POWERPOOR

Empowering Energy Poor Citizens through Energy Cooperative Initiatives

WP3 Capacity Building and Multilevel Knowledge Creation – Module 1

Energy poverty, PowerPoor project, PowerPoor toolkit: PowerTarget, PowerAct

This project has received funding from the European Union's HORIZON 2020 research and innovation programme under grant agreement No 890437

Module 1 – Structure and content

- Module goals
- Module content
  - PART I: Introduction to energy poverty
  - PART II: The POWERPOOR project
  - PART III: The POWERPOOR toolkit
  - PART IV: The POWER-TARGET tool
- Module summary
  - Key takeaways
  - Further reading

Module 1 – Goals

- To familiarise the audience with the concept of **energy poverty**, existing policies to address the issue, and the current governance frameworks for energy initiatives at the EU and global levels

- To present the **POWERPOOR approach**

- To describe the tools developed within the project and their role in alleviating energy poverty

PART I: Introduction to Energy Poverty

- Concepts: Understanding Energy Poverty
- Energy Poverty in the Global Agenda
- Energy Poverty in Numbers
- EU Energy Poverty Landscape

“Adequate warmth, cooling, lighting and the energy to power appliances are essential services needed to guarantee a decent standard of living and citizens’ health.”

EU Energy Poverty Observatory, 2018

(www.energypoverty.eu)

Understanding Energy Poverty

Energy Poverty Concept

- ✓ Energy poverty is defined as a set of conditions where:

"individuals or households are not able to adequately heat, cool, or provide other required energy services in their homes at affordable cost" (1)

- ✓ Energy poverty is:

"the inability to realise essential capabilities as a direct or indirect result of insufficient access to affordable, reliable and safe energy services, and taking into account available reasonable alternative means of realising these capabilities" (2)

(1) Pye et al., 2015; Bouzarovski, 2018
(2) Day, G.Walker, N.Simcock, Conceptualising energy use and energy poverty using a capabilities framework, EP93 (2016)

Understanding Energy Poverty

Energy Poverty Concept

Energy poverty is often understood “as a situation where a household cannot meet its domestic energy needs”(1)

Living in inadequately heated or cooled households negatively impacts human health and well-being. In addition, individuals who are unable to meet their basic energy needs are prevented from fully participating in society.

