A new platform for smarter energy performance contracts is coming to Europe

Innovative solutions for building owners and investors through the active control of smart buildings will be tested in Portugal and Belgium

A new concept for adding flexibility in the Energy Performance Contracting model is currently being developed at a European level. This approach aims to support building owners and investors by promoting comfort and energy-cost savings through active demand response solutions. Additionally, it will have a beneficial effect on the environment as it helps reducing overall emissions. To achieve this, seven partners from four different countries are developing a proof-of-concept platform for valorising building flexibility, which will be validated in two pilot sites in Portugal and Belgium.

A decarbonised building stock by 2050 requires a large majority of buildings in the EU to be highly energy efficient, compliant with an Energy Performance Certificate label A. Chris Caerts, project coordinator, from EnergyVille and VITO, highlights that, "*To reach the target emission reductions for the building stock, about 97% of buildings should be renovated. This is very challenging; therefore, we are convinced that actively steering consumption to use emission-free electricity is a key measure.*"[i]

AmBIENCe – A*ctive Managed Buildings with Energy Performance Contracting* – is the name of the European project that is working to develop a contract and business model for active energy performance contracts and a proof-of-concept platform to calculate the associated savings and incentives.

The developed concept and platform, to be piloted in Portugal and Belgium, outlines the characteristics of an active building and the requirements for having an active building energy performance contract that covers the contract model as well as the associated business model. Various innovative energy and non-energy services (e.g., comfort, asset value, health) are also considered as part of the new performance contracting model.

Moreover, AmBIENCe will create improved guidelines and recommendations for policy makers and regulatory bodies to implement active building energy performance contracts in a wide range of building types (residential, commercial, tertiary).

The project's solutions will mainly target energy service companies (ESCOs), building owners and investors.

New solutions to activate buildings and businesses

By adding the flexibility of a smart building in the process of evaluating a building's energy performance, the Active Building Energy Performance Contracting concept in AmBIENCe allows building owners and users to reduce energy costs and effectively maintain their comfort level. The AmBIENCe approach invites building owners to be active prosumers, providing full transparency on energy billing and consumption. Moreover, adopting an active control in the

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energy management of buildings enhances the reliability of services, increases energy efficiency, and unlocks the potential for energy and cost savings as well as CO_2 emission reductions.

Additionally, the business side will benefit from the solutions developed under this Horizon 2020 project. AmBIENCe's business and contract models offer customer-oriented solutions that provide an optimal balance between the investment cost and savings, through active building control and a performance guarantee. The solutions will favour investments in energy retrofits (e.g. building envelope and energy systems), photovoltaic cells, storage, electrification of heating, and deployment of electrical vehicle recharging points in buildings. Moreover, the developed platform will help service providers and ESCOs to engage with building owners in order to offer value-added services. The platform aims to increase the demand for market and grid stakeholders and ESCOs that need to acquire flexibility for their business.

The consortium is composed of seven partners based in four countries: VITO/ EnergyVille (project leader), BPIE and Energinvest, from Belgium; ENEA, from Italy; IK4, from Spain and INESC TEC and EDP CNET, from Portugal.

For more information on the project: http://ambience-project.eu/.

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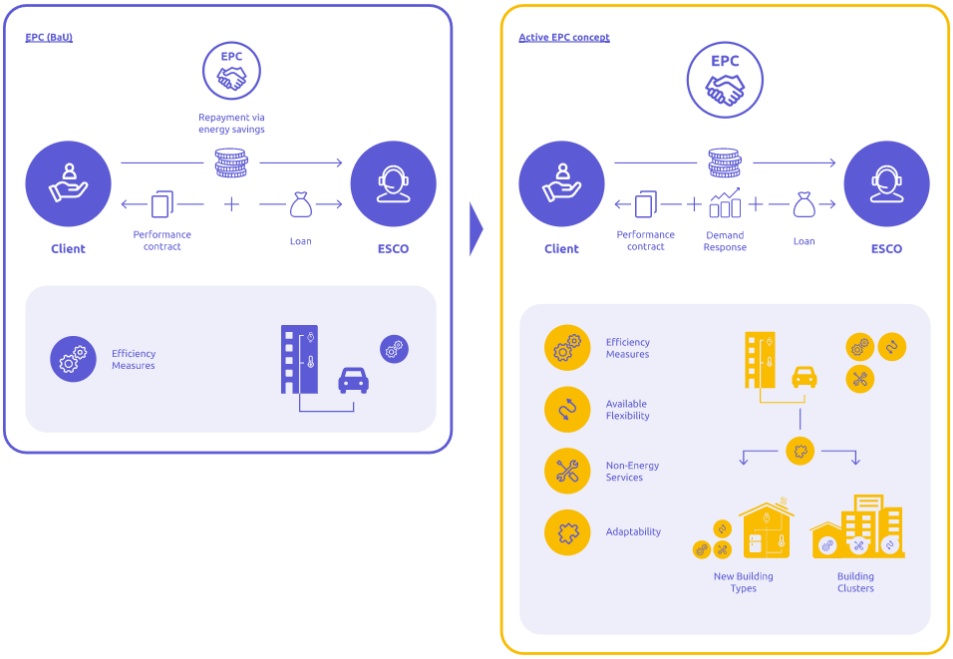

FIGURE 1 - AmBIENCe Concept

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FIGURE 2 - AmBIENCE Team

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[i] Source: http://bpie.eu/publication/97-of-buildings-in-the-eu-need-to-be-upgraded/

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