

## Minutes of the ECO Innovation Technical Advisory Panel

From: Roisin Curran

Date: 14 July 2020

Location: Conference call

Time: 9:00am

The technical advisory panel (TAP) has been set up to review ECO demonstration and innovation applications. It is formed by a number of independent panel members, with its Chair and Secretariat function provided by Ofgem. The TAP makes recommendations to Ofgem to approve or reject certain ECO applications. It does not, in and of itself, make any decisions to approve or reject such applications. Accordingly, these minutes provide a summary of each discrete review undertaken by the TAP as discussed by TAP members during group meetings. The TAP review is limited to the material submitted by applicants at application stage, or in subsequent correspondence, and these minutes provide a summary of the opinions offered by TAP members on the material submitted insofar as they inform the eventual recommendation made by the TAP. These minutes are reviewed by the TAP members prior to publication. These minutes do not represent a formal statement of opinion by Ofgem in regard to any product, measure, or application received by Ofgem in relation to ECO. Applicants who wish to challenge the opinions contained within these minutes may contact Ofgem directly.

### Present

David Glew, Leeds Beckett University

Jason Palmer, Cambridge Energy

Neil Cutland, Cutland Consulting Ltd

Kate Fielding, BEIS

Kay Popoola, BEIS

Eric Baster, Ofgem

John Shiell, Ofgem

Christopher Mack (Chair), Ofgem

Roisin Curran (Secretariat), Ofgem

## **Introductory remarks by the Chair**

The Chair welcomed all panel members to the meeting. Hunter Danskin sent his apologies as he was unable to attend.

### **1. Innovation Measure Application: Tesla Powerwall**

- 1.1. The application relates to a domestic battery storage unit with a smart controller.
- 1.2. The panel agreed the product is materially different and an improvement on measures currently delivered under ECO.
- 1.3. The panel agreed the product is capable of achieving cost savings, particularly when used in combination with other measures such as Electric storage heaters (ESH) and solar PV panels.
- 1.4. The panel were of the view that the proposed technical monitoring questions were suitable for the product.
- 1.5. The panel requested information on what is included in the warranty for the product, and suggested the applicant consult with TrustMark to ensure the warranty is appropriate for delivery under ECO3.
- 1.6. One panel member highlighted the importance of notifying the relevant household insurance company that battery storage has been installed at a property, and questioned how the applicant would ensure the property owner is aware of the need to do so.
- 1.7. The panel requested information on the functionality of the smart controller, including any settings that can be changed by the householder that might jeopardise the system's performance or safety, and the information presented to the householder on the platform.
- 1.8. The panel agreed the product may have a positive impact on those vulnerable to the effects of the cold, as the battery would allow heating to operate during power cuts. The

panel had concerns over the suitability of the product for fuel poor households and pre-payment meters. The panel asked for assurance that such households had been considered in the design and usability of the smart controller.

- 1.9. The panel recommended the application is approved subject to clarifications on the warranty, smart controller, and ensuring relevant insurance companies are notified of installations.

## **2. Innovation Measure Application: UKSOL Solar PV**

- 2.1. The application relates to a solar PV system which uses “half cut” technology and an integrated panel optimiser to increase the efficiency of the product and reduce the impact of shading.
- 2.2. The panel noted that the features included in the application are common to other PV panels currently on the market, but acknowledged the higher cost may have prevented delivery under ECO.
- 2.3. The evidence provided showed the improved efficiency from the half cut technology was marginal, and the panel would prefer that the forthcoming optimiser for shading was included in the product. Additional information on how the product is innovative and an improvement on other PV systems or configurations on the market would also be beneficial.
- 2.4. The panel also sought clarification on whether the half cut technology and shading features were independent of each other.
- 2.5. The panel agreed the product is capable of achieving cost savings, and that the current technical monitoring questions for solar PV would be applicable to the product.
- 2.6. The panel noted the MCS certification was pending on the newer and more efficient models, however it was unclear what additional features were included in these models. It was also unclear if the optimisation feature would be ready at the same time as the MCS certification for the newer, more efficient models.
- 2.7. The panel agreed the product would have a marginally positive impact on fuel poor households and those vulnerable to the effects of the cold.

- 2.8. The panel recommended the application is approved subject to clarifications on the innovative aspect of the product, the newer more efficient models, and when the optimisation feature could be included in installations.

### **3. Demonstration Action Amendment Applications**

- 3.1. The panel reviewed an amendment application for the approved demonstration action Schneider.
- 3.2. The amendment was for a substantial reduction in sample size, and to allow the product to be partially installed in most properties. The panel were concerned that the reduced sample size, and increased variability within the sample groups due to different existing heating controls would not allow a statistically significant result to be achieved. It was also unclear how the applicant would achieve matched pairs between sample groups given the variability.
- 3.3. The panel had additional questions on the reasoning behind the changes, in particular how the applicant intends to collect robust data on the effectiveness of the product at achieving cost savings if the product is partially installed in most properties.
- 3.4. The panel suggested a new proposal is submitted to enable robust data to be collected, and a statistically significant result achieved.

### **4. Review of BTS Smart HTC Method for Demonstration Actions**

- 4.1. The panel reviewed the suitability of the BTS Smart HTC method for demonstration actions, based on information provided by BTS.
- 4.2. The Smart HTC method from BTS is an alternative to the more expensive and intrusive co-heating test, although the co-heating test has an improved accuracy.
- 4.3. The information provided by BTS was helpful in identifying the limitations of the Smart HTC method, the results of which can be used to improve the accuracy of models such as SAP (although note that there are many other uses for SmartHTC beyond plugging into SAP).
- 4.4. The method may be used in demonstration actions to measure the HTC before and after installation of a passive product such as insulation. For semi-active or active products

that have a dynamic, occupancy, or behavioural aspect, additional parameters need to be monitored for use in the model. The panel noted that Demonstration Actions must determine the energy cost saving of the measure, and therefore applications proposing to use Smart HTC must include further detail setting out how the HTC will be used to determine the cost saving.

- 4.5. The accuracy of the smart HTC method can vary for individual measurements depending on the data collected, therefore a shorter duration of measurements would require a larger sample size. There were also concerns on the applicability of this method for retrofit measures where the expected energy savings are small. The calculated error of the HTC measurement may be as high as 30% in some cases, so if the expected energy saving of a product is 10% for example, a difference between pre and post installation measurements may not be determined. Note, however, that an uncertainty of 30% is unusually high and would likely require that all of the optional extra information (window details, boiler efficiency, etc) had not been provided, which is unlikely when there's an on-site survey as for ECO3 projects).

## **5. Date of next meeting**

- 5.1. The next meeting of the TAP is on Tuesday 8 September 2020 via conference call.