TURKEY in HORIZON 2020

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ALTUN/HORIZ/TR2012/0740.14-2/SER/005

This project is co-financed by the European Union and the Republic of Turkey
Bu proje Avrupa Birliği ve Türkiye Cumhuriyeti tarafından finanse edilmektedir

Theme Oriented Trainings:
Secure, Clean and Efficient Energy

CARTIF

CLEAN, SECURE AND EFFICIENT ENERGY IN H2020

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INTRODUCTION
RTD, ENER, EASME, INEA

- Directorates-General Research & Innovation (RTD) and Energy (ENER)
- Executive Agency for Small and Medium-sized Enterprises (EASME)
- Innovation & Networks Executive Agency (INEA)
- INEA and EASME set-up by the EC to manage on its behalf several EU programmes

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INTRODUCTION

POLITICAL CONTEXT

2030 Climate-Energy Package

- 40% reduction of Greenhouse Gases
- 27% of renewable energy
- 27% improvement in energy efficiency

Energy Union (key reference framework for the EU's energy policy)

- **Where we want to go**:
  A secure, sustainable, competitive, affordable energy for everyone
- **What this means:** 5 pillars
  Energy security, solidarity and trust
  A fully integrated internal energy market
  Energy efficiency first
  Transition to a low-carbon society
  An Energy Union for Research, Innovation and Competiveness

SET-Plan

- *Integrated Roadmap*
- *Communication on Integrated SET-Plan (COM[2015]6317)*

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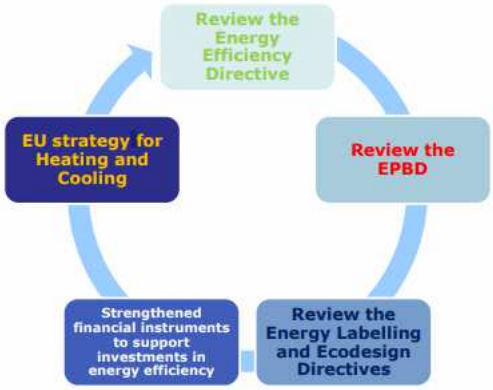
INTRODUCTION

POLICY CONTEXT

Framework Energy Efficiency Policies - Concrete actions



Source: Directorate-General for Energy

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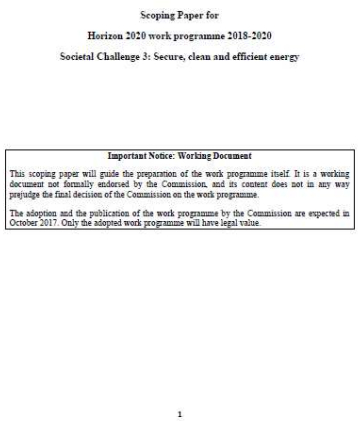
INTRODUCTION

SCOPING PAPER



Scoping Paper for

Horizon 2020 work programme 2018-2020

Societal Challenge 3: Secure, clean and efficient energy

Important Notice: Working Document

This scoping paper will guide the preparation of the work programme itself. It is a working document not formally endorsed by the Commission, and its content does not in any way prejudge the final decision of the Commission on the work programme.

The adoption and the publication of the work programme by the Commission are expected in October 2017. Only the adopted work programme will have legal value.

1

Scoping Paper for Horizon 2020 work programme 2018-2020

Societal Challenge 3: Secure, clean an efficient energy

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INTRODUCTION

SCOPING PAPER

Context:

EU committed to a **clean energy transition** and the establishment of a **'resilient Energy Union with a forward-looking climate change policy**'

Goal:

EU, leader in **renewable energy**, boost **energy efficiency** and to have strong, innovative and competitive companies that develop **energy-efficient and low-carbon solutions**

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INTRODUCTION

SCOPING PAPER - STRATEGIC ORIENTATIONS

The **Energy Challenge (SC3)** is structured according to the **Energy Union priorities** and the **SET-Plan key actions**

Inputs:

- **Communication 'Accelerating Clean Energy Innovation'**
- **SET-Plan:**
  - **Integrated Roadmap**
  - **Target setting for 10 Key Actions**
  - **Selection of R&I activities to reach the targets within the 10 Key Actions**
- **Energy efficiency: Policy supporting actions and market uptake priorities**
- **Horizon 2020 Advisory Group on Energy (AGE)**

