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# What is the European City Facility?

he European City Facility (EUCF) is funding facility set up under the Horizon programme for Research and Innovation of the European Union. It provides tailor made and simplified financial support (grants of EUR 60 000) and capacity building services to municipalities and local authorities in European Union. The objective is that these entities develop sound investment concepts and mobilise finance in the field of sustainable

The EUCF provides support for investment projects within the field of sustainable energy, including all investments on the energy demand side, which contribute to the improvement of energy performance and the achievement of energy savings.

The EUCF 1st call was open from May 25th to October 2nd 2020. Amongst 257 applications from all over Europe, 30 beneficiaries received the EUCF grant to create their investment concepts.

# What happens next?

The EUCF provides support

for investment energy

The selected beneficiaries from the 1st EUCF call will create their investment concepts until the end of 2021. After validation, the investment concepts will be ready to be presented to potential investors. The resulting concepts will also be an initial step towards a fully-fledged business and financial plan.

**projects within the** Potential investors are invited to contact the EUCF by registering to the EUCF field of sustainable investors network and obtain more detailed information about EUCF supported projects and investment concepts. By joining the EUCF Investor Network, you will be given the chance to engage with EUCF cities, receive first-hand in-

formation on their investment concepts and seek opportunities to finance sustainable energy actions across Europe.

The current report provides a summary of the projects that have been selected in the 1st EUCF call, with an overview of investment sectors and locations



# Investment Sectors and Regions

The 30 local authorities that are beneficiaries from the 1st EUCF Call are divided into three regions: Central and Eastern Europe (CEE), Nordic countries & Western Europe (NC&WE) and Southern Europe (SE).

Among the investment sectors targeted by the call, beneficiaries can be found amongst a variety of sectors: public buildings, residential buildings, building integrated renewables, district heating, smart grids, sustainable urban mobility, and innovative energy infrastructure. The public buildings sector is the most targeted in the CEE and SE regions. In the NC&WE region, the development and use of building integrated renewables has been the most selected.

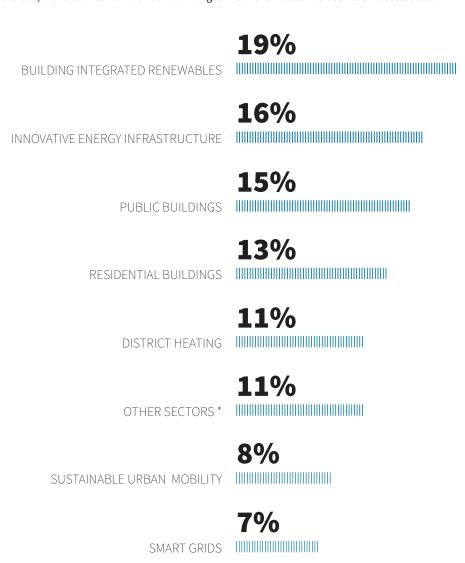


Figure 1: Distribution of the selected projects by Investment sector. Please note that one investment project may target more than one sector.



# Investment Size Per Region

€ INVESTMENT

EXPECTED ENERGY SAVINGS

EXPECTED RENEWABLE ENERGIES

CENTRAL & EASTERN EUROPE (CEE)

**629** 

467,6 GWh/y

**598** GWh/y

NORDIC COUNTRIES & WESTERN EUROPE (NC&WE)

2.641

**744**GWh/y

2.688
GWh/v

SOUTHERN EUROPE (SE)