(1) *EU Energy Poverty Observatory, 2020 / Picture credits: freepik.com*

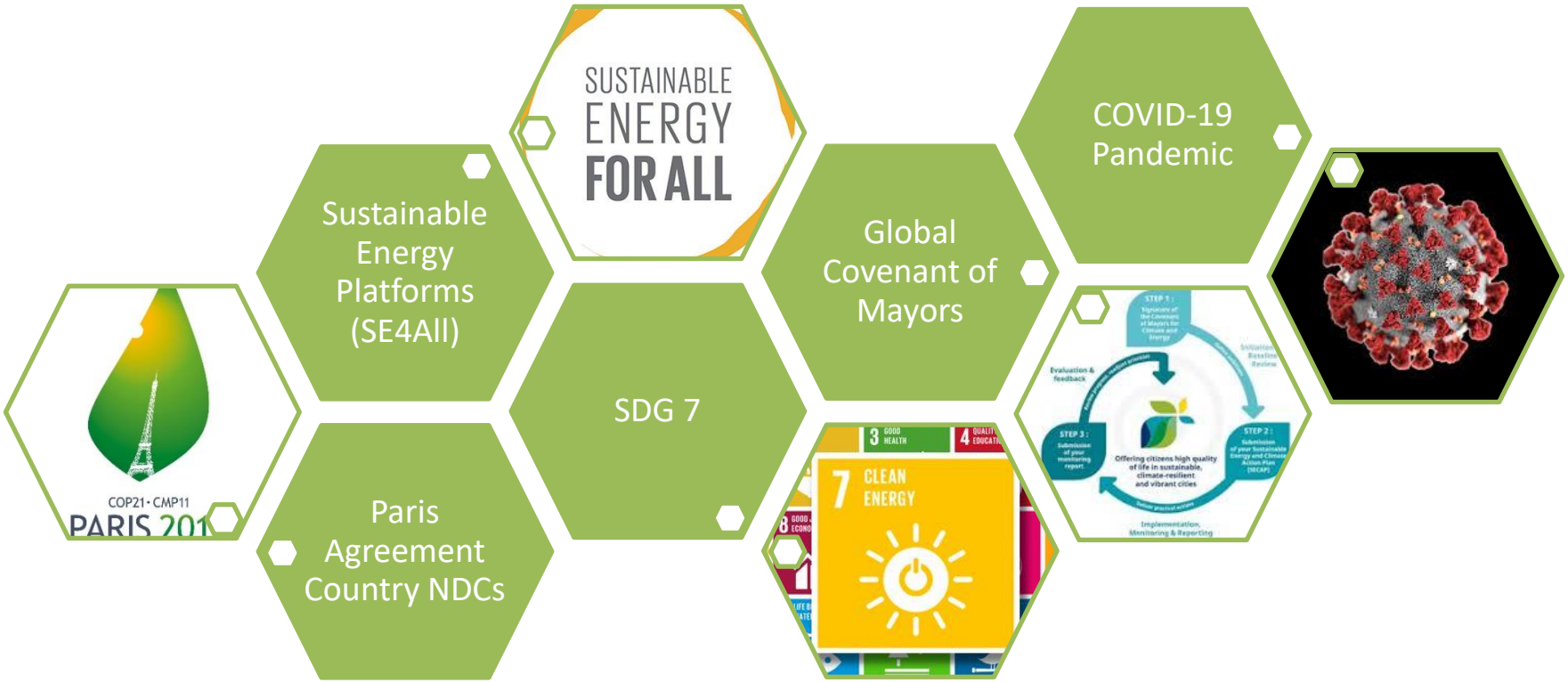
Understanding Energy Poverty

Energy Poverty in Europe – A complex challenge

Source: Energy Poverty in the European Union, YouTube: https://youtu.be/kT-lpCdd_WI

Understanding Energy Poverty

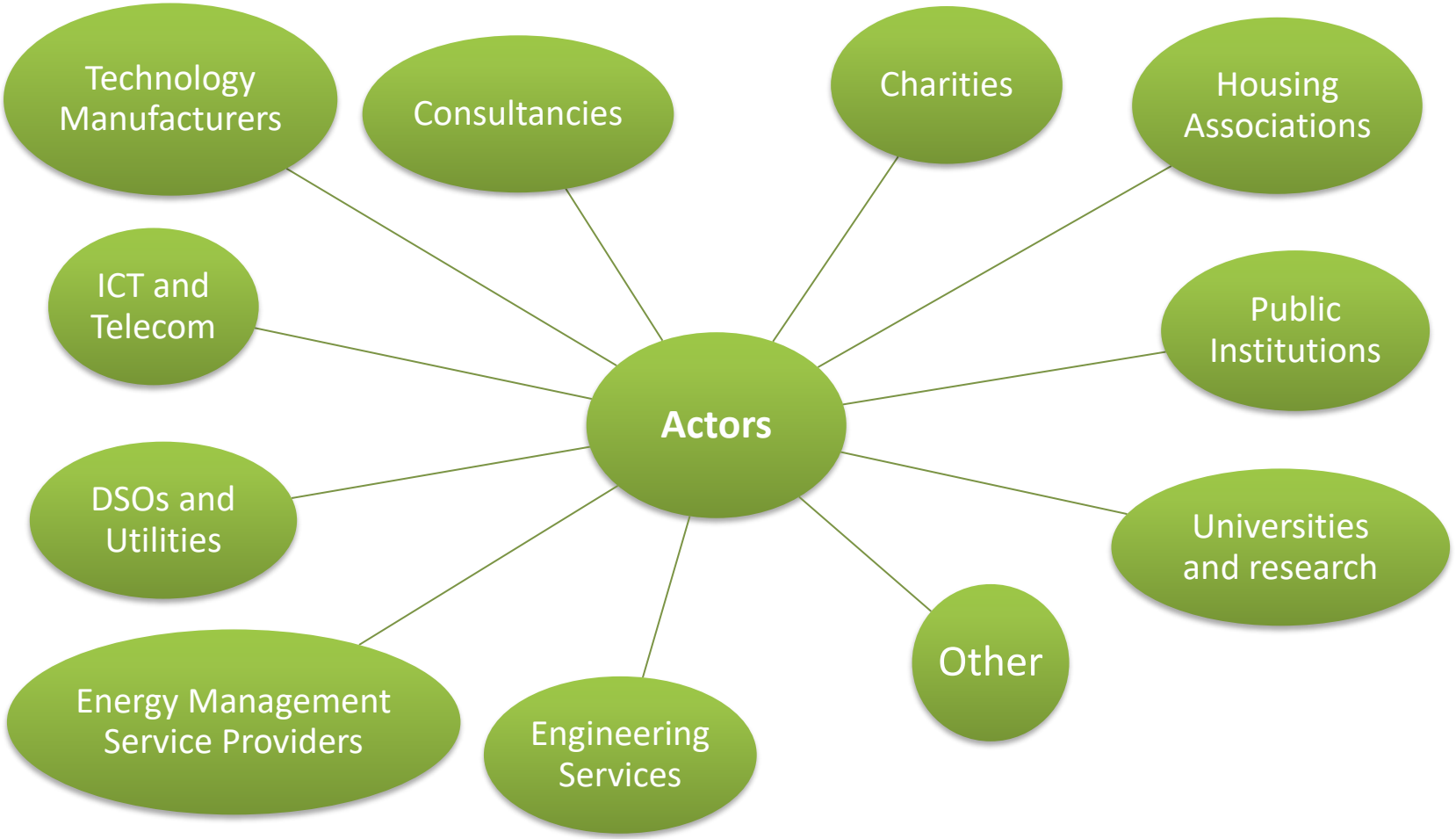
Energy Poverty in the Global Sustainability Agenda



