

ECO4 Scoring Consultation

GEO response to the consultation:

In summary, geo is broadly supportive of the scoring consultation:

1. The use of a SAP-based “before and after” tool to help realise the government’s aim of improving the energy efficiency of buildings is an important measure and geo agrees with the approach, but recommends additional strengthening.
2. The further clarity released on the ECO4 Scoring Methodology to aid providers prepare for April 2022 is welcomed. geo will respond to the open consultation subsequently.
3. It is clear that innovation measures have been under-adopted in previous phases; geo broadly supports BEIS’s desire to encourage innovation:
 - a. The proposed innovation uplifts are appropriate and are comfortable with the use of Appendix Q accreditation.
 - b. The process burden introduced with some elements of ECO4 (e.g. PAS2035) might dissuade providers from deploying highly effective innovative measures and geo recommends such elements be further reviewed and simplified.
4. The desire to move to scores based on measured impact through the ‘pay-for-performance’ uplift is welcomed. However, whilst we recognise that using deemed values is pragmatic, the proposal fails to make best use of previous BEIS initiatives and investments and should be strengthened accordingly:
 - a. ECO4 should obligate providers to install equipment capable of measuring and recording baseline and improved home performance alongside or in advance of energy saving measures.
 - b. The GB smart meter rollout offers the potential of a secure and accurate set of base data for each home. When accompanied by temperature and humidity detection and control and appropriate machine learning capabilities, smart meters are able to provide BEIS and energy companies real, cost-effective, insight into which measures to deploy for a given property.
 - c. Adopting this approach would provide accurate in-life performance measurement for the measures deployed whilst improving the whole life benefit of the ECO4 programme.

Consultation Responses:

Question 1: Do you agree that full project scores should be based on starting and finishing intermediate SAP bands?

Partially agree. The overall approach of linking full project scores to the deemed starting and finishing SAP bands appears to be a simple and effective means of scoring ECO4 projects and geo agrees in part with the proposed approach.

Regardless of the method chosen to establish the deemed scores, geo considers that deemed positions and outcomes should be the worst-case position for ECO4 measures. BEIS's position, highlighted in Paragraph 2.6 of the consultation is noted ('BEIS highlight that evidence from previous ECO schemes shows bespoke scores are more complicated and likely to be open to fraud.'). geo agrees that relying entirely on bespoke scoring is complex and, prior to the advent of the GB smart meter rollout, unreliable. However, given the accurate and secure data available through the GB rollout, geo propose a hybrid solution based on deemed-plus-real world data is adopted for ECO4.

The GB smart meter rollout is one of the most comprehensive and consumer-focused smart meter implementations undertaken by any government to date. The data that it generates offers energy suppliers the opportunity to establish accurate pre- and post-measure performance evaluations for the properties embraced by ECO4. It is counter-intuitive and wasteful not to make full use of this data source to support the assessment of the impact of ECO4. Accordingly, geo proposes that the installation of electricity and, where applicable, gas smart metering equipment should be a mandatory condition ahead of/coincident with the implementation of one or more ECO4 measures.

Further, geo recommends that ECO4 recommends and rewards the installation of a smart thermostat, capable of at least Class IV functionality, and a household temperature and humidity sensor. Combined with the smart meter installation, these simple and low-cost (circa £60 per equipped household) additions would allow at least 12% saving on gas heating costs¹, and would thus be essentially self-funding for most homes within 1 year². This approach could be implemented in almost all homes considered by ECO4³. It would provide a complete set of before and after data that would allow a specific heating and insulation efficiency value to be calculated for each target home, allowing the actual efficacy of each measure to be accurately assessed.

If this approach were adopted, full project scores could use the proposed deemed model as its base, score, but could then apply a multiplier that reflects the actual score achieved where a measured before-and-after assessment is supplied. Appendix A shows how the proposed ECO scoring model could be adapted to accommodate the approach recommended above.

Question 2: Do you agree that scores should be segregated into four floor area segments?

Partially agree. Subject to geo's recommendations in response to Question 1, segregation by floor area seems appropriate.

However, whilst the overall approach makes sense, geo note that there is a risk that it might incentivise energy suppliers to prioritise larger, predominantly landlord-owned dwellings. It would be sensible to focus the proposed floor areas-segmented system to avoid ECO4 measures disproportionately favouring such properties and to provide owner-occupier properties a substantial share of the total pool of measures.

¹ BEAMA Manifesto for Heating Controls

² Based on an average £480 gas heating bill, savings in the first year would be £58.

³ 86% of UK homes have gas central heating. Where no central heating system is fitted, ECO4 proposes the installation of gas central heating.

Question 3: Do you agree with the methodology used to determine the full project scores?

Partially agree. The proposed approach is predictable and pragmatic, but not wholly representative of reality, and therefore will bias certain measures, and underplay others. However, utilising the approach recommended in response to Question 1 would neutralise this potential bias.

