Today!

Webinar

EVERY1

Cities, Citizens & Knowledge Gaps

25rd Feb 2026

12:00 - 13:00 CET

Part 2 *of Every1's Digital Energy for Everyone Webinar Series*

Funded by the European Union

EVERY1

About Every1

- 4-year project (2022-2026)
- Funded by the European Union's Horizon Programme for Research and Innovation (2021-2027)
- Every1 Knowledge Hub, Networking + Matchmaking
- 11 Partners from 9 EU Countries

Funded by
the European Union

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Every1 enables inclusive participation in the digital energy transition by identifying knowledge gaps, developing accessible learning pathways, and strengthening stakeholder collaboration.

Through capacity-building and knowledge sharing, we empower citizens, policymakers, and industry to navigate and shape the evolving energy landscape.

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Context

- Citizens are increasingly expected to make informed choices
- Cities and local authorities are asked to lead
- Information available is often too technical, too fragmented

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Every1 progress

- How interested European citizens actually are in learning about energy
- How social inequalities and diversity influence access to energy knowledge
- What role cities, local ecosystems and living labs can play in bridging these gaps

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Agenda

1. **Introduction**
2. **Invited Speakers**
    1. Irina Rets (Open University)
    2. Tine Engelen (VITO)
    3. Rita Alonso (AdEPorto)
3. **Discussion panel**
4. **Closing remarks**

Every1 Research Findings: Knowledge Gaps and Inequality in Energy Engagement

Irina Rets
Senior Research Fellow
Every1 project

The Institute of Educational Technology (IET)
The Open University, UK

25 February 2026

Every1 project is co-funded by the European Union under the EU Programme HORIZON-CL5-2021-D3-02 under the Grant Agreement Number: 10175596.

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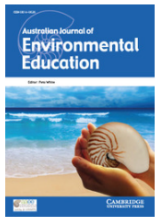
To what extent are people living in households interested in learning about energy topics in the context of the current cost of living crisis and the climate emergency?



Australian Journal of Environmental Education

Article contents

- Abstract
- Introduction
- Literature review
- Methodology
- Results
- Discussion
- Implications and conclusions
- Supplementary material
- Financial support
- Ethical standard

Energising the Energy Literacy Debate for Environmental Education: Exploring Citizens' Interest Levels, Knowledge Gaps and Individual Differences

Published online by Cambridge University Press: **19 September 2024**

Irina Rets, Denise Whitelock, Chris Edwards, Leigh-Anne Perryman and Fereshte Goshtasbpour

Show author details

Article | Figures | Supplementary materials | Metrics

Save PDF | Share | Cite | Rights & Permissions

Abstract

Energy literacy can empower individuals to make informed decisions about energy use. However, the level of public interest in learning about energy-related topics remains uncertain, and there is a dearth of research exploring energy literacy-related knowledge gaps. This mixed-methods study aimed to address those issues. A survey of 3,843 citizens from four European countries revealed that most citizens have only a moderate interest in learning about energy. Age, gender, educational level, income level, living situation and environmental attitudes appear to have a significant effect on individuals' interests. The study identified key knowledge demand areas regarding saving energy and reducing costs, becoming self-sufficient in energy production and cooperating with others for more efficient energy use. The findings indicate that engagement with energy-related topics could be improved by considering affective factors such as individual interest. The study also reveals a need for greater interdisciplinarity in energy research.

- **Overall low energy literacy levels reported** among people
- **Interest** as a variable **can predict** the extent to which an **individual** sustains attention and focuses on a topic for extended periods of time, **values the acquired knowledge** and approaches a given topic with an exploratory mindset
- Particularly crucial for complex topics such as sustainable living, domestic energy consumption and use.

- We need **a stronger focus** in research and practice **on people's learning and learning dispositions** in respect of climate change and energy use

Rets, I., Whitelock, D., Edwards, C., Perryman, L.A., & Goshtasbpour, F. (2024). Energising the energy literacy debate for environmental education: Exploring citizens' interest levels, knowledge gaps and individual differences. *Australian Journal of Environmental Education*, 1-18. https://doi.org/10.1017/aee.2024.37

https://www.cambridge.org/core/journals/australian-journal-of-environmental-education/article/energising-the-energy-literacy-debate-for-environmental-education-exploring-citizens-interest-levels-knowledge-gaps-and-individual-differences/DBBB43CE5B7968F7BD244B3A43EA91AE

SCAN ME

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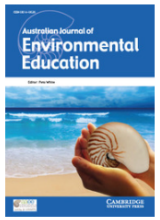
To what extent are people living in households interested in learning about energy topics in the context of the current cost of living crisis and the climate emergency?



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Methodology:

A survey answered by 3,843 citizens across four European countries

RQs:

1.To what extent are adult citizens of four European countries interested in learning about energy-related topics?

1a) What individual differences have a statistically significant effect on this interest?