**449** MILLION €

**67**GWh/y

287
GWh/v

TOTAL

3.719

1.278 GWh/y

3.572

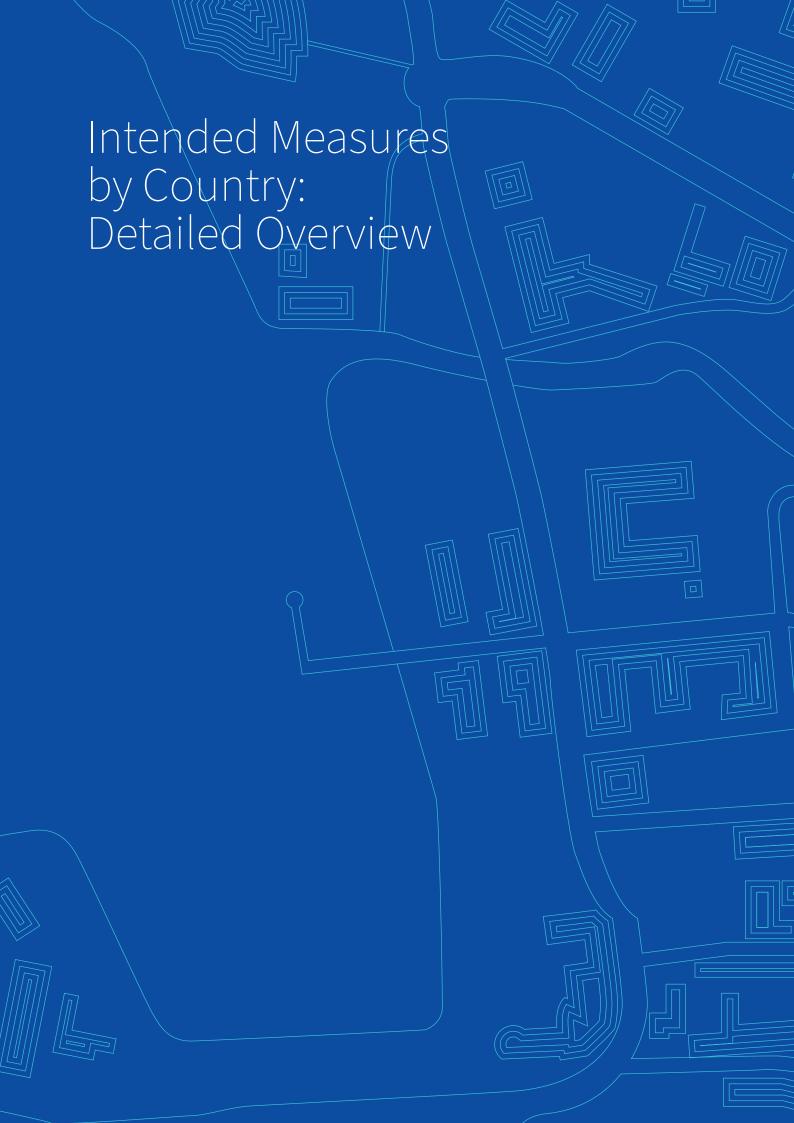


# Beneficiaries by Country



Figure 2: Map of the 30 projects selected in the 1st call of the EU City Facility. The detailed descriptions of these projects can be found in the summary, in the section titled "Intended measures by country".





# Belgium

MUNICIPALITY

Schaerbeek



INVESTMENT SIZE

886

MILLION €

**RENEWABLE ENERGIES** 

**13** 

MEASURES TO BE FINANCED AND SECTORS

The investment concept targets major energy renovation of public buildings, mainly administrative offices, municipal schools and sport facilities through retrofitting of HVAC installations with advanced regulation, relighting/re-lamping, renewable energy (heat pump, water solar heating, PV), envelope insulation, smart metering and monitoring of energy efficiency, possibly using the IPMVP protocol.

**ENERGY SAVINGS** 

**197** 

**Public buildings** 

**TARGETED SECTORS** 

# Bulgaria

MUNICIPALITY Dobrich



**INVESTMENT SIZE** 

40

MILLION €

**RENEWABLE ENERGIES** 

30

GWh/y

, ,

**MEASURES TO BE FINANCED AND SECTORS** 

Implementation of integrated package of energy efficiency measures in municipal buildings and multifamily residential buildings including thermal insulation of walls, replacement of windows, changing the lights with LED, PV installations for hot water and roof photovoltaic systems for electricity production.

**ENERGY SAVINGS** 

66

GWh/y

**TARGETED SECTORS** 

Public buildings, Building integrated renewables, Residential buildings

# Croatia

MUNICIPALITY
Velika Gorica



**INVESTMENT SIZE** 

**23** 

RENEWABLE ENERGIES

**15** GWh/v

**MEASURES TO BE FINANCED AND SECTORS** 

The technology measures include a deep renovation of almost 1000 houses and three public buildings in order to reach nZEB or positive energy building standard, containing buildings envelope, new doors, windows and in-house heating and cooling installations. A 1.8 MW PV installation, a new district heating system with a 4 MW heating plant along with 1.5 km heating interconnection with an industrial facility and a 5.5 MW biomass heating plant are planned. Moreover, installation of district heating pipes and substations is considered. All public lighting will be changed to new LED.

