Minutes

Making a positive difference for energy consumers

Minutes of the ECO4 Innovation Technical Advisory Panel '3b'

From: Victoria Truelove	Date: 3 May 2023 Time: 09:00 – 12:15	Location: Conference Call

A technical advisory panel (TAP) has been set up to review innovation measure applications and make recommendations to Ofgem to approve or reject 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 IM 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.

1. Present

Adrian Hull, (Panel Member) THS Inspection Services

Cliff Elwell, (Panel Member) University College London

David Glew, (Panel Member) Leeds Beckett University

Jason Palmer, (Panel Member) Cambridge Energy

Paul Phillips, TrustMark

Hunter Danskin, BEIS

Kay Popoola, BEIS

Andy Morrall, Ofgem

Eric Baster, Ofgem

Owain Rees-Jones, Ofgem

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Reuben Privett (Chair), Ofgem

Victoria Truelove (Secretariat), Ofgem

2. Introductory remarks by the Chair

2.1. The Chair welcomed all panel members and attendees to the meeting.

3. Application 5 – Scottish Power – Soltherm 75

3.1. The application is for an external wall insulation (EWI) system, with a claimed achievable effective performance lifetime of 75-years, tested employing extended hygrothermal cycling and statistical regression analysis.

3.2. Previous history related to the application was outlined by Ofgem, as having been approved under ECO3, with this application being for consideration against the 45% uplift criteria and re-evaluation of product limitation in relation to low-rise buildings.

3.3. Applicant claims were highlighted by the TAP to primarily be based on product durability. A manufacturer warranty supports the product lifetime durability claim and was noted as being of benefit.

3.4. The testing employed for ascertaining product durability over 75 years was discussed by the TAP, noting cold-wet cycles have not been listed and querying whether frost damage and freeze thaw process had been accounted for.

3.5. The impact of increased product durability on other improvement criteria was discussed by the TAP, noting installation costs were greater thereby not presenting an improvement against the reduced cost of installation criterion. The calculations provided were noted as incomplete, and not adequately reflective of whole lifetime costs. The TAP was of the view that claims against increased annual cost savings of the measure were not identified or evidenced.

3.6. The TAP was of the view that the decrease in cost of installing the measure was reliant solely on avoiding replacement costs associated with products with shorter lifetimes. The TAP noted the difficulty in attributing a score for reduction in cost of installation over longer time horizons where greater uncertainty exists.

3.7. The TAP discussed the increased fire performance the product under application presented against comparable measures, and the impact from differences in fire performance building regulations within England and Scotland and project delivery costs. The methodology and assumptions of fire testing were discussed. Variations between low and high-rise buildings and standards when delivering EWI was discussed by the TAP, and the comparable measure evaluated.

3.8. The ability of the product to achieve a 150-year lifetime with a single replacement was regarded positively by the TAP. The quality of consultation reports and maintenance guide was noted also noted as being high, with some of the thermal bridging considerations having been made.

3.9. Costings provided within submitted evidence were discussed by the TAP, including the inspection and maintenance programme costing and comparisons against the comparable measure being noted as not fully detailed and the householder's responsibility. The TAP highlighted a structured maintenance regime over the product lifetime where the onus does not fall to the householder and increased costing details would strengthen the application.

3.10. The warranty certificate provided within the technical report was highlighted by the TAP as a manufacturer warranty, not an insurance backed guarantee. The potential remediation mechanisms were the company to cease trading were discussed.

3.11. Inspection and maintenance regime outlined was noted as focusing on the outer layer of the system by the TAP, and potential for water ingress and associated damage evaluated, particularly in relation to the impact on product lifetime.

3.12. Costing for system render and coating refreshment treatments were discussed, particularly where scaffolding may be required due to abseiling and ladder usage not being suitable against the facade of the property.

3.13. Usage of cross fixings and clamps in relation to improved wind load performance claims was discussed by the TAP. Incorporation of additional clamp heads around window and doors was evaluated by the TAP including component displacement and replacement over product lifetime. The potential of changing windows and similar structural changes to the building over time raised concerns on component attachment points and impact on the system.

3.14. The TAP was of the view claims on product durability required additional evidence to support increased lifetime and a longer-term maintenance plan to strengthen scores against the 45% uplift criterion. This could include additional detail on the support provided to householders and detail on manufacturer involvement, particularly in relation to system maintenance and inspection regime.

3.15. Durability and fire safety improvements for the system under application against low-rise and high-rise buildings was discussed by the TAP and compared against available alternatives in each scenario.

3.16. The thickness of the product required to achieve u-values outlined within the BBA certificate and additional clarification on how the product would perform within a non-standard property, was outlined as requiring additional clarifications by the TAP.

3.17. A Q&A was not held with representative(s) for this application.

3.18. The TAP was of the view the product under application could have the current limitation relating to installation only where EPS EWI is unsuitable removed for standard uplift delivery. The application for the product to be consider for a substantial uplift should be rejected with feedback.

4. Application 6 – Scottish Power – Soltherm FSC

4.1. The application is for a BBA approved grey EPS EWI system that utilises fire safe composite insulation panels to achieve low combustibility and improved fire performance.

4.2. Previous history related to the application was outlined by Ofgem, as being approved under ECO3 for a standard IM. The application received is for consideration against the 45% uplift criteria.