Energy poverty is a serious concern which receives increasing attention in the global sustainability agenda. It is addressed in several international frameworks and platforms.

Understanding Energy Poverty

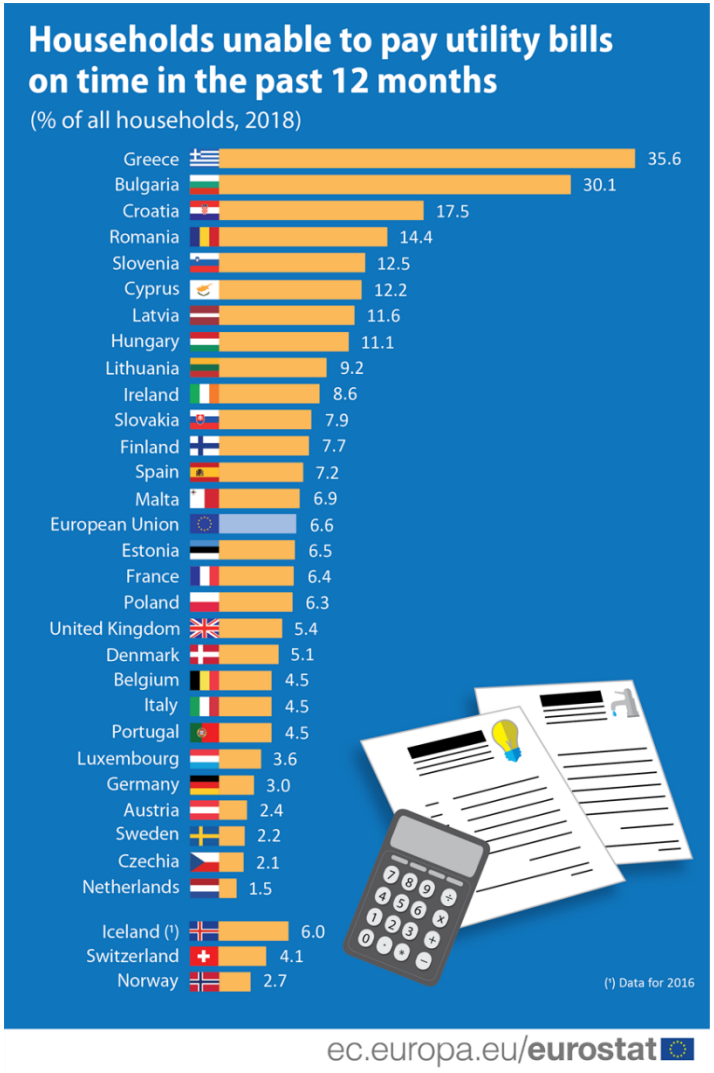
Key Actors in the Energy Poverty Landscape