**ENERGY SAVINGS** 

**20** GWh/y

**TARGETED SECTORS** 

Public building, Building integrated renewables, Residential buildings, District heating, Innovative energy infrastructure, Smart Grids



# Croatia

# MUNICIPALITY

# Rijeka



**INVESTMENT SIZE** 

**78** 

MILLION €

**RENEWABLE ENERGIES** 

150

GWh/y

The investment concept includes various technological solutions for environmental protection, energy and mobil-

ity such as production of biogas from municipal bio-waste,

design and construction of plant with UHTH technology for

production of synthetic gas from the waste material, public lighting, electrical mobility and on-site production of hydrogen from excess renewable electricity sources ("green

138

GWh/y

### **TARGETED SECTORS**

**ENERGY SAVINGS** 

Public building, Residential buildings, District heating, Sustainable Urban mobility

# MUNICIPALITY

# **Karlovac**



**INVESTMENT SIZE** 

37

MILLION €

hydrogen").

RENEWABLE ENERGIES

41

GWh/v

Geothermal energy utilization in the city of Karlovac, including borehole drilling, heat storage tank construction, transceiver station construction, accession pipeline construction, pump room/station construction, improving eco package of the current boiler (58MW), construction of a solar power plant, refurbishment of the existing district heating system and plant operation and maintenance.

# TARGETED SECTORS

Building integrated renewables, innovative energy infrastructure, Smart Grids

# Denmark

# MUNICIPALITY

# **Nyborg**



**INVESTMENT SIZE** 

66

MILLION €

RENEWABLE ENERGIES

223

GWh/y

# MEASURES TO BE FINANCED AND SECTORS

Transition to renewable energy sources by producing enough green electricity to cover the need of electricity in the municipality (citizens, public buildings, businesses and industries). The main focus is PV technologies and solar cell parks.

# TARGETED SECTORS

Innovative energy infrastructure



# Denmark

### MUNICIPALITY

Samsoe



**INVESTMENT SIZE** 

13

MILLION €

**RENEWABLE ENERGIES** 

**55** 

GWh/y

### MEASURES TO BE FINANCED AND SECTORS

The project aims to investigate and develop options for a biogas liquefaction according to the approved SECAP action to meet the ambitious climate plan for Samsoe municipality. The project will analyse investment into the innovative micro-scale liquefaction processes using purification and biogas upgrading, bio methane liquefaction and potential use of "waste" CO2.

#### **ENERGY SAVINGS**

40

GWh/y

### **TARGETED SECTORS**

Sustainable urban mobility, Innovative energy infrastructure, Others

# Germany

# MUNICIPALITY

Rostock



**INVESTMENT SIZE** 

24

MILLION €

**RENEWABLE ENERGIES** 

35

GWh/\

# MEASURES TO BE FINANCED AND SECTORS

The aim of the investment concept is to expand the solar energy production in the region of Rostock expanding solar parks, photovoltaic and solar thermal plants in open space.

# TARGETED SECTORS

Building integrated renewables

# Hungary

# MUNICIPALITY

Gyöngyös



**INVESTMENT SIZE** 

196

MILLION €

**RENEWABLE ENERGIES** 

1.9

GWh/y

# **MEASURES TO BE FINANCED AND SECTORS**

The intended measures include a two-circles 350 MW geothermal power plant with a heat exchanger and a power generating steam turbine, 13 production and 9 re-injection thermal wells. The 4.7-kilometer-long district heating line will be renewed. Expanding the district heating system aims to supply several public and residential buildings.

### **TARGETED SECTORS**

Public building, Building integrated renewables, Residential buildings, District heating, Innovative energy infrastructure



# Hungary

### MUNICIPALITY

# Hódmezővásárhely



### **INVESTMENT SIZE**

57 MILLION €

# **RENEWABLE ENERGIES**

**103** 

### MEASURES TO BE FINANCED AND SECTORS

The investment concept targets four investment objectives, including 10 investment components (ICO), which are a complex renewable energy investment program (renewable energy production of 102,8 GWh/year) based on geothermal energy and district heating.

