

Pay-for-performance schemes: An innovative policy-driven approach for building renovations

The SENSEI project is offering 10 recommendations to policymakers that support a performance-based market for energy efficiency in buildings

The European Union (EU) is taking significant steps towards decarbonizing its building sector and EU leaders who agreed to a more ambitious 2030 climate target are working to update key directives and regulations to achieve this goal.

Despite these efforts, the EU is facing several long-standing barriers in retrofitting buildings to be more energy efficient. To overcome these barriers, the EU and national public funds need to be more effectively communicated and targeted towards end-users. This can be achieved through blending various sources of financing, proportionate support based on achieved results, strengthened technical assistance, and promoting synergies with market-based mechanisms.

What are pay-for-Performance schemes?

The SENSEI project has been at the forefront of exploring the use of innovative Pay-for-Performance (P4P) schemes where payments for energy efficiency are based on proven and measured savings. With recent advancements in measuring and valuing energy savings, financing models based on metered savings can be a significant aid to policymakers, who are tasked with creating an enabling environment for these initiatives.

Pay-for-Performance (P4P) schemes have gained significant traction in the United States; however, the European Union's energy system operates differently and has yet to encounter the same obstacles faced by states such as California (e.g., from increased RES penetration), which has taken the lead in implementing P4P programs. Stakeholders interviewed in the context of the SENSEI project emphasized the significance of modifying policy, regulatory, and market rules to facilitate the growth of P4P schemes and make them appealing to relevant parties.

We need a forward-looking policy framework

For P4P schemes to be successful, they must be incorporated as part of a regulated program that is guided by government policies and regulations. The regulatory push is crucial as underperforming market players may not be inclined to participate otherwise. To attract both Energy Service Companies (ESCOs) and end-users, alterations to the existing energy market elements are necessary. The challenge at hand is not a technical issue, but rather a market failure resulting from the significant asymmetry of information

between the buyer and the seller. The solution lies in treating energy efficiency in a similar manner to power generation, where payment is only received upon the attainment of desired results.

The 10 Recommendations for energy efficiency

The following 10 policy recommendations aim to create a market-driven, performance-based system that recognizes the value of energy efficiency. As an outcome, they should incentivize property owners, building managers, and energy service companies to invest in energy efficiency measures and establish market structures that reward market actors based on the achieved energy savings.

Utilizing Economic Stimulus Packages to Support Metered Performance:

Economic stimulus packages can be leveraged to encourage the development of innovative business models that prioritize actual/metered performance, such as P4P schemes. This can help enhance the Energy Performance Contracting model through the presence of aggregators to reach “hard- to-reach” sectors, such as the residential and small to medium commercial building sector.

Establish Strict Energy Performance Requirements:

To improve the energy efficiency of new and existing buildings, strict energy performance requirements should be established for all parts of the building stock, with specific compliance deadlines.

Enhance the Role of Energy Efficiency Market Players:

The role of key energy market actors, such as Energy Service Companies, aggregators, and contractors, should be strengthened to ensure their participation in building renovations and involvement in the residential sector.

Recognize Energy Efficiency as a Valuable Resource:

Utilities and Distribution System Operators should be required and incentivized to utilize energy efficiency as a valuable resource in providing services to the energy system. The “metered savings” methodology outlined in Annex V of the Energy Efficiency Directive (EED) should also be partially required to support performance-based schemes.

Elevate Transparency and Accuracy through Metered Methodologies:

The rules for monitoring, reporting, and verifying energy savings outlined in Article 7 of the Energy Efficiency Directive (EED) should be further strengthened to improve transparency and accountability by promoting the use of advanced M&V methods.

Increase Ambition in Public Buildings:

Additional requirements should be placed on all public buildings, beyond central government buildings, to encourage increased energy efficiency renovations and actual/metered savings. The increased need for renovation should also include increased involvement from energy efficiency service providers.

Improve Energy Efficiency in Small and Medium Enterprises:

Small and medium enterprises should be subject to additional requirements, such as mandatory energy audits and the implementation of energy-saving recommendations, along with increased requirements for actual/metered savings.

Involve Stakeholders in Pay-for-Performance Scheme Implementation:

Involving stakeholders in all steps of the design process is crucial for the successful implementation of P4P schemes within the EU. Ministries and Energy Agencies could play the role of market facilitators and help design a widely acceptable system to drive investments in energy efficiency.

Promote Standards and Capacity Building:

Training and capacity- building activities should be promoted to encourage the adaptation and implementation of P4P schemes, along with establishing standards, template contracts, and procedures.

Raise Awareness and Empowering Citizens:

The concept of the energy efficiency aggregator should be promoted at a national level and final users/consumers should be made aware of the benefits and potential of P4P schemes.

Based on research from the EU-funded project SENSEI, in order to overcome the barriers hindering retrofit actions and accelerate the decarbonization of the building sector, the EU needs to act on different fronts to foster better use of public and private funds. The key to success is to create a favourable policy and regulatory environment that values energy savings as a demand-side resource based on metered energy savings that will allow novel instruments, such as Pay-for- Performance schemes to thrive and provide a significant contribution to the EU's ambitious climate target.

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