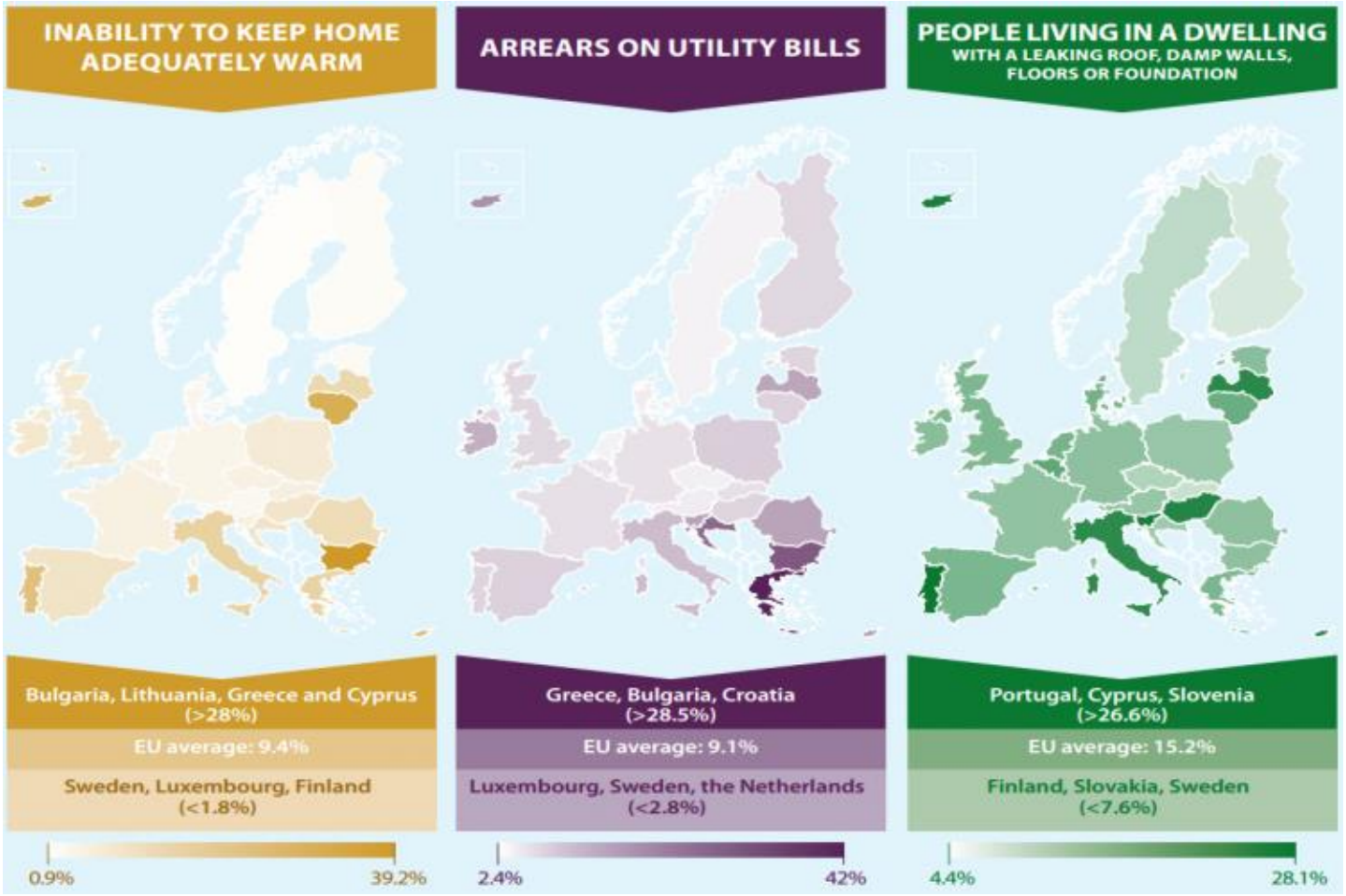
Source: JRC Science for Policy Report. "Energy poverty through the lens of EU research and innovation projects". (2019)

Energy poverty facts in Europe

People unable to pay utility bills on time and keep their homes warm



Energy poverty facts in Europe



Source: Eurostat, 2020

Energy poverty policy framework in Europe

Setting the pathway for accelerated action

EU Clean Energy for all Europeans' package	European Green Deal	EU Energy Poverty Observatory New! Energy Poverty Advisory Hub	CoM Third Pillar (Energy Poverty)	Renovation Wave	Mitigating Household Energy Poverty – H2020 Call

Energy poverty is addressed in different European policy instruments and initiatives.