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INTRODUCTION

SCOPING PAPER – KEY ASPECTS

- Reduce the carbon footprint of energy
- Enhance the security of energy supply
- Keep energy affordable for everyone in the long run
- Increase the global competitiveness of European industry in the field of innovative low-carbon energy technologies

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INTRODUCTION

SCOPING PAPER - CROSS-CUTTING ISSUES

- **Open innovation and smart financing:** A special focus will be on creating more favourable **market conditions, supporting innovative business models and increasing citizen involvement**
- **Open to the world:** Cooperation with international partners (technology development and transfer)
- **Digitisation:** integration of ITCs. New designed energy market based on a **consumer-centric** approach, enabling new business models, services and processes, appropriate and secure data management and also new actors
- **Social Sciences and Humanities (SSH):** A better understanding of the **'energy behaviour' of different actors**, the effects of policy/economic interventions and a deeper involvement of citizens are crucial for changing the energy system

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INTRODUCTION

SCOPING PAPER - CROSS-CUTTING ISSUES

- **Education, Training and Skills**: The Energy Challenge will address the improvement of **education and training for people** in different age groups and professions
- **Joint actions with Member States/Associated Countries:** In line with the spirit of the Energy Union and the essence of the SET-Plan, the Energy Challenge will continue its efforts to improve the **coordination of energy R&I programmes** at different levels thus **increasing impact**.

All activities supported by the Energy Challenge will also have an impact on the implementation of the **United Nations (UN) Sustainable Development Goals (SDGs)**

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INTRODUCTION

SCOPING PAPER - PRIORITIES

- **GLOBAL LEADERSHIP IN RENEWABLES**

  The challenge is to create an EU-integrated industrial renewable energy sector which is economically sustainable and competitive in European and global markets in the long-term. The main focus will be on **decreasing capital and operational costs of renewable energy technologies**.

- **A SMART CITIZEN-CENTRED ENERGY SYSTEM**
  - **Smart distribution and end use:** smart and integrated energy solutions for all energy vectors. Smart energy grids, energy storage, more efficient buildings. Self-consumption. Social sciences and humanities
  - **Smart interfaces between generation and transmission**: enabling energy systems to **integrate (very) high shares of renewable generation** with conventional generation. Smart digital management
  - **Smart Cities and Communities**: The lighthouse city approach from previous calls will continue to increase the number and diversity of the Lighthouse cities involved and will put stronger focus on **Positive Energy Blocks (PEB) as integral part of smart city districts**.

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INTRODUCTION

SCOPING PAPER - PRIORITIES

- **EFFICIENT ENERGY USE**

  Energy efficiency is at the heart of the Energy Union strategy which considers it as an **energy source in its own right**, representing the value of energy saved.

  - **Buildings & consumers**
    - **Building digitisation:** Integration of ICT will be promoted for buildings as well as in their design, construction, operation and commissioning processes. **Monitoring and control (including fault detection)**
    - **Building renovation:** Emphasis will be put on technologies facilitating faster, cheaper and more environmental friendly renovation including user and installer-friendly solutions both for envelope and systems, with low-carbon and efficient energy sources and heating and cooling solutions.
    - **Innovative demand-side energy services:** The Energy Challenge intends to support the demonstration of technologies empowering energy **end-users to actively participate in the energy system (as prosumers)**

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INTRODUCTION

SCOPING PAPER - PRIORITIES

- **Industry & services:** address technological and non-technological challenges regarding **heat and cold recovery** and reuse technologies, **renewable production** of heat and cold, efficient system **design** and **industrial symbiosis** based on optimised energy flows
- **Market uptake measures:**
  - Buildings & consumers: special focus on **nearly zero-energy buildings**, behavioural change; participation of consumers in the energy market
  - Industry & services: in particular energy efficiency **awareness of enterprises** and their supply-chain.
  - Policies enabling actions for **better policy design**
  - **Mobilising investments** in energy efficiency

- **DECARBONISING THE USE OF FOSSIL FUELS**
  - Carbon Capture Storage (CCS) will need to be deployed as soon as possible
  - Industrial utilisation of captured CO2 has both the potential to replace fossil fuels as raw material