2. What knowledge gaps do European citizens have about energy-related topics?

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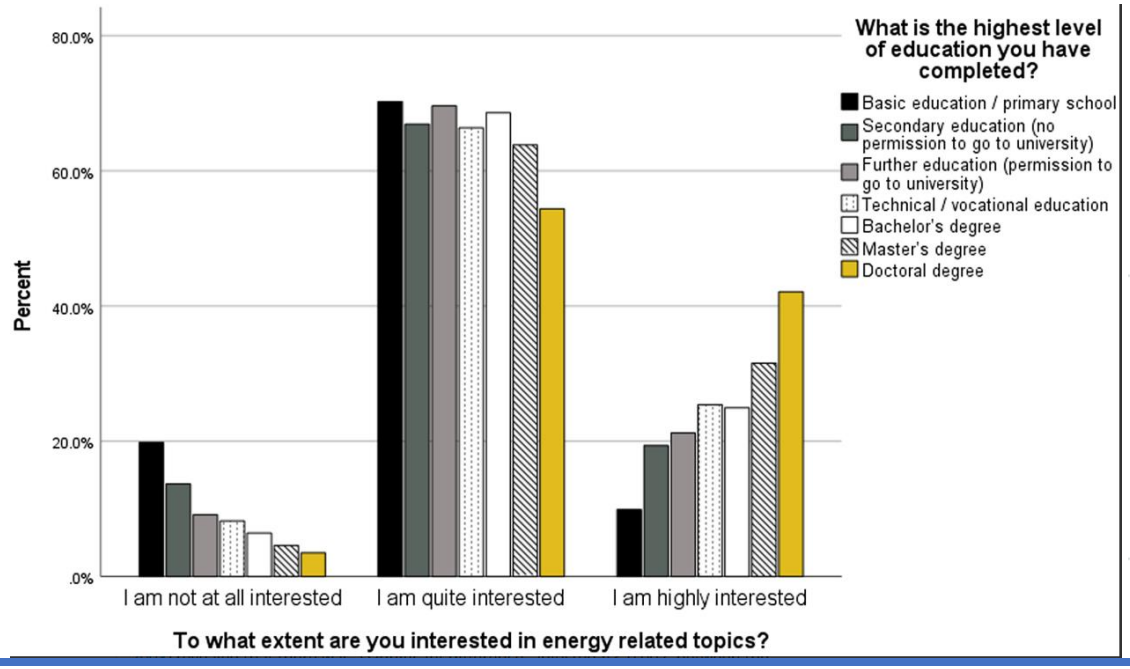
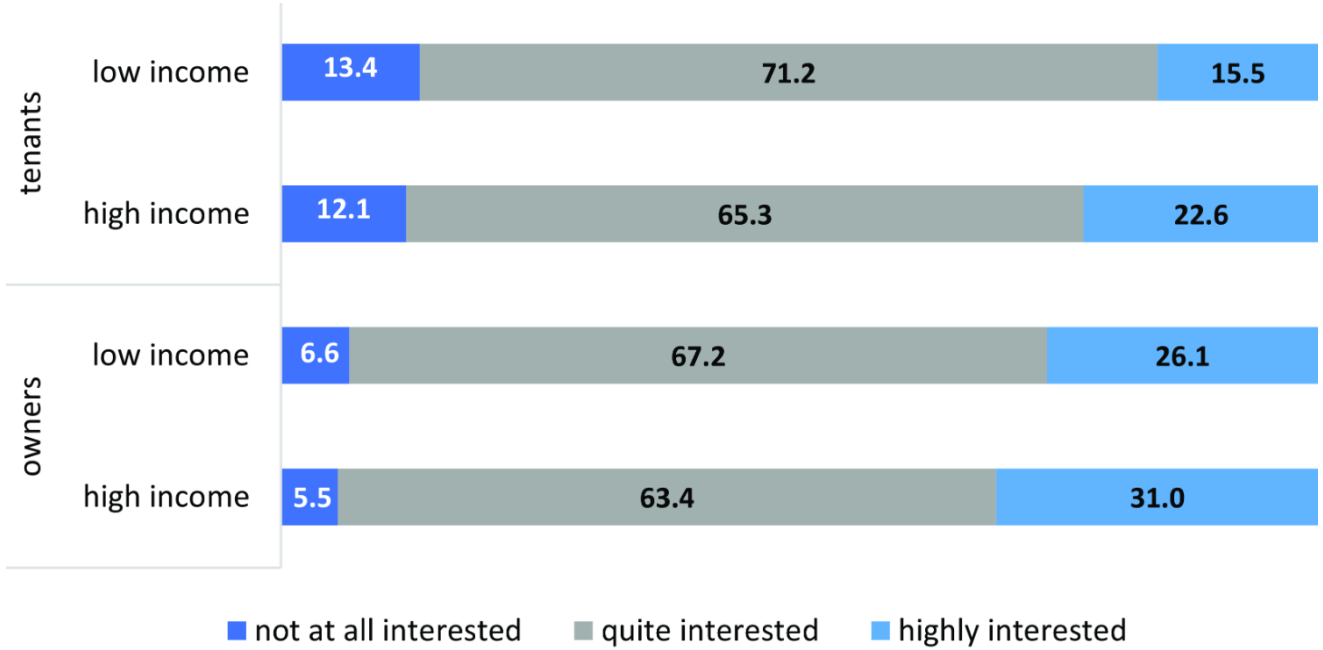
Quantitative findings

💡 The majority is 'moderately' interested (67% of the sample moderately interested, 24.4% - highly interested; 8.6% - no interest) but this varies across demographics

💡 Interest in learning about energy is primarily a middle-class issue (e.g., higher income, better educated, homeowner).





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Qualitative findings

Among those who are interested, there is a demand for knowledge in a number of areas: e.g., how to become more self-sufficient in producing energy at home, community cooperation in energy production.