Energy poverty policy framework in Europe

THE EU Energy Poverty Observatory

- ✓ Started in December 2016 with funding from the European Commission
- ✓ Its goals are to enable networking, disseminate information and provide technical assistance to the widest possible range of interested parties, based on a holistic approach
- ✓ Website: **www.energypoverty.eu**

Web portal hosting the world's largest database of energy poverty-related indicators, publications, policy measures and training resources.

II Phase of EPOV → Energy Poverty Advisory HUB 2021

Energy poverty policy framework in Europe

The Energy Poverty Observatory

CASE STUDY	EU Energy Poverty Observatory (EPOV)	REACH
		Pan-European
DESCRIPTION	The EU Energy Poverty Observatory aims to improve the measuring, monitoring and sharing of knowledge and best practices on energy poverty by providing a web portal including a wide range of useful resources from across Europe and beyond.	
SOLUTION	A 40-month project (2016-2019) funded by the European Commission, EPOV was developed by a consortium of 13 organisations led by the University of Manchester. EPOV has developed tools that are available on its online portal, including: indicator dashboard, evidence repository, catalogue of practical policies and measures, training material, members' directory, and discussion forums.	
IMPACT	• The world's largest database of energy poverty • Contributed to a more holistic view of energy poverty • Addressed missing links between research, policy and practice	

Source: EU Energy Poverty Observatory https://www.energypoverty.eu/

Energy poverty policy framework in Europe

Understanding the EPOV / EPAH Statistics.

CASE STUDY	ENERGY POVERTY ADVISORY HUB (EPAH) INDICATORS TO ASSESS ENERGY POVERTY	SCOPE/ LOCATION
		EUROPEAN
DESCRIPTION	EPOV / EPAH constitutes one of the key sources of indicators on energy poverty in Europe. It provides a set of primary and secondary indicators, in addition to key insights on energy poverty at a member state level	
KEY INDICATORS	**Primary indicators include:** Arrears on utility bills, Inability to keep home adequately warm, etc **Secondary indicators include:** Household electricity prices Poverty risk: People at risk of poverty or social exclusion (% of population)	
IMPACT	The indicators allow stakeholders to understand the current status of energy poverty in their country and use this information for a diversity of purposes, such as: • Research and modelling • Data analysis and benchmarking • New tools and project development	

Source:
https://www.energypoverty.eu/indicators-data

Energy poverty policy framework in Europe

The H2020 "Mitigating Households Energy Poverty" sister projects

POWERPOOR

Empowering Energy Poor Citizens through Joint Energy Initiatives

EnergyMeasures

Tailored Measures Supporting Energy Vulnerable Households

ComAct

Community Tailored Actions for Energy Poverty Mitigation

STEP

Solutions to Tackle Energy Poverty

ImpowerMed

Empowering Women to Take Action Against Energy Poverty in the Mediterranean

ENPOR

Actions to Mitigate Energy Poverty in the Private Rented Sector

SocialWatt

Connecting Obligated Parties to Adopt Innovative Schemes towards Energy Poverty Alleviation

Energy poverty policy framework in Europe

Assist Project

CASE STUDY	ASSIST Support Network for Household Energy Saving	LOCATIONS BE, FI, IT, PL, ES, UK
DESCRIPTION	ASSIST focuses on strengthening consumer rights with special attention to vulnerable consumers and energy poor individuals. Its two-way approach aims to: a) actively engage consumers in the energy market & positive change of behaviour in relation to energy consumption and b) to influence policy design	
SOLUTION	Funded by the European Commission under the H2020 program, ASSIST ran from May 2017 until June 2020. The project consortium included 12 organisations from 6 countries + the European association EAPN. Project actions included generating in-depth knowledge on energy poverty and policy recommendations, training home energy advisors (HEA) & creating a HEA network, testing pilot projects & possible solutions	
IMPACT	• 500 trained Home Energy Advisors (HEA) in 6 countries. • More than 10.000 consumers reached per country through dissemination activities • About 750 consumers reached per country through on-the-ground activities (energy cafè, home visits, helpdesk, bill audit, etc.) • 2%-5% energy saved (electricity and gas) by households assisted by the HEAs • 0.5-2 increased VEF – Vulnerability Empowerment Factor: indicator created by ASSIST to measure increase of empowerment of vulnerable consumers	