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INTRODUCTION

SECURE, CLEAN AND EFFICIENT ENERGY

(i) **Energy efficiency first**

(ii) **Europe as a leader in renewables**

(iii) **A fair deal to consumers**

Research, innovation, demonstration and market-uptake

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INTRODUCTION

SECURE, CLEAN AND EFFICIENT ENERGY

Call - BUILDING A LOW-CARBON, CLIMATE RESILIENT FUTURE: SECURE, CLEAN AND EFFICIENT ENERGY

Goals

- on the supply side, cheaper and more performant generation technologies which are better integrated in various levels of the energy system;
- a smarter, more flexible and resilient energy system;
- on the demand side, increased overall energy efficiency and provision of means to enable **consumers to play a more active role in the energy transition**;
-
- a better understanding of the specific socio-economic contexts in which the energy transition takes place which will allow to address obstacles in a more effective way;
- increased market-uptake of innovations, including the implementation of energy policy, the preparation for rolling-out investments, and the support for capacity-building

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INTRODUCTION

SECURE, CLEAN AND EFFICIENT ENERGY

Call - BUILDING A LOW-CARBON, CLIMATE RESILIENT FUTURE: SECURE, CLEAN AND EFFICIENT ENERGY

6 main focus areas:

- Energy Efficiency
- Global leadership in renewables
- Smart and clean energy for consumers
- Smart citizen-ccentred eneergy systems
- Smart Cities and Communities
- Enabling near-zero CO2 emissions from fossil fuel power plants and carbon intensive industries

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INTRODUCTION

SECURE, CLEAN AND EFFICIENT ENERGY

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TOPICS

ENERGY EFFICIENCY

- *Energy efficiency needs to be considered as a **source of energy in its own right***
- *An ambitious approach to energy efficiency is needed across all the sectors, but the major challenge of the next decade lies in **buildings***
- ***Digital smart technologies** will be playing an increasingly important role, not only from a technological point of view, but also for triggering new business opportunities*
- *Innovation is also needed in the **financing of energy efficiency***

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ENERGY EFFICIENCY – TOPICS 2018

Upgrading buildings' energy performance and smartness

- LC-SC3-EE-2018; LC-SC3-EE-2-2018; LC-SC3-EE-5-2018-2019

Energy efficient industry and services

- LC-SC3-EE-6-2018; LC-SC3-EE-8-2018

Energy efficiency is an investment

- LC-SC3-EE-9-2018; LC-SC3-EE-10-2018; LC-SC3-EE-11-2018

Energy efficiency is an energy source

- LC-SC3-EE-13-2018; LC-SC3-EE-14-2018

Support for policy-driven innovations

- LC-SC3-EE-15-2018; LC-SC3-EE-16-2018

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-1-2018-2019-2020: Decarbonisation of the EU building stock: innovative approaches and affordable solutions changing the market for buildings renovation

- Proposals should **demonstrate** solutions of building fabric and/or systems that ensure faster and more **cost-effective deep renovations** (passive elements + energy systems, e.g. heating and cooling) that result in high energy performance
- Proposals should include **innovations in technology and in design** and **construction methods** with low embodied energy and **on-site works organisation**, **industrialization** and **lowering cost** of energy retrofitting and they should take into account any architectural constraints
- Integration on-site of **renewable energy generation**
- Proposals could address drivers of building renovation that go beyond a desire to reduce energy consumption and related energy costs. For example, decisions to renovate may sometimes coincide with structural repairs
- **Business models** and the **holistic integration** of disciplines across the value chain

- TRL: 8-9
- Innovation action, €3-4 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-2-2018-2019: Integrated home renovation services

- Proposals should create or replicate innovative **local or regional "integrated home renovation services"**. The developed services should cover the whole "customer journey" from technical and social diagnosis, technical offer, contracting of works, structuring and provision of **finance** (e.g. loans or EPCs), to the monitoring of works and quality assurance
- Proposals should build upon the **promising experiences of integrated renovation services emerging in Europe*** and aim at developing / improving economically viable **business models**, ultimately running without the need for public subsidies
- Coordination and support action, €0.5-1.5 million

** Please see the examples of good practice in chapter 3 of the Commission Staff Working Document 'Good practice in energy efficiency' COM(2016) 761 final*

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-5-2018-2019-2020: Next-generation of Energy Performance Assessment and Certification