#### **ENERGY SAVINGS**

### **TARGETED SECTORS**

Public building, Building integrated renewables, Residential buildings, District heating, Innovative energy infrastructure

# MUNICIPALITY Mórahalom



# INVESTMENT SIZE

MILLION €

GWh/y

**RENEWABLE ENERGIES** 

# MEASURES TO BE FINANCED AND SECTORS

The aim is to stablish a large-scale geothermal district heating system. The investment concept includes assessment of geological and technological (in particular drilling) risks and their mitigation solutions in order to establish a realistic default rate.

# **TARGETED SECTORS**

**District Heating** 

# MUNICIPALITY Veszprém (Ajka)



## INVESTMENT SIZE

108

MILLION €

## **RENEWABLE ENERGIES**

The intended technology measures are: energy efficient renovation of public buildings with building integrated renewable energy generation, energy efficient renovation of residential buildings with building integrated renewable energy generation or/and green energy purchase option for the inhabitants, energy efficient transformation of the industrial and service sector, off-site renewable energy generation wit PV power plants, sustainable urban mobility and smart energy projects (intelligent traffic control system, intelligent public lighting system, smart grids).

# **ENERGY SAVINGS**

115

GWh/v

# **TARGETED SECTORS**

Public building, Building integrated renewables, Residential buildings, Sustainable Urban mobility, **Smart Grids** 





**Pinerolo** 



**INVESTMENT SIZE** 

**14** MILLION €

**RENEWABLE ENERGIES** 

**0.8** GWh/y

**ENERGY SAVINGS** 

8.6

### **TARGETED SECTORS**

Public Buildings, Building integrated renewables, Sustainable urban mobility

### MEASURES TO BE FINANCED AND SECTORS

The technology measures are related to energy efficiency improvement to the building envelope and building system including insulation systems for external walls, roof and ceiling, new windows, new heat generator, gas-fired small boilers, smart meters, building automation. Integrated renewable power plants (PV) on public buildings and connected with storages and smart grid, LED technologies, replacement of public buses with new electric or hydrogen vehicles, electric recharging grid and new bicycle lanes will be also considered.

### MUNICIPALITY

# Ravenna (Alfonsine)



INVESTMENT SIZE

**16** MILLION €

#### **RENEWABLE ENERGIES**

0.9

#### **ENERGY SAVINGS**

6.9 GWh/v

# **MEASURES TO BE FINANCED AND SECTORS**

The investment concept will set up a moderate & deep retrofitting strategy of buildings reducing up to 60% primary energy by applying an EPC scheme through renewables integrated in buildings, district heating, innovative energy infrastructures in residential and public buildings.

# **TARGETED SECTORS**

Public Building, Building integrated renewables, Residential buildings, Innovative energy infrastructure.

# MUNICIPALITY Castel San Pietro Terme



INVESTMENT SIZE

INVESTMENT SIZ

MILLION €

# RENEWABLE ENERGIES

**19** GWh/v

# **MEASURES TO BE FINANCED AND SECTORS**

The project foresees to realise investment and manage the sustainable mobility of the APEA industrial district including Metrobus service for the companies, integrated ticket to use different mobility services, Smart Bus stations, creation of bicycle paths, electric charging stations, bike sharing and car sharing services, car-pooling platform etc.

### **TARGETED SECTORS**

Innovative energy infrastructure







**INVESTMENT SIZE** 

**12** 

**RENEWABLE ENERGIES** 

1.2

**ENERGY SAVINGS** 

4.4

**TARGETED SECTORS** 

Residential buildings

### MEASURES TO BE FINANCED AND SECTORS

The technology measures include energy web-GIS upgrade, structuring of a digital abacus, streamlining of the bureaucracy and online support service, business model of the "standard neighbourhood", new online system to grant and gain tax credits under the supervision of the Local Authority and creation of a standard contract to introduce ESCOs in the local market.

# Lithuania

MUNICIPALITY Visaginas



**INVESTMENT SIZE** 

**24** 

MILLION €

**RENEWABLE ENERGIES** 

68

GWh/\

# **MEASURES TO BE FINANCED AND SECTORS**

The intended technology measures are:

1.CHP, which uses woodchips material.: installation of CHP,connection to heat and electricity networks.

