Data Communications Company

Consultation on National Grid's Future Billing Methodology Research Project

DCC response

Date: 09 May 2017

Classification: DCC Controlled

Data Communications Company

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National Grid Gas Distribution Limited

09 May 2017

Future Billing Methodology - Unlocking a Low Carbon Future

In 2016, Smart DCC Limited (DCC) launched the data communications infrastructure that allows suppliers to install smart meters in every home and small business across Great Britain. This is a major milestone that delivers a first-of-a-kind, coherent and highly secure service for the whole energy industry.

Smart meters represent a once in a generation opportunity to transform the energy industry. The rollout of smart meters will help consumers to better understand and manage their energy usage and to make better informed decisions about how they buy their energy. Accurate, near real-time information captured by smart meters will support the transition to a smarter and more flexible energy market.

Beyond delivering an efficient, economical and secure smart metering communications infrastructure the DCC is obligated to ensure that those services facilitate innovation in the design and operation of energy networks – in a manner that best contributes to the delivery of a secure and sustainable supply of energy.

National Grid's Future Billing Methodology project represents an opportunity to explore options for a future billing regime that would enable the distribution of a wider range of alternative and low carbon gases. Any future methodology implemented, holds potential to create an economical pathway to decarbonise the heat sector.

DCC welcomes National Grid's consultation on the Future Billing Methodology. In particular, the 'ideal' approach through which smart meters could be used as a transmission point for calorific value data, could hold significant implications for DCC systems and services in the future.

We welcome the opportunity to highlight key areas for consideration as a detailed plan is established, in particular:

- **Increased demand on DCC Systems –** DCC Systems have been designed and built to accommodate specific volumes of metered data using demand profiles

based on policy decisions taken in the past. The introduction of smart meters as a transmission point for CV data would result in an increase in the volume of metered data transmitted through the network. As the research project progresses, engagement with the DCC would be welcomed. This would ensure early consideration of data volumes and any requirement for increased capacity in DCC systems alongside any associated costs.

- **Support from DCC –** supporting and enabling innovation across the energy networks is an important function for DCC to serve. Specialist support and access to industry leading expertise can be made available to National Grid and DNV GL throughout the research project. This could include, for example, assuring DNV GL test / DCC system simulations and enabling a field trial to determine effective data deployment and use by real gas smart meters.

DCC's detailed responses are set out in the attachment to this letter. Should you wish to discuss any of the issues raised in our response or have any queries, please contact me.

I confirm that this letter and its attachment may be published on National Grid's website.

Yours sincerely,

Jonathan Bennett, Strategy Director

Data Communications Company

Future Billing Methodology

FUTURE BILLING METHODOLOGY

UNLOCKING A LOW CARBON GAS FUTURE

CONSULTATION RESPONSE

Company name	Smart DCC Ltd
Date	09 May 2012
Contact name	Jonathan Bennett
Job title	Strategy Director

Consultation question responses

For each of the questions below, please explain:-

- **why you agree or disagree and;**
- **your views on what, if any, alternative changes you would consider to be appropriate.**

Use as much space as required on the below tables.

1.	**Do you agree that the existing LDZ FWACV methodology presents a barrier to a low carbon gas future and that alternative methodologies should be explored?**			
	Agree	Yes	**Disagree**	
	Please treat answer as confidential (delete as appropriate)			**Yes/No**
	Reasoning DCC has no direct involvement with the existing LDZ FWACV methodology. The consultation documentation provided suggests that the existing approach does present a barrier to a low carbon gas future. In line with our licence obligations, DCC seeks to actively develop our systems and services to facilitate innovation in the design and operation of energy networks – in a manner that best contributes to the delivery of a secure and sustainable supply of energy.			
	Indicative cost impact (if applicable) [NA]			

2.	Do you agree that the Future Billing Methodology Project could provide the basis to deliver an economical and sustainable pathway to decarbonising heat for 2030 and 2050?		
Agree	Yes	**Disagree**	
Please treat answer as confidential (delete as appropriate)			**Yes/No**
Reasoning DCC are supportive of the project and agree that the Future Billing Methodology Project could provide the basis to deliver a pathway to decarbonising heat for 2030 and 2050. Whether the pathway(s) identified are economical and sustainable will be dependent on the outcome of the research and any subsequent business cases developed.			
Indicative cost impact (if applicable) [NA]			

