

Better monitoring for energy efficiency in buildings

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The past five years have seen energy efficiency in buildings moving from a welcomed addition to a sector priority. Unfortunately, well-defined targets do not always translate in effective measures: gaps between projected and actual performance can be huge, resulting in poor return on investment. The PERFORMER project is aiming to solve this problem with a holistic energy monitoring methodology.

The clock is ticking. If the EU is to reach its objective of increasing the [energy efficiency](#) of European buildings by 20 % before 2020, significant efforts still have to be made to promote the adoption of new generation components and products, improve modelling approaches and monitoring, agree on common European standards and reduce the

performance gap.

Launched in 2013, the PERFORMER consortium is hoping to help the EU rise to these challenges, particularly by providing stakeholders with new tools and methodologies. These include an 'Energy Instrumentation Kit in a box' to monitor energy performance, an Energy Simulation Environment and a cloud-based data storage and simulation facility which makes benchmarking easier compared to local solutions.

This set of instruments will be tested on four demonstration sites in Spain, France, the UK and Poland. The sites have been selected based on their potential to validate the PERFORMER technology, but also for their location in countries facing very different climate conditions.

In Cardiff, the project will be measuring the performance gap of St. Teilo's Church in Wales High School. It will develop a system to detect latent and abnormal electricity consumption at the Hotel de Las Letras in Madrid, will seek to achieve further reduction in energy uses at the already top-of-the-class Baltic Plaza Hotel in Kolobrzeg, and will be evaluating the magnitude of electricity use at Woopa – a positive energy and zero carbon building conceived by GDF Suez in Lyon.

The measurements will be based on a set of relevant economic, social and environmental indicators defined under the project which will be analysed before and after the implementation of the PERFORMER tools. This is expected to help the consortium evaluate these tools' effectiveness.

On the occasion of its fourth General Assembly which took place on 28 and 29 January in Saclay, France, the team said it was well on track to begin the on-site deployment of PERFORMER's hardware and software solution by February 2016. The team's work on the PERFORMER framework tool is drawing to an end, with detailed methodologies having

been defined for the assessment of building [energy](#) performance. A high-level architecture for the ICT hardware and software platform of PERFORMER has been defined, and the next step will see the consortium defining how each component will be integrated with existing systems in the pilot buildings.

If successful, PERFORMER is expected to boost industry by providing economies of scale leading to sizeable retrofitting cost savings and reduced pay-back periods.

More information: For further information, please visit PERFORMER: performer-project.eu/

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