Appendix 1. Coding table with themes and respective illustrative quotes

Theme	Illustrative quotes from the data
Energy saving in the current cost of living crisis	**reducing energy consumption and, consequently, energy costs**
	P_1959 (62-year-old female, Sweden): *"How can I save energy and reduce costs".*
	self-sufficiency in producing energy at home
	P_2884 (40-year-old male, Portugal): *"I want to learn about energy autonomy. How can I produce my own electricity at home?"* P_551 (41-year-old female, Sweden): *"How can I become independent from energy companies?"*
	personal energy consumption management
	P_216 (53-year-old female, Portugal): *"I want to learn how to understand the individual consumption of each device. What specific household items contribute the most to electricity usage, for example, and what I can do about it.*
Solar energy solutions	**adopting solar energy for home use and affordability, efficiency, connectivity, and self-sufficiency associated with it**
	P_542 (22-year-old male, Poland): *"I want to learn about energy saving through solar panels, and the possibility of self-connection"*
	solar solutions for smaller properties
	P_2584 (49-year-old female, Germany): *"I want to learn about how to make solar energy usable for tenants, and what charging station opportunities are there in an apartment building".*
Making a positive difference in the current climate emergency	**practical actions one can take on a personal level for climate mitigation**
	P_260 (32-year-old female, Sweden): *"I want to know more about how the environment is affected, and what we as private individuals can do to reduce any environmental impact?"*
	requests for examples of good practices regarding energy consumption and sustainable living
	P_56 (38-year-old female, Germany): *"How can I proactively make a contribution and, maybe, even save? What are some of the good habits I can develop? Maybe, I'm already doing something good, or the things I'm doing aren't doing anything".*
Energy communities	**community cooperation for a more efficient use of energy**
	P_1709 (68-year-old female, Sweden): *"I want to learn about shared solar parks opportunities in my neighbourhood".*
	feeling disconnected from the production of energy and wanting more information on the energy production cycle
	P_2808 (60-year-old male, Poland): *"Where does energy come from? What sources does it come from? The energy that I get in my household from the energy companies – is it renewable energy?"*
Other alternative solutions to the climate crisis	P_2791 (63-year-old male, Germany): *"I want to learn if it is possible to use several renewable energy sources (photovoltaic + small wind power plant + combined heat and power plant)".* P_661 (29-year-old female, Sweden): *"Different types of more sustainable energy production and use, and how they stack up against each other in terms of various factors".*

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Implications

- **Energy literacy frameworks** should incorporate the concept of **“interest in learning about energy”**
- Need for **tailored** climate education programmes, energy literacy awareness campaigns and energy policies (e.g., to groups of citizens that are less interested)
- **No one-size-fits-all approach** to enabling and empowering individuals to make informed energy choices. Individual interest is an important element in enhancing energy literacy
- As “big” research problems cannot be solved within one discipline, our findings are **a call for more interdisciplinary research on energy literacy**

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Thank you!

IET website: https://iet.open.ac.uk/

Check out our 80+ learning materials on the topic:

irina.rets@open.ac.uk

Living Lab Genk: Energy poverty and vulnerable consumers

VITO

Tine Engelen

Janka Vanschoenwinkel

Evi Lambie

EU-DREAM

EU-DREAM is supported by the European Union's Horizon Europe programme under agreement 101160614. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

vito Energy Ville

Overview

EU-DREAM aims to develop next-generation energy services, solutions, and products that truly benefit consumers.

36
MONTHS

17
PARTNERS

M4.5€
FUNDING

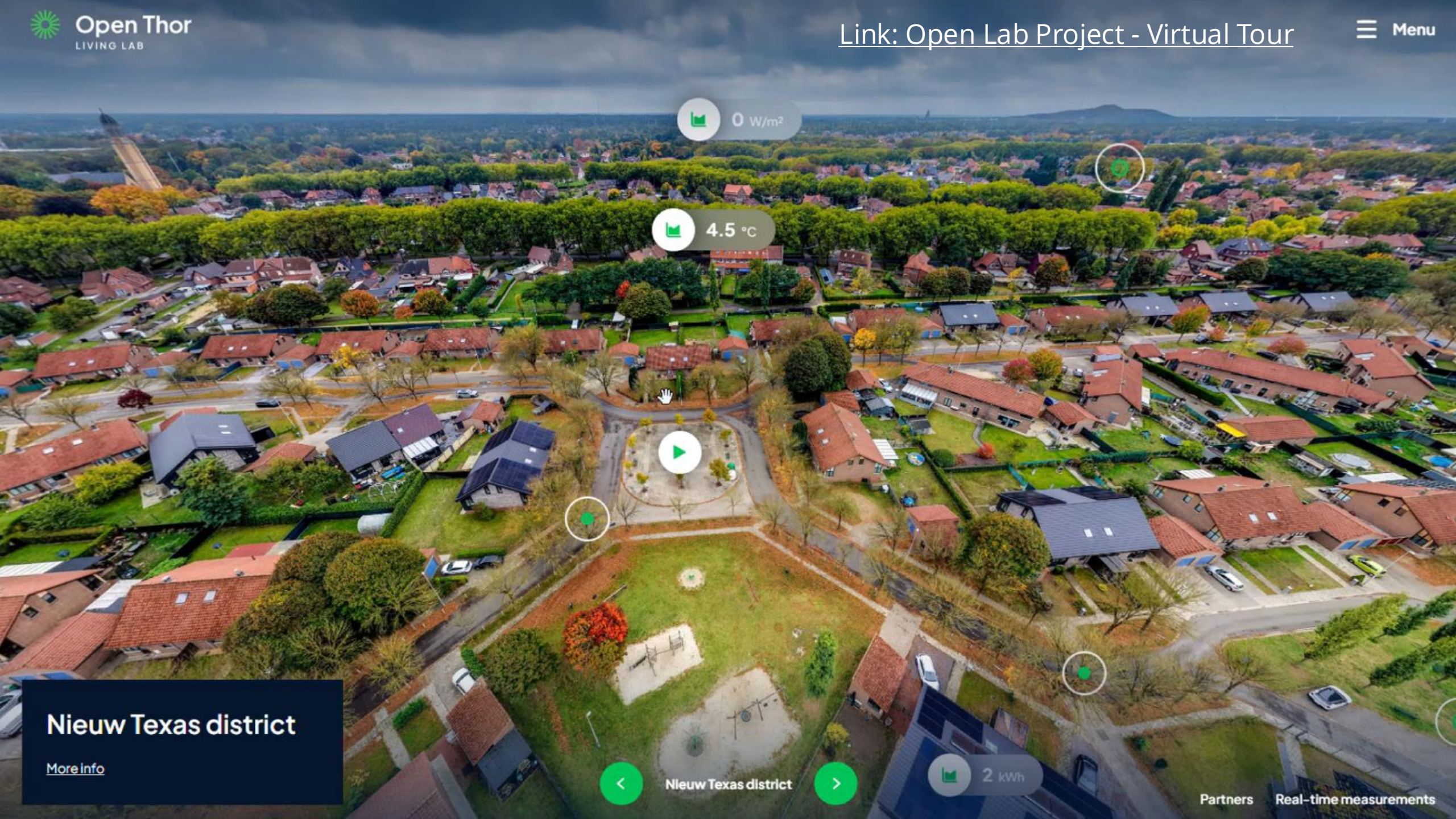
6
LIVING LABS

Objectives

- **Empowering Consumers with Data-Driven Solutions**
- **Development of AI-based assistant tool and NLP-based intermediator**
- **Development of a cloud-based data-sharing platform**
- **Development of new AI-powered and simplified digital platforms**
- **Creation of User-Friendly digital tools**
- **Innovative Market Mechanisms**
- **Consumer-Centric Approaches**
- **Improvement of Energy Literacy**

