



#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

Global Leadership in Renewables

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Research and
Innovation



Next renewable energy solutions

LC-SC3-RES-1-2019

Bringing these new energy conversion solutions, new renewable energy concepts and innovative renewable energy uses faster to commercialization

To TRL 3 to 4

RIA

EUR 20 million

Developing the next generation of renewable energy technologies

Beside the **development of the technology**, the proposal will have to clearly address the following related aspects: the potential lower environmental and climate impact on a **life cycle basis**, the better **resource efficiency**, issues related to **social acceptance or resistance** to new energy technologies, related **socioeconomic** and **livelihood issues**.

Support will be given to activities which focus on **converting renewable energy sources into an energy vector**, or the **direct application of renewable energy sources**.

Renewable energy solutions for implementation at consumer scale

LC-SC3-RES-4-2018

Decarbonisation of the building sector (heating, cooling, electricity)

Further integration of energy technologies (and storage)

Highest possible share of RES in buildings, considering costs and implications for the user

TRL to 4-5

RIA

EUR 2 to 5 million

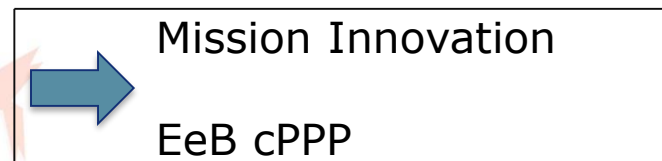
Renewable energy system integrated at the building scale

Solutions **combining different renewable energy technologies** to cover the highest possible share of **electricity, heating and cooling** needs

Multi-family residential or commercial or public or industrial buildings (in the case of the industrial buildings, energy needs of the industrial process should not be addressed)

Needs and requirements of users and installers to be addressed (SSH expertise)

Reduction of air pollutants



Renewable energy solutions for implementation at consumer scale

LC-SC3-RES-5-2018

Use of RES available locally to supply heating & cooling

Innovation needed also in resource mapping, monitoring & control tools

Reduce investments and operation costs & increase the systems' performance

TRL to 6-7

IA

EUR 3 to 10 million

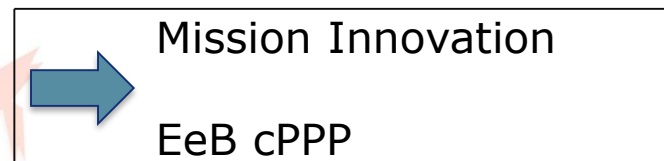
Increased performance of technologies for local heating and cooling solutions

One or more of the following aspects to be addressed:

- ❖ Optimisation **components heating & cooling system**
- ❖ Tools to **optimize design and monitoring of components** heating & cooling system
- ❖ **Integrated control for smart operation** heating & cooling system

Residential (single house and apartment blocks) and **commercial buildings**

Reduction of air pollutants



Renewable energy solutions for implementation at consumer scale

LC-SC3-RES-7-2019

Large potential of applying solar energy for industrial purposes

Industrial processes might need to be adapted

Limited installation, O&M requirements - easy to operate

TRL to 4-5

RIA

EUR 3 to 5 million

Solar Energy in Industrial Processes

Cover the highest possible share of the heating and/or cooling demand of one or more industrial processes by means of **solar thermal energy**

In the case of heating, the process temperature shall be **higher than 150°C**

Individual industrial sites and/or industrial parks (coupled to a district heating and/or cooling network) are in scope

Contribution to relevant BREFs under the Industrial Emissions Directive

 SPIRE cPPP

Renewable energy solutions for implementation at consumer scale

LC-SC3-RES-8-2019

Large potential to integrate substantial shares of renewable energy generation in district heating and/or cooling systems

RE technologies can be combined

Reliable with limited installation and running costs

TRL to 6

IA

EUR 8 to 15 million

Combining Renewable Technologies for a Renewable District Heating and/or Cooling System

Cost-effective solutions for district heating and/or cooling systems which allow **satisfying at least 50% of the energy demand of the system** by the use in the district of one or more renewable energy technologies

Otherwise **wasted excess heat** is in the scope

Solutions should be **demonstrated in real conditions** within an operational district heating and/or cooling system

Operators and final users to be engaged, their requirements to be considered



Thank you!

Find out more:

<http://ec.europa.eu/programmes/horizon2020>