Source: ASSIST https://www.assist2gether.eu/eu-home

References and further reading

- ✓ POWERPOOR Online Library: http://powerpoor.eu/library
- ✓ Energy Poverty Observatory: https://www.energypoverty.eu
- ✓ Eurostat: https://ec.europa.eu/eurostat

PART II: The POWERPOOR project

Approach, content and concept of the POWERPOOR project

Description of the tools developed within the project

The Project at a glance

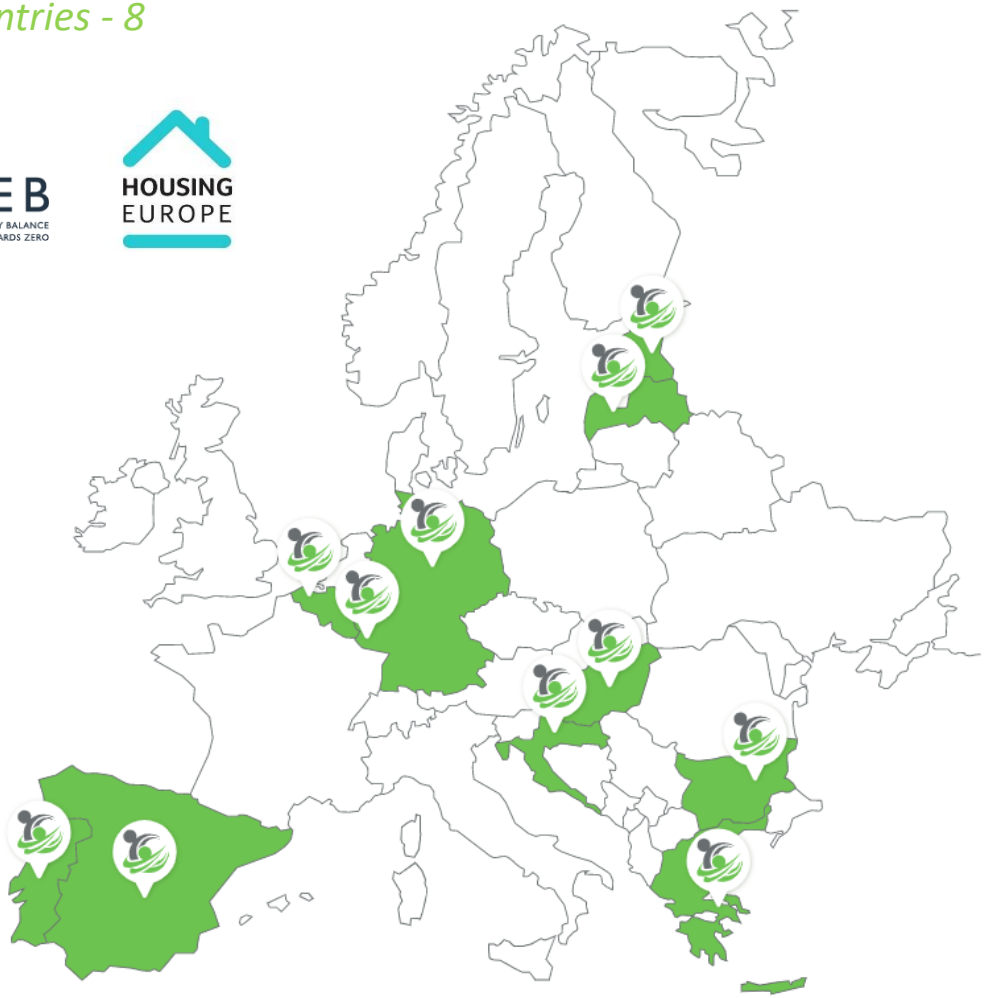
Start: 01/09/2020 Duration: 36 Months	Empowering Energy Poor Citizens through Joint Energy Initiatives	Coordinator: National Technical University of Athens (NTUA) Project partners: 14

European Union's Horizon 2020 Research and Innovation Programme

Budget: €1,999,812.50	Grant Agreement number: 890437 — POWERPOOR — H2020-LC-SC3-2018-2019-2020/ H2020-LC-SC3-EE-2019

The POWERPOOR consortium

14 participating partners – 11 countries - 8 pilot countries



POWERPOOR leads the way in

Supporting citizens suffering from energy poverty to implement energy efficiency interventions and participate in joint energy initiatives, through the development of the POWERPOOR support programmes and tools, with the aim to alleviate energy poverty.