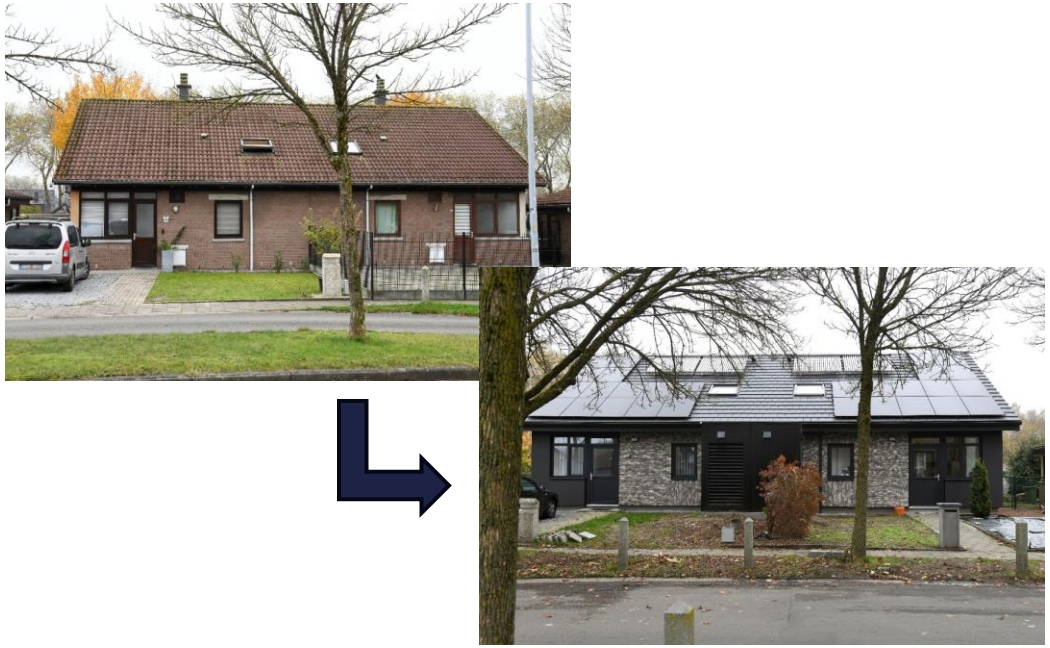
Belgium

What should these digital tools look like for vulnerable consumers?


Open Thor
LIVING LAB
Link: Open Lab Project - Virtual Tour
Menu
0 W/m²
4.5 °C
Nieuw Texas district
More info
Nieuw Texas district
2 kWh
Partners
Real-time measurements

The Living lab in Genk: explained

27 social houses renovated



Why this matters

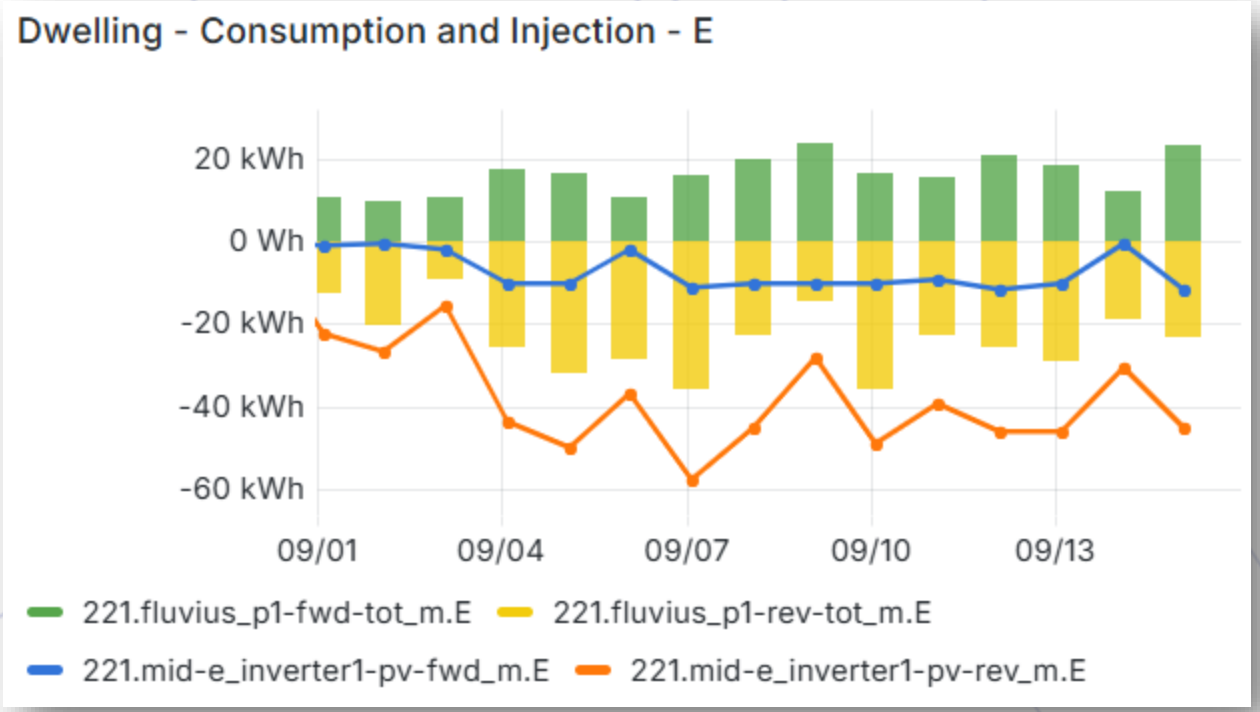
- EU towards digital and renewable energy systems
- But not all citizens can participate equally
- Our living labs explore how vulnerable households experience this transition