3.	Do you agree that the proposed Measurement and Validation Field Trials could provide an understanding of the modelled zones of influence of LDZ-embedded gas entry points?		
Agree	**NA**	**Disagree**	**NA**
Please treat answer as confidential (delete as appropriate)			**Yes/No**

Reasoning DCC has not responded to this question
Indicative cost impact (if applicable) NA

4.	**If your answer to Q2 and or Q3 was "Disagree", what alternative or modified approach would you like to see considered?**		
Agree	NA	**Disagree**	NA
Please treat answer as confidential (delete as appropriate)			**Yes/No**
Response NA			
Indicative cost impact (if applicable) NA			

5.	**What factors and impacts would you like to see considered through the Future Billing Methodology Project?**	
Please treat answer as confidential (delete as appropriate)		**Yes/No**

The factors and impacts considered through the project of most relevance to DCC relate to the potential for future implementation of the 'ideal' approach, in which smart meters are used as a transmission point for CV data.

This approach, if implemented at scale, holds potential to increase the amount of data transmitted across DCC Systems - compared to current forecasts. DCC Systems have been built to accommodate the volume of data originally identified by BEIS in its Volume Projection analysis. Whilst a phased increase in capacity is planned, this is only intended to accommodate the forecast increase in the number of meters connecting to DCC Systems. The transmission of additional CV data was not included within this forecast.

The impact on DCC Systems will take the form of an increase in the volume of data traffic and/or increased volatility of demand. These impacts will largely be dictated by the frequency and method by which National Grid (or other organisation) would seek to transmit CV data to the meter and the frequency with which energy suppliers seek to read the meter.

In turn, the increased data flow could potentially result in the need for expansion of DCC Communication Service Provider (CSP) network capacity and Data Service Provider (DSP) systems and interfaces. The impact and associated issues should therefore be considered through this project.

DCC communication services and service requests
In order to send calorific value data direct to the meter, National Grid would need to become a DCC User. In addition, amendments would be required to DCC systems to allow National Grid to transmit calorific value data to meters. These changes could be sought through the Smart Energy Code modifications process, through the development of an elective communication service - defined in a bilateral agreement.

Further details of the approach including requirement for preliminary assessment, technical feasibility evaluation and establishment of charging issues can be found within the smart energy code. https://www.smartenergycodecompany.co.uk/

DCC advocates consideration of these issues and the associated cost implications through this research project.

Future developments – meter specifications
The project consultation document references the potential for actual energy measurement at the smart meter itself as a future development consideration.

This functionality sits outside the current smart meter specification and the timescales for the completion of the Future Billing Methodology project would limit

the potential to explore this development for inclusion within the current smart meter installation programme. The next opportunity to incorporate would be at re-installation when meters are expected to reach the end of their useful lives in approximately 15 years. In advance of this timeframe however, further development of chromatographs or other device to measure gas energy at the point of consumption could allow connection and transmission via the smart meter home area network.

6.	**If implemented, how would the suggested changes to the existing LDZ FWACV billing regime benefit your company/organisation, e.g. what savings would the changes bring?**	
	Please treat answer as confidential (delete as appropriate)	**Yes/No**
Reasoning DCC feel it is not possible to quantify any cost or benefit at this point in time.		
Indicative cost impact (if applicable) NA		

7.	**Do you envisage any legal or regulatory issues arising if any of the Future Billing Methodology options were to be implemented?**	
	Please treat answer as confidential (delete as appropriate)	**Yes/No**

Reasoning As identified in the response to question 5, the main regulatory issues from DCCs perspective relate: • to the registration of National Grid as a DCC user and, • any modifications to the Smart Energy Code to implement future required solutions that require use of DCC systems and services In addition, it is important to note that the installation of a smart meter is not a mandatory obligation for households. The rate and geographic dispersal of installations should be considered in context with the anticipated roll out of any future options.
Indicative cost impact (if applicable) [NA]

8.	**Do you have any other comments on the Future Billing Methodology Project? (e.g. issues not covered in this document)**
Please treat answer as confidential (delete as appropriate)	**Yes/No**
[ ]	