



Horizon 2020 - Green Deal call

Area 4: Energy and resource efficient buildings

Sylvain ROBERT, Project Advisor

EASME, Unit B.1 Horizon 2020 Energy

Topic LC-GD-4-1-2020: Building and renovating in an energy and resource efficient way

- Indicative budget:
€60 million
- Indicative EU contribution per proposal:
€10 to 20 million
- Innovation Action (IA)
- Technology Readiness Level:
TRL 5/6 to TRL 7/8



Topic LC-GD-4-1-2020: Specific challenge

- Decarbonisation by 2050: role of the buildings sector
- Buildings as zero-emission/zero-pollution, positive energy powerhouses within green neighbourhoods
- Design and construction to reduce embodied emissions and operational energy efficiency
- Transition to energy positive buildings using renewable energy
- Creation of green neighbourhood « living labs »

Topic LC-GD-4-1-2020: Scope (1)

- Overall objective to test innovations across whole value chain, adapt the value chain to new operation patterns resulting from innovations.
- Set up or use existing innovation clusters to demonstrate, evaluate and replicate innovative solutions across different building types and climatic zones
- Green neighbourhood « living labs » to raise awareness, facilitate social innovation, promote education & training for sustainable living
- Coordination on standards and regulatory aspects to ensure operational efficiency, address design-built performance gap

Topic LC-GD-4-1-2020: Scope (2)

- At least two (residential and non-residential, new and/or retrofitted) large-scale demonstrations in different regions of Europe
- Design of green, positive energy neighbourhoods embedded in sites' context
- Energy and resource efficient construction/renovation workflows for off-site manufacturing, reducing embodied energy and occupant disruption
- Ensure replicability, long-term performance (maintenance, air quality etc.), potential for future adaptation, reuse or deconstruction
- No negative effects on fire and seismic safety

Topic LC-GD-4-1-2020: Scope (3)

- Post-construction monitoring of energy performance and component durability.
- Sustainable, energy efficient building design adapted to local conditions
- Active-passive solutions
- Digital and EGNSS based methods of design, construction, monitoring, tracking of processes
- Innovative and more energy efficient Building Integrated Photovoltaics

Topic LC-GD-4-1-2020: Scope (4)

- Innovative, cost and energy efficient renewable energy generation in buildings combined with urban service facilities & HVAC technologies
- Energy storage systems with bidirectional charging that don't limit use of living space
- Energy efficient building operation at reduced maintenance costs and long-term performance with digital technologies to optimise energy at neighbourhood scale
- Digital technologies to ensure comfortable & healthy living environment: dynamic matching, demand response; smart home services, advanced controls; etc.

Topic LC-GD-4-1-2020: Impacts (1)

- Primary energy savings triggered by the project (GWh/year);
- Investments in sustainable energy triggered by the project (million Euro);
- High energy performance buildings (NZEB for retrofitted; positive energy for new)
- Reduction of GHG emissions towards zero (tCO₂-eq/year) for total life cycle
- - 50% embodied energy in buildings
- Reduction of air pollutants towards zero (kg/year) for total life cycle

Topic LC-GD-4-1-2020: Impacts (2)

- Demonstration of high replicability potential using new or existing innovation clusters incorporating the whole value chain
- - 30% construction/retrofitting time and cost
- - 30% dust and noise during retrofit works leading to higher user satisfaction
- + 30% improved indoor environment quality
- Proposals should state relevant indicators & metrics with baselines

Information sources

- Green Deal Call

https://ec.europa.eu/info/research-and-innovation/strategy/european-green-deal/call_en

- Funding & tenders portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>

- EASME

<https://ec.europa.eu/easme/en/section/horizon-2020-energy-efficiency>

- INEA

<https://ec.europa.eu/inea>

- BUILD UP

www.buildup.eu

Thank you



© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