What we are monitoring

- We continuously track 200+ sensors in each dwelling:
  - Indoor temperature, humidity and CO2
  - Heating system performance
  - Electricity production (PV) and consumption
  - Battery use and grid interactions

What we are monitoring

- We continuously track 200+ sensors in each dwelling:
  - Indoor temperature, humidity and CO2
  - Heating system performance
  - Electricity production (PV) and consumption
  - Battery use and grid interactions
- The dashboard we use internally is very technical



This means → Great for researchers, not suitable for residents

Residents ask

“How do I know when my PV is producing enough?”

“When is energy cheap for me to use?”

→ We need to translate complex data into simple, meaningful feedback that makes sense in daily routines.

LOOMY lamp

- A smart lamp that uses colour signals to show real-time energy use:
  - Solar energy (green)
  - Home battery (purple)
  - Grid energy (orange)
- Why it matters:
  - First step to activate residents and raise awareness
  - Helps tenants better understand their energy use
  - Visual and app-based feedback on consumption patterns
- Manuals include tips per colour (e.g., shower when green)

Useful digital tools through co-creation sessions

Together with social housing company and residents, we aim to understand

- What features residents actually need
- What motivates behaviour change
- How to design digital tools that are helpful, not overwhelming

Why engagement matters

- Digital tools only work If people
  - Understand them
  - Trust them
  - See their benefit
  - Feel included in the process
- That’s why we run workshops, co-creation sessions, and interviews.

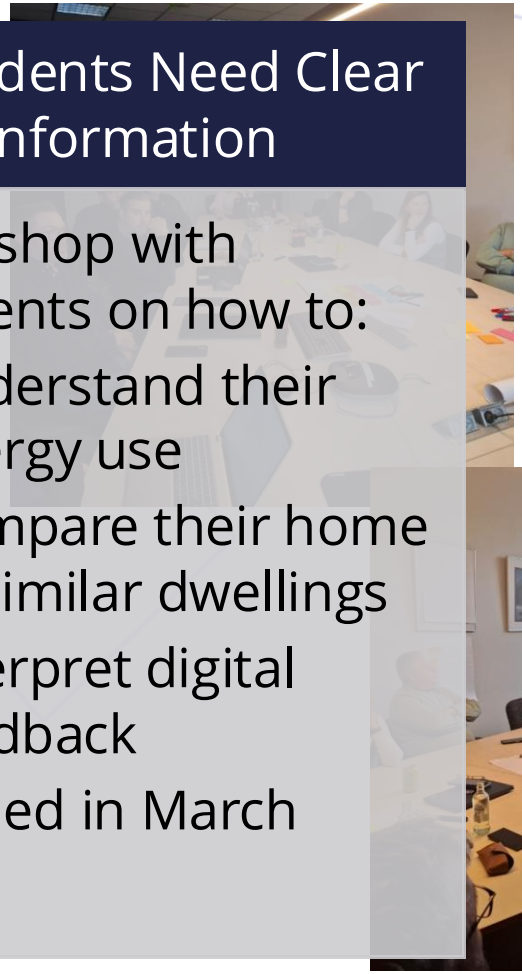
Three co-creation sessions

1: Social Housing Company

- Co-creation with SHC to improve:
  - **Monitoring** of technical systems
  - Early detection of **failures**
  - Planning **maintenance** proactively

2: Residents Need Clear Information

- Workshop with residents on how to:
  - Understand their energy use
  - Compare their home to similar dwellings
  - Interpret digital feedback
- Planned in March



3: Nudging and Behaviour Change

- Together with residents we explore:
  - What encourages them to adjust habits
  - How digital tools can nudge them gently
  - What messages or visuals work best
- Planned in April

Key Takeaways

- Explore how vulnerable consumers **experience transitions**
- Renovations improve performance, but data must be turned into **simple guidance**.
- Tools like Loomy can bridge the gap between complex information and **daily decisions.**
- **Co-creation** with residents ensures digital solutions are useful, usable, and fair.

Discover more at eu-dream.eu

Discover the living lab: Open Lab Project - Virtual Tour

Ref. Horizon-CL5-2023-D3-03
Effective Uptake of Digital Services to Repower European Consumers and Communities as Active Participants in Energy Transition and Markets

