ofgem e-serve Making a positive difference for energy consumers

ECO Technical Monitoring Report

www.ofgem.gov.uk

July to December 2013

This report presents the results of the independent technical monitoring of the installation quality of ECO measures. We are publishing this report in line with our commitment to transparency and will discuss the findings with energy companies, industry groups and accreditation bodies, to drive improvements in installation quality. The report covers measures monitored during the first two quarters of the current technical monitoring regime (1 July to 31 December 2013). The results provided in this report are based on the most recent information submitted to Ofgem by suppliers, and are subject to change.

What is technical monitoring?

Ofgem requires energy companies to carry out technical monitoring to verify the quality of installation of their ECO measures. Technical monitoring is designed to ensure that ECO measures comply with relevant standards of installation. Failure to comply with these standards can result in a loss of savings passed on to consumers. The monitoring must be conducted by qualified independent agents. Measures are assessed against a standard questionnaire developed by Ofgem, energy companies and industry experts[1]. Energy companies are required to conduct monitoring for 5 per cent of measures each quarter, across a representative sample of measure types, geographical areas, installers and obligations.

The results of technical monitoring are submitted, unaltered, directly to Ofgem each quarter by energy companies. Energy companies are able to respond to fails during the following quarter, and identify erroneous fails that may then be reclassified as passes. This process is ongoing, and final fail rates may be lower than those presented in this report.

If a measure fails to comply with a standard relating to its installation, Ofgem expects the supplier to remedy the fail. If the fail is not adequately remedied Ofgem will investigate to determine if further action is warranted and, where appropriate, may refuse to credit the supplier with having achieved savings from the measure. Ofgem is working with energy companies to increase the accuracy of technical monitoring and improve the quality of measures installed under the ECO scheme.

Technical monitoring installation fail rates

Technical monitoring was carried out on 15,171 measures between 1 Jul and 31 Dec 2013. Of these, 1,624 measures failed to comply with a standard of installation of the measure. These fails have been split into two categories. Type 1 fails are those that could moderately or significantly reduce the ability of a measure to deliver savings. Type 2 fails are those that have little or no direct impact on the savings produced by a measure (see appendix 1). We are highlighting these Type 2 fails to drive improved quality for consumers benefiting from the ECO scheme. Figure 1 shows the results for all monitored measures, and results split by measure category . The most commonly failed questions are provided in appendix 2. Figure 2 shows the fail rate split by quarter. We are awaiting further information from energy companies on some recorded fails before determining if they are Type 1 or 2 fails, or if they should be amended to passes.

[1] https://www.ofgem.gov.uk/ofgem-publications/86418/tmqsv211final-07052014.pdf

[2] We have only included individual measure categories where more than 100 fails have been reported for that measure. However 'Total Measures' includes all measures with recorded fails. Note that because monitoring rates are representative of the number of measures installed, some measures have been monitored more times than others.