It appears that the scores have been calculated on SAP2012. geo propose that the scores are updated utilising SAP10.2 as this is likely the main SAP edition in play during the lifetime of the ECO period.

It would be sensible to carry out a representative trial using real data from the implementation of ECO4 measures to evaluate how close the SAP cost calculations are to actual cost savings realised. geo also note that the cost saving is independent of fuel type, despite the gulf in fuel prices.

Question 4: Are you aware of any further advantages or disadvantages in respect of the options presented to determine the finishing SAP band?

As noted previously, significant improvements would be achieved by adopting the approach outlined in response to Question 1. In particular, geo recommend the following:

1. The scoring system should make better/full use of the GB smart meter rollout to support before and after calculations.
2. The system should allow for the installation of smart thermostats for all target properties and should therefore account for the impact of changes to the occupancy heating profile delivered by such thermostats.
3. The GB smart meter programme anticipates implicit behavioural changes and associated savings will occur through the provision of improved information. As noted in geo's response to Question 1, the installation of smart meters in advance of or coincident with the implementation of ECO4 measures should be made mandatory.
4. The version of SAP used should be updated and standardised to provide a consistent assessment of benefits throughout the ECO4 period.
5. As noted in response to Question 1, geo proposes a monitoring installation step ahead of pre-retrofit SAP assessment, as in PAS2035

Question 5: What are your views on the advantages and disadvantages identified?

As noted in response to Question 1, operating exclusively using deemed figures, whilst simple and broadly effective, fails to make effective use of one of the most significant BEIS projects of the last decade. Ignoring securely-generated real world data and replacing it solely with deemed data seems to be a retrograde step.

Question 6: Do you agree with the proposal to use pre-calculated deemed partial project scores based on the floor area, and starting intermediate SAP band?

Disagree. Relying on pre-calculated deemed partial scores will almost inevitably lead to government overpaying or energy companies being underpaid for measures undertaken as part of the ECO4 programme. The assumption that statistically, over the breadth of installations, any imbalance will be neutralised. However, this approach does not account for variability in the wide range of 3rd party contractors that will be required to support the delivery of ECO4. Given accurate data can be obtained as part of the ECO4 programme, geo disagrees with the sole use of deemed scores and recommends a hybrid model, where deemed scores are sufficient to retire a measure, but where actual scores are given preference in establishing the actual score achieved.

Question 7: Do you agree with the process used to develop the partial project scores?

Agree. However, geo raises the following questions/points:

1. What were the reduction factors applied? These were subtracted from the costs for the unimproved dwelling.
2. Can some (innovative or Smart saving measures) avoid a derating?
3. What happens if the overall SAP measures are lower than the combined PPS scores? That's why derating exists.
4. Where is the deflation methodology mapped out? Is this different from the correction factor or reduction factor (in BRE modelling report)?

Question 8: Do you agree with the use of a single fixed correction factor to account for interactions between measures?

Partially agree. The fixed correction factor approach is pragmatic at the start of the ECO4 programme. However, it does not allow for the potential for installer variability noted in geo's response to Question 6, the evolution of measure during the life of the ECO4 programme or for the introduction of significant innovations not allowed for at the start of the programme.

geo recommend that, similarly to the 'multiplier' approach highlighted in response to Question 1, the use of a fixed correction factor be supplemented by a further multiplier that can be applied if real-world measurements are provided by the energy supplier.

Question 9: Do you agree with the use of the actual percentage of property treated to determine the partial project score for a measure?

Agree.

Question 10: Do you agree with our proposal to calculate the innovation measure uplift by using the partial project score for the innovation measure?

Agree. geo has the following suggestions:

1. Would it make sense to apply 'pay-for-performance' be applied to a partial project score?
2. What is the uplift for 'pay-for-performance'?
3. Page 42 – Project C – Innovation Uplift: Is this calculation correct? Should it be 1.25 x deflated project score.

Question 11: Do you agree with our proposal to have two routes for new measures to enter the ECO4 scheme – a standard alternative methodology route and a new “data light” route?

Partially agree. The approach makes sense in encouraging innovation. However, given advances in technology over the past year and the likely increases during the life of the ECO4 programme, geo considers that an additional innovation measure category for 'Smart Saving Measures' should be introduced. This category should target/represent measures that:

- a. Are ubiquitous (can be installed in more than 80% of homes addressed by ECO4);
- b. Offer 10% or more energy saving for households;
- c. Provide a one year return on investment for the measure and its installation;
- d. Leverage the value of the GB smart meter rollout;
- e. Create secure and credible information outputs supporting future measures
- f. Establish a more dynamic and accurate foundation for future ECO programmes and for assessing and monitoring the efficiency of UK housing stock into the future.

Question 12: Do you agree with our proposed evidence requirements for the data light route? If not, please inform us of your preferred requirements.