Facilitating behavioural change in energy usage and enabling the uptake of energy efficiency measures through experience and knowledge sharing, as well as through joint energy initiatives and citizen engagement campaigns targeting groups of consumers in energy poor communities.

Promoting energy community projects / alternative financing schemes and assisting citizens to pursue funding opportunities (e.g., energy communities, energy cooperatives & crowdfunding).

Energy poverty alleviation support schemes
will be designed, developed and implemented in 8 pilot countries across Europe, led by a network of certified Energy Supporters and Energy Mentors.

Through energy poverty alleviation support schemes
citizens are positioned at the heart of the solution through a gradual transition from an energy poor citizen towards an informed consumer and later an active prosumer.

The POWERPOOR approach

PowerPoor Toolkit

Training Materials

Energy Supporters and Energy Mentors

Trainings

Certification

- ✓ *Training Seminars*
- ✓ *Webinars*
- ✓ *Face 2 Face meetings*

Local Energy Poverty Offices

Municipalities

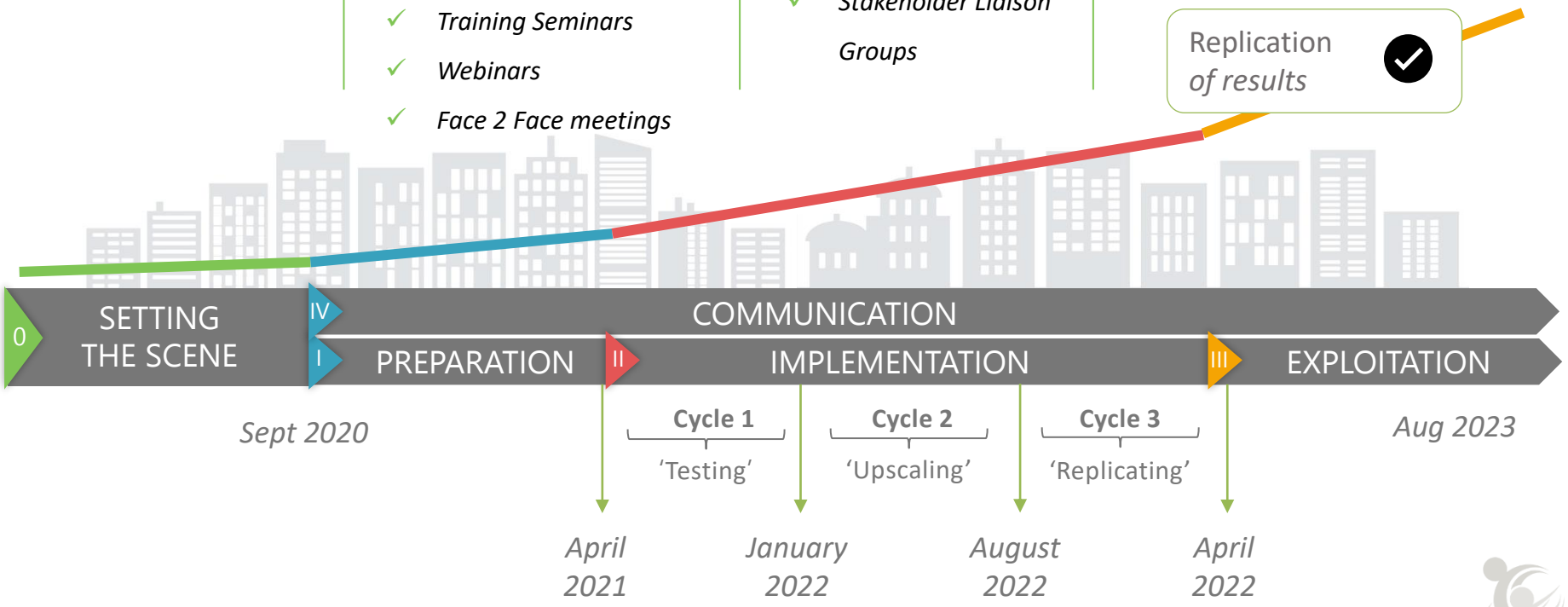
- ✓ *Info days*
- ✓ *Stakeholder Liaison Groups*