Fig. 1) Installation fails as a percentage of all monitored measures

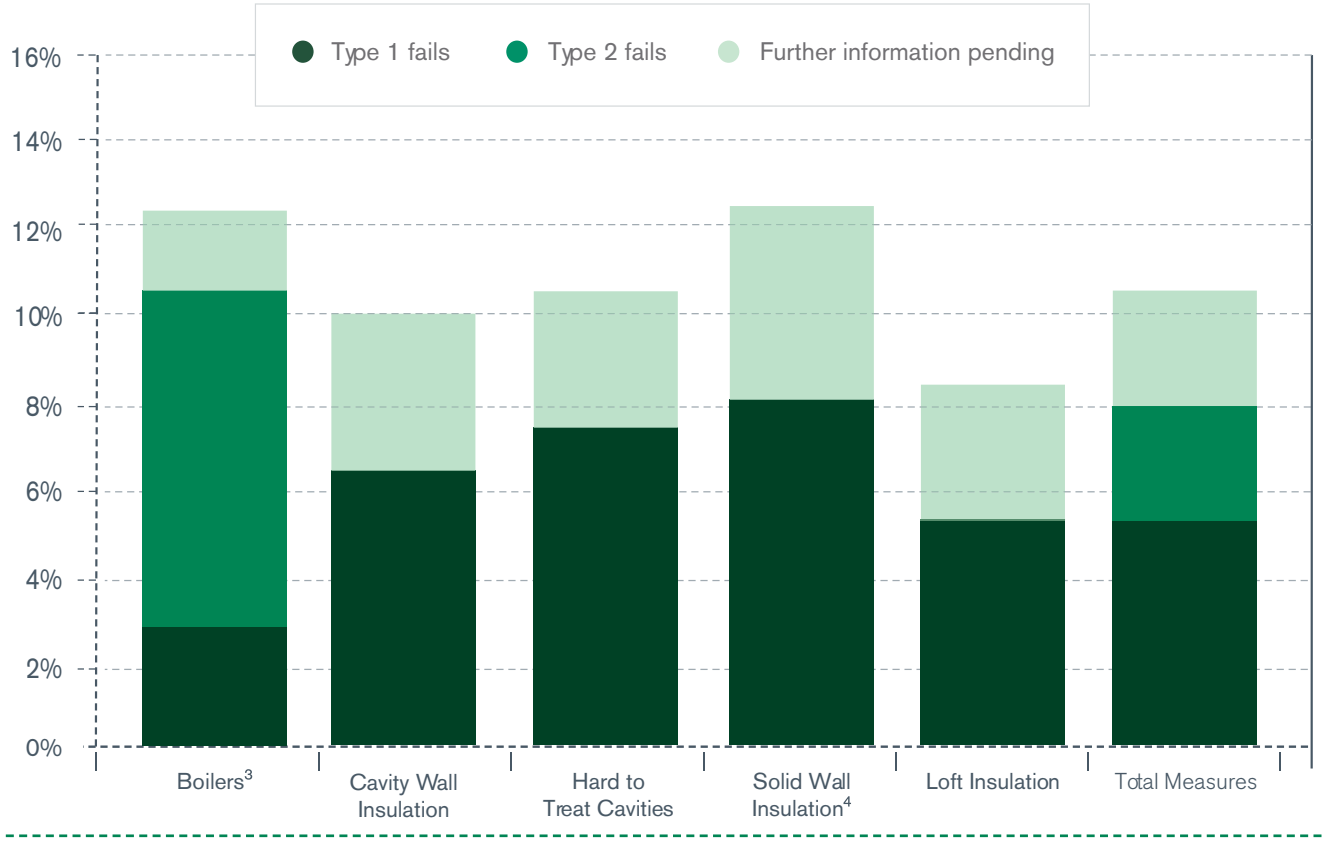

Fig. 2) Technical monitoring results by quarter

Monitoring Period	Installation Fail Rate[5]
Jul-Sept 2013	11.4%
Oct-Dec 2013	10.6%

Ofgem's response to technical monitoring results

Ofgem expects energy companies to actively work to improve the quality of ECO measure installations. To incentivise this improvement, required monitoring rates are linked to technical monitoring performance. If a supplier reduces their average fail rate below 5 per cent, over a defined period of three quarters, they will be permitted to conduct monitoring at a reduced level. Where appropriate, Ofgem can revoke the savings attributed to a measure that fails technical monitoring if adequate remedial work is not carried out.

[3] The 'boilers' measures type includes repairs, replacements and heating controls.
[4] 'Solid wall insulation' includes internal and external wall insulation measures.
[5] Includes Type 1 and 2 fails, and those with further information pending.

Appendix 1: Definition of Type 1 and Type 2 fails [6]

Type 1 fails

Ofgem classifies Type 1 fails to be those that can moderately or significantly reduce the ability of a measure to deliver savings to consumers.