Thank you for your attention

Tine Engelen
Janka Vanschoenwinkel
Evi Lambie

25 February 2026

EU-DREAM

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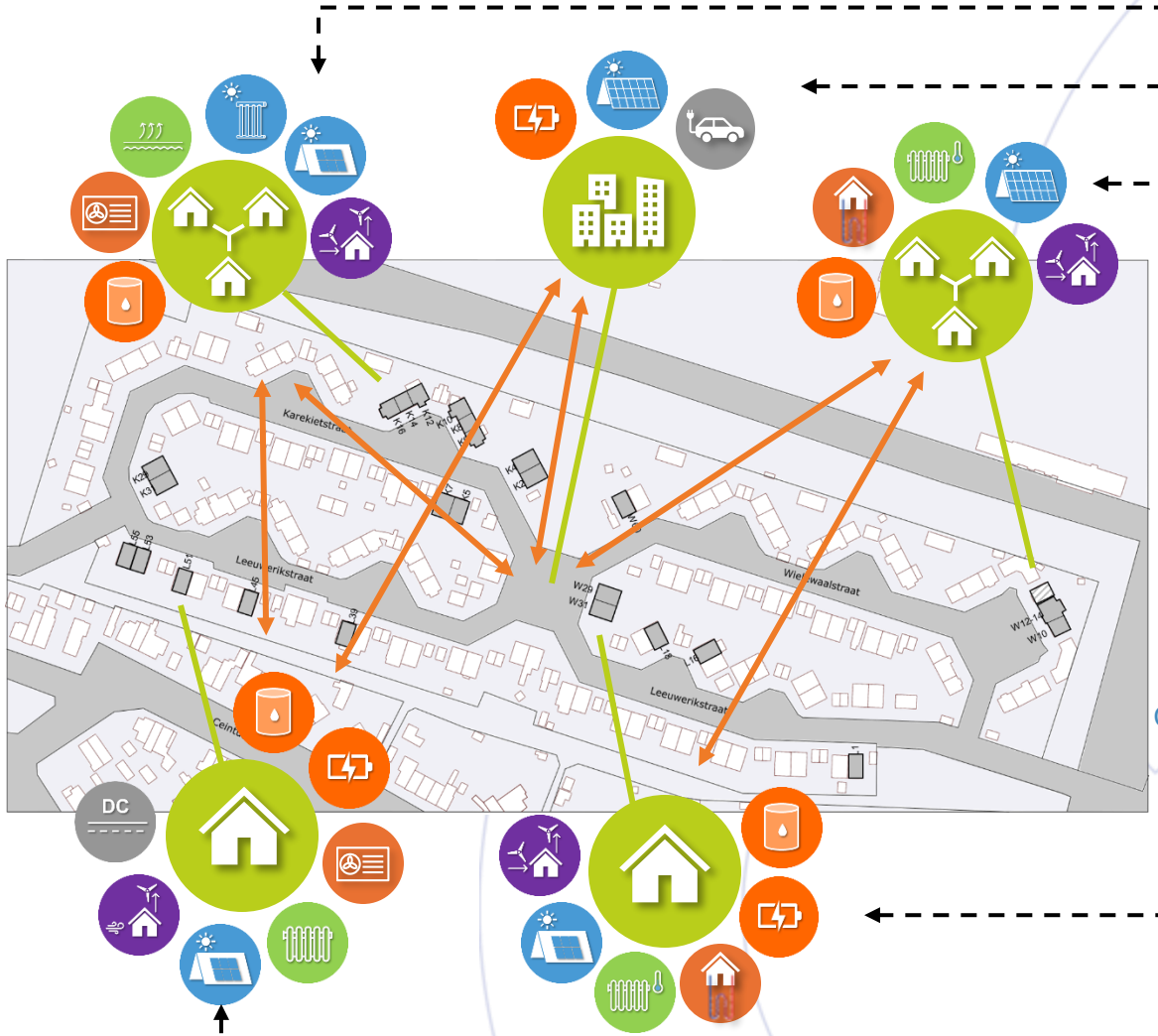
Renovations to improve energy efficiency



LOCAL ENERGY COMMUNITY

SMART CONTROL

TECHNOLOGY BOXES

- INDIVIDUAL
- MICROGRID

HEAT PUMPS

- AIR-WATER
- GEOTHERMAL

RENEWABLE ENERGY

- PV
- BIPV
- SOLAR THERMAL
- HYBRID (PVT)

STORAGE

- THERMAL
- ELECTRIC

EMISSION SYSTEM

- RADIATORS
- VENTILO-CONVECTORS
- SURFACE HEATING

VENTILATION

- EXTRACT with DEMAND CONTROL
- BALANCED with HEAT RECOVERY

OTHER

- DC GRID
- EV CHARGING

EU-DREAM vito Energy Ville

Cities, Citizens & Knowledge Gaps in the Energy Transition

February 25th, 2026

Associated members

Energy, Waste, Water, R&D,
Professional Orders and Academia.

Establishment

Established in 2007 as a
non-profit association.

Institutions

Integrates 2 public and private entities.

Territory

Territory > 990 km^2.Covers the AMP-ND
(Porto Metropolitan Area North of the Douro River).

Municipalities

Includes 10 municipalities of the AMP-ND.
Population > 1.1 million.

Public utility status

Recognised on 7 December 2021
for a period of 10 years.

Environmental Public Interest of Activity

Recognised on 3 September 2025.

AdEPorto Experience in Citizen Engagement and Participation

1. **TO UNDERSTAND AND POTENTIATE**
   - *Bairros Positivos* Project
   - Gamification in Renewable Energy at Schools
   - AdEPorto Environmental Education Programme
2. **TO EXPERIMENT**
   - *POWERYOUTH* Project
   - *"À Velocidade do Sol"* Initiative
3. **TO DECIDE**
   - *EHHUR* Project
   - Climate Action Plans


To understand and potentiate

Citizen Egagement – Projects of Reference

Bairros Positivos – Matosinhos Municipality

Objectives

- To mitigate energy poverty in municipal social housing;
- To increase energy literacy and promote behavioral change;
- To support more efficient energy use and renewable integration;
- To reinforce sustainable, resilient and informed communities in Matosinhos.

Engagement strategies

- Energy literacy sessions;
- Household energy monitoring;
- Vulnerability assessment surveys.

Added value

- Direct outreach to vulnerable populations;
- Evidence-based understanding of real consumption patterns;
- Behavioral change supported by data and proximity;
- Stronger alignment between infrastructure investment and citizen action.

CH Custió

CH Recarei

Our activity

Citizen Egagement – Projects of Reference

Bairros Positivos – Matosinhos Municipality

Energy Literacy Sessions in Social Housing Estates

- 48 sessions delivered across multiple municipal neighborhoods in Matosinhos, promoting efficient energy use and sustainable habits.

Household Monitoring & Data Collection

- Installation of 100 electricity consumption monitoring devices.