Energy Poverty Guidebook

EU policy recommendation & national roadmaps

The POWERPOOR Alliance

Replication *of results*



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Energy Poverty Mitigation Toolkit

Identify citizens suffering from energy poverty

Module 1 - ENPOV

Enable them to understand their energy use

Module 2 - ACTIONS

Communicate innovative financing

Module 3 - FUND

Incorporate energy poverty mitigation actions into SECAPS

Module 4 - PLAN

Training material

The toolkit can be utilised by citizens suffering from energy poverty, public and national authorities, energy communities or cooperatives, experts in the field, or other stakeholders

Energy poverty support programmes

In each pilot country, households and citizens suffering from energy poverty will be identified, leveraging the knowledge of the local partners (**POWER-TARGET** module).

Energy support programmes will be developed by a certified network of **Energy Supporters**, who will provide citizens suffering from energy poverty with:

(a) Tips and information to encourage behaviour change and/or small-scale interventions (**POWER-ACT** tool), in addition to

(b) Information on how to take part in innovative financing schemes such as energy communities, cooperatives and crowdfunding campaigns to fund interventions that can alleviate the problem (**POWER-FUND** tool).

Local Energy Poverty Alleviation Offices will be established in the participating municipalities, run by a certified network of **Energy Mentors**

Energy Supporters *will directly engage energy-poor citizens and assist them in planning, securing funding and implementing energy efficiency interventions.*
Energy Mentors *will provide support and expertise in all the key areas associated to the operation and/or creation of an energy community / cooperative of energy poor citizens.*

Engagement activities

- ✓ **Group training seminars** and **a series of webinars** will be organised in the 8 pilot countries (Bulgaria, Croatia, Estonia, Greece, Hungary, Latvia, Portugal and Spain) so that interested individuals can become **Energy Supporters and/or Energy Mentors**.

- ✓ Through **face-to-face (F2F) tailor-made training seminars**, the local project partners will also train representatives from cities and regions, members of energy communities/cooperatives and other social service organisations, facilitating the establishment of Local Energy Poverty Offices that can operate as focal points on energy poverty.

Interested individuals may include public authorities (employees of local and regional authorities), members of existing communities/cooperatives, social workers, local consultants, professionals and entrepreneurs in the field of sustainable energy, health practitioners, university graduates and young scientists.

Expected results

- ✓ A total of **1.100 Energy Supporters and Energy Mentors** trained and certified.
- ✓ Establishment of **15 Energy Poverty Alleviation offices**.
- ✓ **8 National Roadmaps** in 8 European countries (Bulgaria, Croatia, Greece, Latvia, Estonia, Portugal, Spain) recommending policies to tackle energy poverty.
- ✓ **1 European Roadmap** aiming to alleviate energy poverty across Europe.
- ✓ Establishment of the **POWERPOOR Alliance** network to support the sustainability of the project results after its completion.

PART III: The POWERPOOR toolkit

Description of the POWER-TARGET, POWER-FUND and POWER-ACT tools

Energy Poverty Mitigation Toolkit

The **POWER-TARGET** toolkit will:

- ✓ Identify citizens suffering from energy poverty using a data-driven approach that facilitates the identification of citizens, communities, neighborhoods or districts and
- ✓ Undertake quantitative and qualitative analyses to support the development of the **POWER-TARGET** tool.

Energy Poverty Mitigation Toolkit

The **POWER-ACT** toolkit will:

- ✓ Empower citizens suffering from energy poverty to understand their energy use, the benefits associated with energy efficiency interventions and encouraging the installation of renewable power generation capacities,
- ✓ Evaluate users' thermal comfort,
- ✓ Create energy profiles,
- ✓ Evaluate costs and benefits of energy efficiency actions (e.g., payback period), and
- ✓ Encourage behaviour change (e.g., smart tips).

Energy Poverty Mitigation Toolkit

POWER - FUND

The **POWER-FUND** toolkit will:

- ✓ Communicate innovative financing opportunities to address energy poverty and engage citizens,
- ✓ Collate information on innovative financing opportunities and guide users on how to pursue these,
- ✓ Provide an online marketplace for energy cooperatives in energy poor communities, and
- ✓ Engage users and citizens through the launch of crowdfunding campaigns.

POWERPOOR

Thank you!

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