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Horizon 2020 Energy Efficiency Call for Proposals 2019

Upgrading smartness of existing buildings (EE-4) & Next generation of EPC (EE-5)

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Energy

EE-04-2019: Upgrading smartness of existing buildings through innovations for legacy equipment

Specific challenge:

- Buildings: transition from energy consumers to active contributors to the energy system
- Smart buildings : managing themselves, interacting with their occupants and with the grid
- Improving efficiency of existing building stock as main challenge
- Focus on legacy equipment : longer lifecycle, higher costs of replacement, or difficult to integrate in buildings

TRL
6-8

IA
70%

EE-04-2019: Upgrading smartness of existing buildings through innovations for legacy equipment

Scope:

- Demonstrate technological solutions to manage building energy and interact with the grid based on user preferences
- using IT to upgrade existing buildings
- connecting both short and long lifecycle equipment
- Plan broad uptake on energy markets and integration into specific building typologies
- Maximise consumer comfort : cost-effective, user-friendly, easy to install, saving energy and money

EUR 3-4 million

EE-04-2019: Upgrading smartness of existing buildings through innovations for legacy equipment

Impact:

- Primary Energy savings (in GWh/year)
- Investments in sustainable energy (in million Euro)
- Upgrade of a number of existing buildings, these including a significant number of building systems and appliances
- Energy and costs savings greater than the energy consumption from IT and cost of the upgrade
- Reduction of GHG (tCO₂-eq/year) and/or air pollutants (kg/year)

EE-5-2018-2019-2020: Next-generation of Energy Performance Assessment and Certification

Specific challenge (1/2):

- Assessment processes and certificates need to become more reliable, user-friendly, cost-effective and compliant with EU legislation
- They need to increasingly reflect the smart dimension of buildings and facilitate the convergence of quality and reliability of Energy Performance Certificates (EPCs) across the EU
- Holistic assessment of buildings: envelope and system performances, smart readiness, RES, final energy use, comfort levels
- Ensure a technology neutral approach, make use of International and EU standards, particularly ISO/CEN

EE-5-2018-2019-2020: Next-generation of Energy Performance Assessment and Certification

Specific challenge (2/2):

- Assessments should be based on indicators such as calculated annual final energy used, share of renewable energy used, past final energy consumptions and expenditures, comfort levels, level of smartness, etc
- Assessments should increasingly take into account actual measured data from sensors, smart meters, etc
- Demonstrate how schemes could be strengthened, modernised and best linked to national certification schemes, enhancing compliance checking and effectiveness of financial support

EE-5-2018: CSA (Market Uptake)

Characteristics of the 3 successful proposals, which demonstrated:

- Improved compliance, reliability, usability and convergence of Energy Performance Certification (EPC) schemes
- Innovative indicators in EPCs such as Smart Readiness, Comfort, Outdoor Air Pollution, Real Energy Consumption, District Energy
- Innovative approaches to handling EPC data, maximising their value in EPC Databases, Building Logbooks, Tailored Recommendations, Financing Options, One-stop-shops
- Strong participation of national agencies, standards and technical bodies involved in energy performance calculation and certification schemes
- Providing national bodies with tools for EPBD and CEN standards implementation
- Encompassing asset rating and operational rating
- Improved link between EPCs and deep renovation

EE-5-2019: Next-generation of Energy Performance Assessment and Certification

Scope:

- Innovative approaches for assessing building energy performance
- Reliable assessment of building intrinsic performances
- Work towards output-based assessments using available building energy related data
- Improve reliability, cost-effectiveness and compliance with EU-standards, to allow for EU-wide deployment
- Involve relevant stakeholders, including certification bodies
- Consider using EPCs in building passports and renovation roadmaps

IA
70%

TRL
6-7

EUR 2-2.5 million

EE-5-2019: Next-generation of Energy Performance Assessment and Certification

Expected Impact:

- Improved user-friendliness of EPCs in terms of clarity and accuracy of the information provided
- Enhanced user awareness of building energy efficiency
- Primary energy savings triggered (GWh/year)
- Investments in sustainable energy triggered (million EUR)
- Reduction of GHG (tCO₂-eq/year) and/or air pollutants (kg/year)

Topic EE4: Tips for a successful proposal

- Base your approach on a good understanding of existing buildings, legacy equipment and consumer expectations
- Successful proposals address most aspects of the award criteria at least in a robust and convincing way, at best through unique or outstanding strengths
 - 'Most aspects of the award criteria': be prepared to compete with many good proposals
 - 'At least robust and convincing': support claims with details and figures, ensure credibility and robustness of the approach, e.g. detailed pilots both ambitious and replicable, a solid methodology/risk mitigation, addressing in detail all the impacts of the call, etc.
 - 'At best unique or outstanding strengths': e.g. a brilliant concept, highly innovative components, a solution likely to overcome a major barrier, an excellent consortium, unique exploitation capacities, etc.

Topic EE5: Tips for a successful proposal

- Explain well your innovative approaches for assessing building energy performance
- Involve the relevant stakeholders: certification bodies, energy agencies, etc
- Cleverly choose your demo cases, and explain them in detail
- Calculate your Impacts accurately and with credible baselines
- Show how your idea allows EU-wide replicability
- Read the topic carefully!

Thank you!

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