Agree. There will always be a challenge between applying a PPS uniformly across the 4 different areas and 14 different EPC bands, with the appropriate fuel weightings. The tension between gathering data and introducing novel technologies will be challenging. Further clarity on the

expected quantum of studies, i.e. number of properties / duration of trial or simulated savings that amount to the 'Supporting evidence for bill savings' would be beneficial.

geo note that, without clarity on the levels required, it's not clear if the 'Data light' route is actually lighter in data requirements than the PCDB method in SAP.

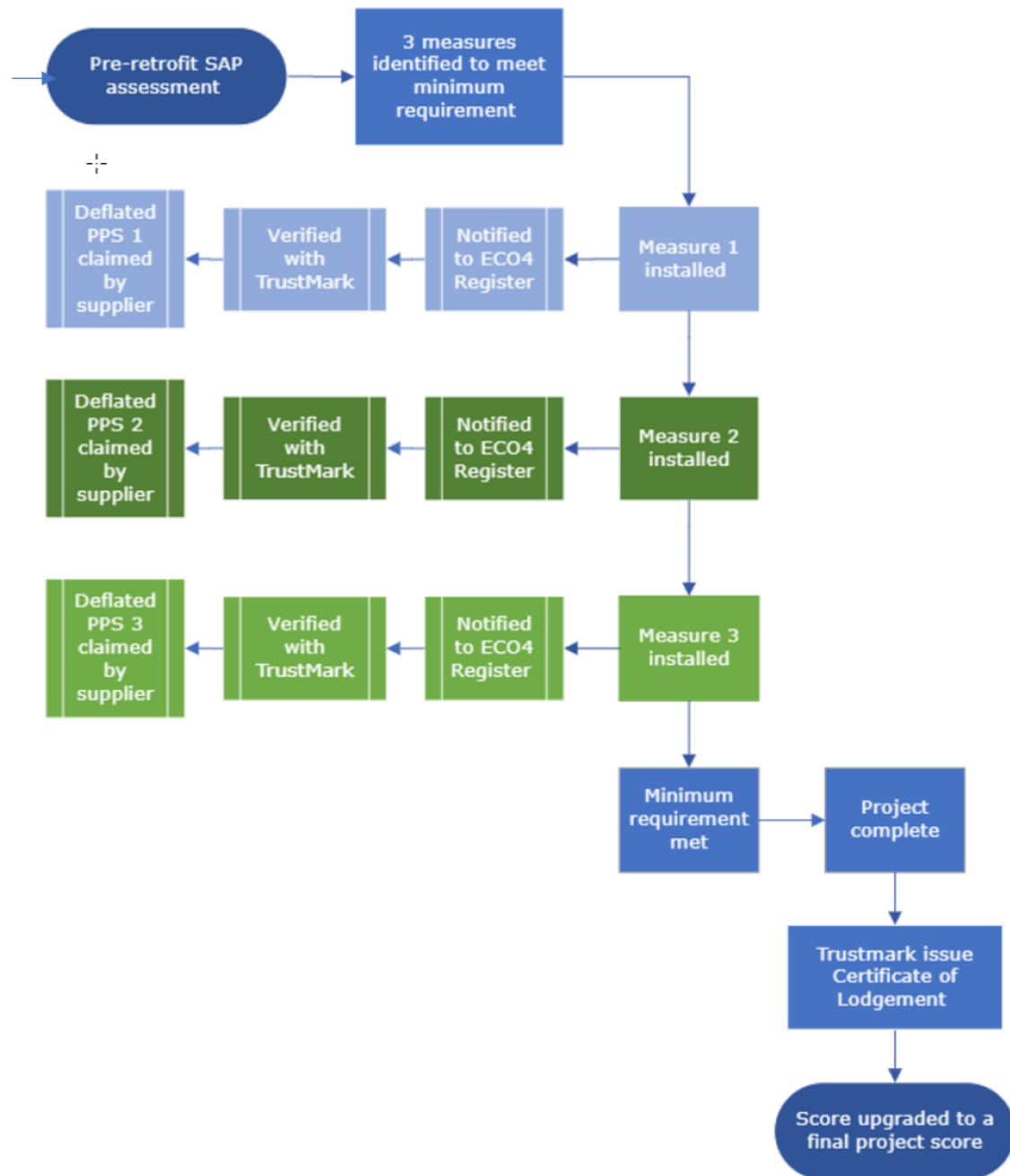
Question 13: Do you think we should have additional mechanisms, such as a review stage or an open call for evidence, to account for the inherent risk associated with data light scores?

Partially agree. In common with our response to Question 1, mandating all data light measures are installed with performance monitoring would be helpful to establish the validity of the ECO4 programme.

Limiting the programme to 5,000 installs a year seems to be pragmatic, although big enough to cause a problem if needed to be retrofitted. Assuming the 5,000 installation per year limit is implemented, geo recommend making this a blanket value, rather than being pro-rated to individual energy company's obligations, as this might dissuade the sponsoring energy company from rolling out the measure due to the limited run rate they can achieve.

Appendix A: Recommended Scoring Approach

ECO4 Scoring Method:



GEO Suggested ECO4 Scoring Method