- Energy Performance of Buildings Directive (**EPBD**). Current energy performance certification systems face a number of challenges
- **Next-generation energy performance assessment** schemes will value buildings in a **holistic** and cost-effective manner across several complimentary dimensions: envelope performances, system performances and smart readiness (i.e. the ability of buildings to be smartly monitored and controlled and, to get involved in demand-side management strategies) with **actual measured data**
- Proposals should involve relevant stakeholders (including national and regional **certification bodies**) to stimulate and enable the roll-out of **next-generation of energy performance assessment and certification**, with a view to achieve enhanced reliability, cost-effectiveness and compliance with relevant EU standards and the **Energy Performance of Buildings Directive**
- Convergence of EPC practices and tools across EU
- Coordination and support action, €1-2 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-6-2018-2019-2020: Business case for industrial waste heat/cold recovery

- Proposals should develop **integrated cost-benefit simulation tools** that, based on the characterization of processes, heat/cold streams and other relevant variables, can determine the best utilisation options of recovered waste heat/cold and/ or surplus renewable energy from industrial and eventual other sources (when available).
- Efficient use/system integration of **renewable energy sources** through e.g. heat/cold storage and flexible production.
- Clear **business model** development and a clear path to finance and deployment
- **Demonstration** in real operating conditions in industrial facilities

- TRL: 4-8
- Innovation action, €1-2 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-8-2018-2019: Capacity building programmes to support implementation of energy audits

- The **Energy Efficiency Directive**, in its art.8, requires Member States to develop programmes encouraging **SMEs** to undergo energy audits and to implement the recommended energy-saving measures
- **Staff trainings and capacity buildings programmes**, facilitating SMEs to undergo energy audits and to implement the recommended energy-saving measures
- **Capacity building** to support the take-up of audits recommendations and undertake the actions necessary to reduce energy consumption in the companies required to undergo energy audits
- Initiatives supporting Member States in **empowering or establishing national supporting schemes for SMEs**

- Coordination and support action, €1-2 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-9-2018-2019: Innovative financing for energy efficiency investments

- Proposals should address the development or replication and implementation of **innovative financing schemes for energy efficiency investments** at regional or national level
- Establishment of new innovative, operational financing schemes
- Replication of previously successful solutions
- Establishment of regional/national aggregators which are able to develop large (standardized) project pipeline
- Creation of EU or regional/national energy efficiency investment roundtables/platforms

- Coordination and support action, €1-1.5 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-10-2018-2019-2020: Mainstreaming energy efficiency finance

- **Energy efficiency is not yet considered as an attractive investment by the financial sector. Lack of statistical data** on the actual energy and costs savings achieved by energy efficiency investment projects
- Development, demonstration and promotion of frameworks for the **standardisation and benchmarking of sustainable energy investments**
- **Capacity building for banks and investors** at the national and local level
- Gathering, processing and disclosing **large-scale data** on actual financial performance of energy efficiency investments
- Further integration of **non-energy benefits** in project valuation
- Increase the share of **institutional investor funds** invested in energy efficiency
- Exploring the **impact** of revised risk ratings and requirements for energy efficiency on financial regulations

- Coordination and support action, €1-1.5 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-11-2018-2019-2020: Aggregation - Project Development Assistance

- **Investors and lenders** need to gain more confidence on investment projects related to **energy efficiency** which are still seen as risky and fragmented
- **Project Development Assistance (PDA)** will be provided to public and private project promoters such as public authorities or their groupings, public/private infrastructure operators and bodies, energy service companies, retail chains, large property owners and services/industry
- Existing public and private buildings
- Energy efficiency of industry and service
- Energy efficiency in all modes of urban transport
- Energy efficiency in existing infrastructures

- Coordination and support action, €0.5-1 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-13-2018-2019-2020: Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand-side as energy resource

- **Energy Efficiency services** (e.g. Energy Performance Contracting (EPC)) are available on the market already for quite some time. However, there is a big untapped potential in sectors and with actors not yet engaged in services triggering energy, CO2 and cost savings
- Energy service models (like **EPC**) and services that target new sectors and new actors
- **Business models** which work equally for energy efficiency and other services
- "**Pay for performance**"-schemes
- The use of '**big data**' generated by smart meters, equipment, sensors and tools for standardised processes
- Additional **non-energy features** that support the up-take of innovative energy efficiency services and technologies
- Improving the **accessibility and quality** of demand side service providers while enhancing their access to the market

- Coordination and support action, €1-2 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-14-2018-2019-2020: Socio-economic research conceptualising and modelling energy efficiency and energy demand