- 2.Modernization of street lightning: replacements existing sodiumlamps to LEDs, old lighting bearers; reconstruction streetlighting network; modernization control station; installation ofintelligent street lighting system control equipment.
- 3. Solar power plant: installation of solar cell systems, connection of solar power plant to the electricity network of national grid.
- 4.Storage power plant to provide grid energy storage. The SPPoperates in conjunction with all LT green electricity energyproducers. As the time of energy production and consumptionmay differ, the storage will allow to match it. That can lead toreduced price of the electricity. Installation and connection SPP to the national grid is foreseen.

**ENERGY SAVINGS** 

**1.5** GWh/y

**TARGETED SECTORS** 

Residential buildings



# Malta

MUNICIPALITY

Isla (Cottonera)



**INVESTMENT SIZE** 

**RENEWABLE ENERGIES** 

**14**MILLION€

T2

#### MEASURES TO BE FINANCED AND SECTORS

TARGETED SECTORS

Building integrated renew-

The investment concept will focus on the on-site energy generation through the use of building integrated photovoltaic systems on the roofs of selected warehouses to replace asbestos roofs as well as BIPV with a low architectural impact for the building envelope for buildings in the three localities.

# Netherlands

MUNICIPALITY

**Hoorst aan de Maas** 

**INVESTMENT SIZE** 

**796** 

MILLION €

**RENEWABLE ENERGIES** 

**78** 

GWh/y

#### 747

242

**ENERGY SAVINGS** 

GWh/y

### **MEASURES TO BE FINANCED AND SECTORS**

Replacing the use of natural gas for cooking and heating with sustainable electric alternatives, installation of heat pump, upgrading the energy efficiency of buildings to level B (preferably A) and installing more solar panels on roofs.

**TARGETED SECTORS** 

Public Buildings, Building integrated renewables, Residential buildings, Innovative energy infrastructure

MUNICIPALITY
Westland



**INVESTMENT SIZE** 

MILLION €

RENEWABLE ENERGIES

**1850** 

GWh/y

# **MEASURES TO BE FINANCED AND SECTORS**

Creating a regional 5th generation heat system, covering the entire municipality connecting the various heat clusters with each other and with customers (greenhouse horticulture and the built environment) by building a pipe network and an intelligent dynamic supply-demand parity operating system.

# TARGETED SECTORS

District heating, Innovative energy infrastructure, Smart Grids



# Netherlands

# MUNICIPALITY

# Rheden



# **INVESTMENT SIZE**

136

# MILLION €

### **RENEWABLE ENERGIES**

5.3

# GWh/y

### MEASURES TO BE FINANCED AND SECTORS

The investment project focuses on renovation of housing to a higher energy standard: isolation, restoration, and it may include integrating renewables (e.g. solar panels) and the heating system as an integral part of the energy system of residential and public buildings, or buildings for small businesses.

#### **ENERGY SAVINGS**

61

# GWh/y

# **TARGETED SECTORS**

Building integrated renewables, Residential building, Innovative energy infrastructure

# MUNICIPALITY Waalwijk



# INVESTMENT SIZE

**69** 

# MILLION €

# **RENEWABLE ENERGIES**

83

# GWh/\

# ENERGY SAVINGS

**12** 

# GWh/y

#### TARGETED SECTORS

Building integrated renewables, Sustainable urban mobility, Innovative energy infrastructure, Smart Grids

# MEASURES TO BE FINANCED AND SECTORS

The investment concept aims to develop the Smart port Waalwijk including EV shipping, EV trucking, charging stations, battery storage and sustainable terminal.

# Poland

# MUNICIPALITY

# Piaseaczno



# **INVESTMENT SIZE**

**13** 

# MILLION €

# RENEWABLE ENERGIES

**53** 

# MEASURES TO BE FINANCED AND SECTORS

Construction of an energy complex in Piaseczno including the construction of an ecological heat and power plant and expansion of the heating network with the connection of new customers. In the planned combined heat and power plant, heat and electricity will be produced from several sources: a heat pump collecting heat from treated sewage, cogeneration based on biogas obtained from a biogas plant for biodegradable waste and sewage sludge, and a biomass boiler.