Energy Vulnerability Assessment

- 100 household surveys assessing thermal comfort, consumption behavior and energy poverty conditions.

Integrated Intervention Framework

- Complementary action to infrastructure improvements under the *1.º Direito Programme*, reaching 1 130 residents and reinforcing community resilience.

Citizen Engagement – Projects of Reference

Gamification in Renewable Energy at Schools – Porto Municipality

"Porto Solar" Project

PV systems installed in 25 schools, self-consumption.

25 School Ranking

Comparing their energy performance.

How to move up in the ranking?

Rewarding

1st, 2nd and 3rd place, monthly.

Awards:

- *Tree planting;*
- *Sustainable pencils.*

Good practices

Promotion of Good Energy Practices to adopt in school context to move up in the ranking.

Citizen Egagement – Projects of Reference

AdEPorto Environmental Education Programme – AMP-ND

"Energy pathways"
5th to 9th grade

"More efficient, more aware"
1st to 12th grade (3 dif. levels)

"A conversation around energy"
10th to 12th grade

To experiment

Citizen Egagement – Projects of Reference

POWERYOUTH – Porto Municipality

Objectives

- To empower young people (15-30) to actively engage in energy communities;
- To develop participatory digital tools for youth-led decision-making;
- To create replicable capacity-building programmes in green energy skills;
- To strengthen youth participation in collective energy action across the EU.

Engagement strategies

- Co-creation and liaison groups;
- Participatory digital tools (PARTICIPATE, DECISION, FINANCE);
- Capacity-building programmes and study visits.

Added value

- Structured youth-policy dialogue mechanisms;
- Practical pathways for youth involvement in energy communities;
- Tested participation models within institutional EC frameworks;
- Scalable and replicable governance solutions across Europe.

Pilot: Agra do Amial REC

Asprela + Sustentável Project
Porto Municipality

Co-funded by the European Union

Our activity

Citizen Egagement – Projects of Reference

POWERYOUTH – Porto Municipality

Stakeholder Liaison Groups & Co-creation Processes

- Dialogue between youth, local authorities and institutional actors to define participation and governance models.

Development & Testing of Participatory Digital Tools

- PARTICIPATE, DECISION and FINANCE tools to support youth-policy dialogue, collective decision-making and business models.

Capacity-Building Programme

- Structured training, study visits and empowerment workshops.

Portuguese Pilot – Asprela Living Lab (Porto)

- Youth engagement, testing indirect/proxy participation models.

Demonstration & Replication Pathway

- Pilot implementation in 5 EU countries, engaging 1,000+ young people and establishing models for scalable replication