- In the European Union Strategy, Energy Efficiency was recognised as a resource in its own right
- The research projects should help to make the **Energy Efficiency First principle** more concrete and operational and to better understand its relevance for energy demand and supply and its broader impacts across sectors and markets
- Conceptualise and assess the **impacts** and **model the energy efficiency first principle**

- Research and Innovation action, €1-1.5 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-15-2018: New energy label driving and boosting innovation in products energy efficiency

- Once the majority of products reach the highest classes (A+++), the label no longer stimulates further innovation . Labels should be "rescaled", i.e. existing products will be re-categorised in lower classes so that the top classes are empty and provide new stimulus for innovation
- **Raise the capacity** of manufacturers and, in particular, retailers to fulfil their obligations providing and displaying respectively the correct label at the point of sale
- Develop and roll out tailored and effective actions focusing on **awareness-raising and information campaigns** to alert market actors of label rescaling, with a view to increasing understanding of labels and routing purchase decisions towards higher efficiency products
- Exchange of **best practices** in relation to these campaigns, including through the recommendation of common key messages to the respective target groups

- Coordination and support action, €1-1.5 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-16-2018-2019-2020: Supporting public authorities to implement the Energy Union

- The delivery of the **Energy Union** targets requires the full engagement of the public sector at all governance levels.
- **Local and regional public authorities** have a crucial role in setting ambitious energy efficiency strategies,
- a) *Support to local and regional public authorities*
- *b) Supporting the delivery of the Energy Efficiency Directive*

- Coordination and support action, €1-1.5 million

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TOPICS
ENERGY EFFICIENCY

LC-SC3-EE-17-2019: European City facility - European Cities as key innovation hubs to unlock finance for energy efficiency

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INTRODUCTION

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6 main focus areas:

- Energy Efficiency
- **Global leadership in renewables**
- Smart and clean energy for consumers
- Smart citizen-ccentred eneergy systems
- Smart Cities and Communities
- Enabling near-zero CO2 emissions from fossil fuel power plants and carbon intensive industries

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

- *The Energy Union Strategy has set the target for the EU to achieve **global leadership in renewable energies***
- *EU **industrial renewable energy sector** economically sustainable and competitive in European and global markets in the **long-term***
- ***Four lines of intervention:***
  - *breakthrough technology development*
  - *renewable energy solutions for implementation at consumer scale*
  - *renewable energy solutions for implementation at the energy system level*
  - *renewable fuels for transport*

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GLOBAL LEADERSHIP IN RENEWABLES – TOPICS 2018

Next Renewable energy solutions

- LC-SC3-RES-2-2018

Renewable energy solutions for implementation at consumer scale

- LC-SC3-RES-4-2018; LC-SC3-RES-5-2018; LC-SC3-RES-6-2018

Heating and/or Cooling System

Renewable energy solutions for energy system level implementation

- LC-SC3-RES-11-2018; LC-SC3-RES-12-2018; LC-SC3-RES-13-2018

Renewable Fuels for transport

- LC-SC3-RES-21-2018; LC-SC3-RES-22-2018

Market Uptake Support

- LC-SC3-RES-28-2018

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-2-2018: Disruptive innovation in clean energy technologies

- The challenge is to take exceptionally promising and innovative **energy solutions** with high potential impact to real **breakthrough** and market application
- Photovoltaic windows ('transparent' solar cells)
- Bionic leaf technology
- Strong **exploitation plan** presenting their **business opportunities** and impact potential

- TRL: 3-5
- Research and Innovation action, €2-3 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-4-2018: Renewable energy system integrated at the building scale

- Solutions that **integrate several technologies** based on one or more renewable energy sources (and their combination with energy **storage** systems where necessary) should be made available and the **highest possible share of renewable energy** should be achieved
- The proposal will provide a combination of different **renewable energy technologies** to cover the highest possible share of electricity, heating and cooling needs of a multi-family **residential or commercial or public or industrial building**
- **Social sciences and humanities** has to be included in the consortium
- Innovation Challenge n. 7 ("Affordable Heating and Cooling of Buildings") of Mission Innovation

- TRL: 3-5
- Research and Innovation action, €2-5 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-5-2018: Increased performance of technologies for local heating and cooling solutions

- **Renewable, local energy sources** have a great potential to drastically reduce the use of primary energy for both heating and cooling in residential and commercial buildings.
- **Optimisation** of the different **components** of a renewable heating and cooling system;
- Development of **tools and systems** to optimize the **design and monitoring** of the different components of a heating and cooling system;
- Development of **integrated control systems** for the smart operation of a heating and cooling system
- Innovation Challenge n. 7 ("Affordable Heating and Cooling of Buildings") of Mission Innovation