# **ENERGY SAVINGS**

30

GWh/y

# **TARGETED SECTORS**

Building integrated renewables, Residential buildings, District heating



# Poland

### MUNICIPALITY

# **Sztum**



### **INVESTMENT SIZE**

**11**MILLION €

### **RENEWABLE ENERGIES**

**1.8** GWh/v

# MEASURES TO BE FINANCED AND SECTORS

The included measures are: sewage treatment plant-RES powered, new energy sources (wind, solar) ensuring coverage of energy needs for transport, water supply and sewage networks (minimum of 1.83 GWh/y), energy storage – battery (>1MWh), use of water & sewage networks as an energy storage, thermal modernization of buildings, coal to heat pumps and old cars to e-vehicles.

### **ENERGY SAVINGS**

2.1

GWh/y

### **TARGETED SECTORS**

Public building, Building integrated renewables, Innovative energy infrastructure, Sustainable Urban mobility

# Portugal

# MUNICIPALITY

### Cascais



# **INVESTMENT SIZE**

**250** 

# **RENEWABLE ENERGIES**

**213** 

GWh/y

# **MEASURES TO BE FINANCED AND SECTORS**

The intended measures focus on installing 184 MW of photovoltaic solar energy representing a total generation of 213 GWh per year or 24% of the total electricity consumption within the municipality. With a decentralized energy production and consumption based on self-sufficiency (when possible), the development of innovative smart grids is also considered.

# TARGETED SECTORS

Others (renewable, solar energy)

# Spain

# MUNICIPALITY

# Olot (Girona)



# **INVESTMENT SIZE**

**106** MILLION €

## **RENEWABLE ENERGIES**

2.4

# GWh/v

# MEASURES TO BE FINANCED AND SECTORS

Measures involve substantial building renovation to achieve significant energy efficiency (EE) improvements with a user centred approach sensitive to user motivations (which tend to focus more on health and wellbeing than on EE).

# **ENERGY SAVINGS**

28

GWh/v

# TARGETED SECTORS

Building integrated renewables, Residential buildings



# Spain

MUNICIPALITY

Malaga



**INVESTMENT SIZE** 

RENEWABLE ENERGIES

34

**54** 

MILLION €

GWh/y

Development and implementation of photovoltaic solar parks on municipal land which use the Power Purchase Agreement model for virtual self-consumption. **TARGETED SECTORS** 

Building integrated renewables

# United Kingdom

MUNICIPALITY

Coventry



INVESTMENT SIZE

235

MILLION €.

**RENEWABLE ENERGIES** 

302

GWh/y

ENERGY SAVINGS

1.3

GWh/

### MEASURES TO BE FINANCED AND SECTORS

The investment concept focuses on the creation of smart solar PV integrated electric charging hubs to support wider adoption of electrified vehicle fleets at least cost. Enable high-capacity charging infrastructure by using of local generation and battery storage systems.

**TARGETED SECTORS** 

Public Buildings, Building integrated renewables, Sustainable urban mobility, Innovative energy infrastructure.

MUNICIPALITY

Leeds



INVESTMENT SIZE

112

MILLION €

**RENEWABLE ENERGIES** 

0.5

GWh∕\

ENERGY SAVINGS

187

GWh/y

# **MEASURES TO BE FINANCED AND SECTORS**

The measures assessed in the net zero roadmap for public and commercial buildings include building integrated renewables (solar PV, heat pumps) and energy efficiency measures relating to heating, cooling and lighting.

**TARGETED SECTORS** 

Public Buildings, Building integrated renewables, District heating, Others.



# United Kingdom

MUNICIPALITY

**Royal Borough of** Windsor and Maidenhead

**INVESTMENT SIZE** 

**55** MILLION € RENEWABLE ENERGIES

**ENERGY SAVINGS** 



# **MEASURES TO BE FINANCED AND SECTORS**

The intended technology measures include: district heat networks for 2000 new homes, installation of integrated Solar PV/thermal (GSHP/ASHP package) on residential buildings using heating oil, energy efficiency (solid/cavity wall insulation, loft insulation etc.) on domestic households, renewable energy generation on domestic buildings, by solar installs (PV and/or thermal).

# **TARGETED SECTORS**

Public Buildings, Building integrated renewables, Residential buildings, District heating.