Examples and explanations

Measure type	Question
Loft Insulation	**Q30)** Has insulation been close butted?
Cavity Wall Insulation	**Q29)** Have all injection holes been made good?
Boiler Repairs and Boiler Replacements	**Q26)** Is the boiler connected to a functioning domestic heating (and, if applicable, hot water) system?

- If loft insulation has not been close butted, cold air can pass through the insulation, reducing its effectiveness. A fail on this question also shows that the insulation is susceptible to condensation, which may result in degradation of the insulation, and a reduction in its performance.
- If injection holes are not made good following installation of cavity wall insulation, condensation and damp may degrade the insulation, resulting in a reduction in its performance.
- A boiler that is not connected to a functioning heating system will be unable to provide heating and hot water to a home, and therefore will not deliver any savings to the occupant.

Type 2 fails

Ofgem classifies Type 2 fails as those that may have little or no direct impact on the savings attributed to the measure, but still impact on the quality of the installation or indicate that installers have not followed best practice.

Examples and explanations

Measure type	Question
Boiler Repairs and Boiler Replacements	**Q30)** Does the occupant confirm they know how to use the new boiler?
Boiler Repairs and Boiler Replacements	**Q31)** Is all reinstatement work to an acceptable standard?

- Boiler question 30 could be failed if an installer didn't inform the occupant how to use their boiler, or the occupier may not have been present at installation. In either case, the boiler may be functioning, but we expect that sufficient instructions on how to operate boilers are provided to occupants.
- Reinstatement work includes tasks such as repainting around a new boiler, or refilling drill holes, which do not affect the performance of the boiler in most instances. However, fails on this question still reflect issues with the installation of the measure.

Project plan questions

The Ofgem technical monitoring questionnaire also includes installation questions about the project plans used during the installation of ECO measures. A project plan determines the suitability of a measure and its method of installation to ensure that the installation will comply with statutory requirements and industry best practice. When technical monitoring inspections occur after the installation of the measure, these questions are treated as 'for information only' as it is not expected that project plans are kept on site post-installation. For the purpose of this report, they are therefore not treated as fails.

[6] Note that this distinction is separate, and not analogous, to the major/minor classification used in past technical monitoring of energy efficiency schemes.

Appendix 2: Commonly failed questions

The two most commonly failed questions for each measure shown in the report are listed below, as well as any other questions which were failed more than 100 times.

84 per cent of failed measures failed one of the 11 questions listed below. As such, they highlight potential areas where significant gains in installation quality could be made.

Boiler Installation, Boiler Repair, Heating Controls	
Q31) Is all reinstatement work to an acceptable standard?	Type 2
Q30) Does the occupant confirm they know how to use the new boiler/controls?	Type 2
Q29) Are the water pipes connected to the cylinder insulated?	Type 1

Cavity Wall Insulation	
Q28) Does the drilling pattern ensure an even distribution of material, and conform to the appropriate materials compliance certificate?	Type 1
Q29) Have all injection holes been made good?	Type 1

Hard-to-Treat Cavity Wall Insulation	
Q31) Has the measure/system been installed as specified in the project plan, which as a minimum must be as specified in the appropriate product certificate and/or System Designers Method Statement? [7]	Type 1
Q35) Does the drilling pattern ensure an even distribution of material, and conform to the appropriate materials compliance certificate? (post installation question only)	Type 1

Solid Wall Insulation (The two most common fails relate to external wall insulation)	
Q45) Has the finishing coat/cladding been applied as specified in the project plan and is the installation water tight?	Further information pending [8]
Q43) Are the insulation boards bonded and/or anchored as specified in the project plan?	Type 1

Loft Insulation	
Q33) Has the loft hatch been properly draught-proofed as specified in PAS 2030:2012?	Type 1
Q32) Has the loft hatch been properly insulated as specified in PAS 2030:2012?	Type 1

[7] Note this project plan related question is asked during mid-installation inspections and therefore (unlike other project plan related questions) is still included in our analysis.
[8] We have requested further information from suppliers to determine the exact nature of failures for this question.