4.3. The TAP outlined the thickness required to achieve 0.3 u-values had not been specified by the applicant. The TAP recognised that in order to utilise the product in Scotland, more stringent thermal performance in Building Regulations may need to be demonstrated.

4.4. Costings provided by applicant for delivery of the comparable measure were noted by the TAP as diverging from what they would expect. They highlighted the installation of a fire

barrier when delivering the product had not been accounted for. Additional evidence, such as real-life examples of timings and costings of installation of the product over whole buildings, would support claims against reduced cost of installation.

4.5. The TAP discussed improved fire rating and potential reductions in fire damage which was evaluated against the durability criterion. The TAP conversed on changes to EWI requirements for retrofit and new build standards.

4.6. The window head fire barrier outlined within the BBA certificate was highlighted by TAP members as being for a different Soltherm product and not reflective of the details outlined for the system under application. Clarification on this discrepancy was highlighted as being required.

4.7. The environmental impact of the product was highlighted by the TAP as being potentially different to comparable measures as different materials are used for comparators.

4.8. The TAP was of the view that claims around decreased cost of installing the measure was insufficiently evidenced. The TAP noted the difficulties in holistic evaluation against 2 comparable measures, particularly when considering costings and fire safety.

4.9. The system design and compartmentalisation was noted by the TAP as supporting improved fire safety in an EPS product, making it comparable to mineral wool, and potentially cheaper than comparable measures, particularly with recent increases in price. More comprehensive and benchmarked prices demonstrating accurate differences against comparable systems, such as through the usage of previous project costings could support achievement of higher scores against 45% uplift criteria.

4.10. The TAP noted the approach to insulating below the DPC area was not outlined in the BBA certificate, but could impact system fire safety, cold bridging, and energy efficiency improvements. This aspect was viewed as benefiting from additional clarification.

4.11. A Q&A was not held with representative(s) for this application.

4.12. The TAP was of the view the product under application should be rejected with feedback.

5. Application 7 – EON – SolarEdge

5.1. The application is for a Solar PV system with module level integrated optimisers to maximise generation, automatic safety shutdown, and heat detection, improving safety and reporting.

5.2. No previous history related to the application was outlined by Ofgem.

5.3. The comparable measure provided by the applicant and other comparable measures available within the GB market was discussed by the TAP, with discussion including alternative approaches to fault resolution and warranty provisions.

5.4. The application was discussed by the TAP in relation to the ECO3 approved IM013 description. The TAP was of the view how the system optimisation fundamentally functioned, and efficiency gains were achieved were similar, with safety features for the product under application reflecting an additional benefit.

5.5. The TAP discussed potential implications of householders not having Wi-Fi and how this would impact engagement with system functionality.

5.6. Minimum voltage at which system functions and the related time of day over which energy generation would take place was discussed by the TAP. Disruption to householder and impact from the environment, such as frost, was also evaluated against the comparable measure.

5.7. The TAP was of the view cost savings based on increased energy generation would require additional evidence, such as daily cycle of generation for the product, to support claims.

5.8. The TAP agreed that the application did not provide evidence of a decrease in the cost of installing the measure.

5.9. The TAP was of the view system safety features and employment of the free app to notify householders and installers of faults within the system, was a good feature. Common solar PV system faults and remediation approaches, such as the inverter tripping, and potential implications to energy generation were also discussed.

5.10. Provisions for households without Wi-Fi were regarded positively by the TAP. Contradictions within areas of the application and process after the provisions period ran out was queried by the TAP and raised as an area for clarification.

5.11. Lifetime of standard solar PV measures delivered under ECO was discussed by the TAP and system features enhancing lifetime discussed. The TAP discussed whether system components, such as the inverter and optimisers, also had increased lifetimes. The cost of component replacement was queried.

5.12. The TAP considered that there was sufficient evidence to support substantial increased durability claims.

5.13. The TAP was of the view the delivery at multiple orientations, inclinations, and string lengths was an improvement over the comparable measure.

5.14. The TAP agreed that the application did not provide evidence of an improvement in the overall environmental impact of the measure.

5.15. Installation times for the system were discussed by the TAP. Individual panel optimisation system requirements and approach to connecting these within the array and how this would compare against a comparable measure was queried by the TAP.

5.16. Other claimed improvements, including the safety benefits, ability to install in more locations, and providing feedback via a free app were found to be strong by the TAP.

5.17. In the Q&A, the TAP queried the mechanism for alerting householders following a system fault, the approach to common fault resolution, and the impact of internet connectivity on communications. The representative described how the system functions after a fault occurs.

5.18. In the Q&A, the TAP queried the fault detection mechanism, remediation approach for fire or overheating, and how this differed from the security mechanisms available more broadly within the GB market.

5.19. In the Q&A, the TAP queried the difference between the length of the data plan and warranty described in the application for households without Wi-Fi. The representative provided a satisfactory answer.

5.20. In the Q&A, the TAP queried replacement costs of the inverter. The TAP also queried installation times for the system. The representative gave a satisfactory answer explaining the functionality of the app during installation.

5.21. The panel recommended the application is approved as a new IM and 45% uplift awarded.

6. AOBs

6.1. The potential for identifying lessons learnt within innovation was discussed**.**

6.2. Application evidencing was discussed in general, with questions raised over how to ensure high quality evidence is provided to support applications.

7. Date of next meeting

7.1. The next meeting of the TAP is scheduled for Wednesday 5 July 2023. Further planned upcoming TAP meetings are available on our website.