal constraints at distribution substations on the Celsius website by March 2020 and train planners/ operational engineers on new codes of practice. • ENA workshop with DNOs held by November 2016 (to agree areas of changes to Engineering Recommendations P15 and P17). • Publish any areas for change identified at the ENA workshop and publish change proposal options to ER P15 and ENA ER P17 on Celsius website by February 2017. • Incorporate relevant Celsius outputs into change proposal options for ER P15 and ER P17 and hold workshop with DNOs by January 2020. • Submit proposals for changing ER P15 and ER P17 to ENFG by March 2020.
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The maximum amount of the NIC Successful Delivery Reward (which will not exceed the Licensee Compulsory Contribution) that the Project will be eligible for is £533,779.83.

12. USE OF LOGO

The Funding Licensee and Project Partners, External Funders and Project Supporters 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

13. AMENDMENT OR REVOCATION

As set out in the Electricity 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 8.23 of the Electricity NIC Governance Document); or
- (ii) if Ofgem agrees to provide Contingency Funding, which requires the re-issue of the Project Direction (paragraph 8.42 of the Electricity NIC Governance Document); or
- (iii) if the Funding Licensee applies for Discretionary 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 Discretionary Funding would be awarded (paragraph 8.42 of the Electricity NIC Governance Document).

14. HALTING OF PROJECTS

This Project Direction is subject to the provisions contained in paragraphs 8.30 to 8.34 of the Electricity 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

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

this Project Direction relates and to any subsequent relevant Funding Direction issued by the Authority pursuant to Part E of Charge Restriction Condition 5A.

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 Direction.

NOW THEREFORE:

In accordance with the powers contained in the Electricity NIC Governance Document issued pursuant to Part E of Charge Restriction Condition 5A 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 49A (Reasons for decisions) of the Electricity Act 1989.

ANNEX 1: PROJECT BUDGET

Cost Category	Cost (£)
Labour	1,203,362.07
Equipment	1,333,237.01
Contractors	1,764,545.12
IT	209,136.13
IPR Costs	0
Travel & Expenses	0
Payments to users	30,815.94
Contingency	537,250.86
Decommissioning	29,357.76
Other	230,089.50
Total	5,337,794.39