- TRL: 5-7
- Innovation action, €3-10 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-6-2018: Demonstrate significant cost reduction for Building Integrated PV (BIPV) solutions

- BIPV need to satisfy multiple building functions (such as mechanical rigidity and structural integrity; primary weather impact protection including rain, snow, wind, etc.; energy economy, such as shading, day lighting, thermal insulation; fire protection, noise protection, in addition to architectural and aesthetic considerations, so as to replace roofs, facades and shading devices)
- a) **new BIPV product concepts** to meet these requirements and cost-efficient production techniques reducing their additional cost by 75% by 2030 compared to 2015 levels, and
- b) **demonstration** of these concepts into a BIPV energy system that guarantees the building functionalities and energy needs
- Proposals will also address **standardization** issues

- TRL: 5-7
- Innovation action, €6-10 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-11-2018: Developing solutions to reduce the cost and increase performance of renewable technologies

- **Cost reductions** remain a crucial necessity for existing or new technologies
- *Floating Wind*
- *Onshore Wind*
- *Ocean*
- *Geothermal*
- *CSP*
- *Hydropower*
- *Bioenergy*

- TRL: 3-5
- Research and Innovation action, €2-5 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-12-2018: Demonstrate highly performant renewable technologies for combined heat and power (CHP) generation and their integration in the EU's energy system

- Improvement of individual technologies **performance** and their **incorporation** into the energy system
- *Biomass based combined heat and power (CHP)*
- *Geothermal*

- TRL: 5-8
- Innovation action, €15-20 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-13-2018: Demonstrate solutions that significantly reduce the cost of renewable power generation

- Bring the **costs of electricity generation** from other renewable sources (no PV) to a **competitive level** and allow their broader **penetration in the EU energy mix**
- *Offshore wind*
- *Deep geothermal*
- *CSP*

- TRL: 5-7
- Innovation action, €15-20 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-21-2018: Development of next generation biofuels and alternative renewable fuel technologies for road transport

- Current **biofuel and renewable fuel technologies** are still not competitive compared to technologies of fossil fuel alternatives
- Next generation **non-food/feed drop-in biofuel and alternative renewable fuel technologies** for energy and transport
- Liquid diesel- and gasoline-like biofuels from biogenic residues and wastes through either chemical, biochemical and thermochemical pathways, or a combination of them;
- Liquid gasoline-like biofuels through biogenic upgrading of biogas

- TRL: 3-5
- Research and Innovation action, €3-5 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-22-2018: Demonstration of cost effective advanced biofuel pathways in retrofitted existing industrial installations

- Overcome the high cost and high risk of the installation of industrial plants for **advanced biofuel**
- Proposals will demonstrate **cost-efficient advanced biofuel pathways** which improve the economic viability and reduce capital expenditure (**CAPEX**) and operating expenses (**OPEX**)
- **Retrofitting of existing industrial installations** with necessary innovation specific to the proposed advanced biofuel pathway
- Pulp and paper industry or in existing fossil refineries

- TRL: 5-7
- Innovation action, €8-10 million

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TOPICS

GLOBAL LEADERSHIP IN RENEWABLES

LC-SC3-RES-28-2018-2019-2020: Market Uptake support

- RES Directive in 2009 + 2020 RES targets + "Clean Energy for all Europeans" package
- The proposal will develop solutions which can be easily implemented for **overcoming barriers** to the broad deployment of **renewable energy solutions**
- Recommendation for harmonisation of regulations, life cycle assessment approaches, environmental impact methodologies of renewable energy solutions
- Development of additional features for RES to be compliant with the electricity market requirements, making them "market fit"
- Support sharing of best practice between public funding bodies
- Development of insurance schemes
- Development of innovative financing mechanisms, schemes and sharing of best practices
- Development of support tools to facilitate export markets
- Development of tools

- Coordination and support action, €1-3 million

TURKEY in HORIZON 2020

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ALTUN/HORIZ/TR2012/0740.14-2/SER/003

This project is co-financed by the European Union and the Republic of Turkey
bu proje avrupa birliği ve türkiye cumhuriyeti tarafından finanse edilmektedir

Theme Oriented Trainings:
Secure, Clean and Efficient Energy

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