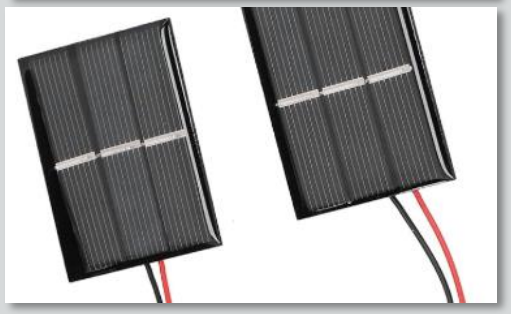




Co-funded by the European Union
POWER youth

Citizen Engagement – Projects of Reference

"À Velocidade do Sol" Initiative – AMP-ND

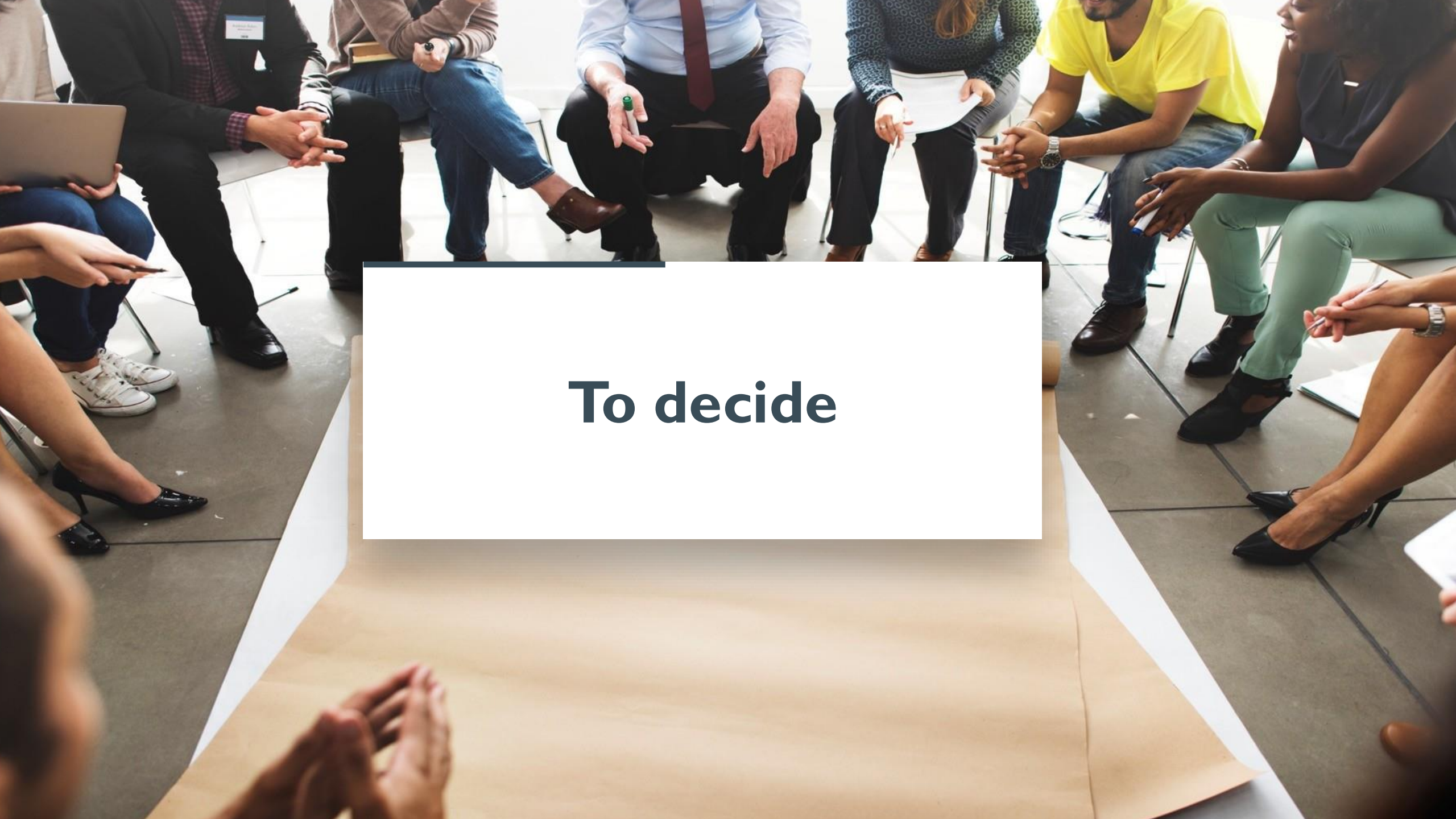


Iniciation
Inscription and kit distribution

Conception/Construction
Autonomous car conception and construction by the teams

Racings
Municipal Solar Car Racings, followed by an Intermunicipal Final

Prizes and Trophy
Attribution of trophy and prizes to the winners, in each race



To decide

Citizen Egagement – Projects of Reference

EHHUR | Eyes Hearts Hands Urban Revolution

Maia Municipality

Objectives

- To promote digital and energy literacy through citizen co-creation and targeted capacity-building activities;
- To explore innovative technological solutions;
- To enhance energy efficiency, biodiversity protection and circular economy practices, while supporting the development of a local renewable energy community;
- To assess the replicability of implemented measures at city scale.

Engagement strategies

- Co-creation sessions;
- Capacity building;
- Thematic workshops;
- Expositions.

Added value

- Context-informed design;
- Stronger social ownership;
- Greater legitimacy of public investment;
- Long-term sustainability of interventions.

Bairro do Sobreiro – Maia Municipality

Funded by EU
Grant No. 101079948

Citizen Egagement – Projects of Reference

EHHUR | Eyes Hearts Hands Urban Revolution

Maia Municipality

Engagement activities

1st Co-creation session | July 13th, 2023

- Interactive voting on renovation options;
- Interactive questionnaire on whiteboard;
- Sobreiro's photographic exhibition.

2nd Co-creation session | June 14th, 2024

- Co-creation of the public green space.

Energy Park | July 31st, 2024

- Game 'More efficient, more aware';
- Collaborative paiting;
- Stands with PV and hydroelectric systems;
- Exposition of a model house.





Funded by EU
Grant No. 101079948

Our activity

Citizen Egagement – Projects of Reference

Municipal Climate Action Plans – Various municipalities

Objectives

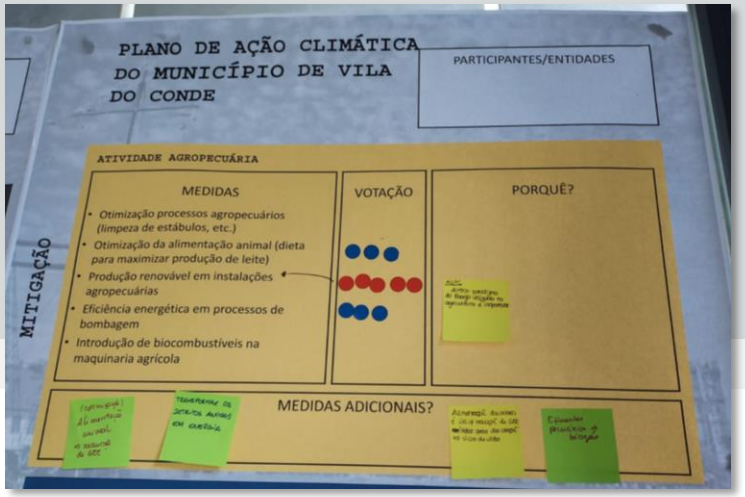
- To define municipal pathways towards climate neutrality through structured mitigation and adaptation measures;
- To integrate stakeholder and citizen participation into local climate planning processes.

Engagement strategies

- Participatory workshops and stakeholder consultations during the MCAP development process;
- Technical and political co-design meetings, including public validation of draft plans.

Added value

- Increased legitimacy and transparency of municipal climate strategies;
- Greater alignment between strategic climate objectives and local territorial realities;
- Reinforced shared responsibility among institutions, stakeholders and citizens.



www.adeporto.eu
info@adeporto.eu

February 25th, 2026

EVERY1

Funded by the European union

Discussion panel

EVERY1

Knowledge Hub

A practical guide to resources on the digital energy transition

Funded by the European Union

Every1 can contribute to the energy transition

Introduction

This booklet is a short, practical guide to the Knowledge Hub developed by the Every1 project, a central space for learning materials, tools and pathways that support participation in the digital energy transition. It explains what you can find in the Hub, how the different sections work, and how to make use of the open, reusable resources available.

This guide of

walkthrough of the Learning Pathways, the library of learning Repository, and shows where to find translations and options your own activities. It also gives an overview of how the Hub links to the wider Every1 network and project outputs.

ct that supports people and organisations in taking part in the digital energy transition. It focuses materials, building skills and strengthening collaboration between those working in energy, . The consortium includes partners such as Flux50, The Open University, Eworx, Th!nk E. mbH, INESC TEC, TU Eindhoven, RdA Climate Solutions, the International Cleantech Network bine technical and educational expertise to design training offers and support stakeholder

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Coming up

Webinar

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Energy Communities and Energy Literacy

26rd Feb 2026 12:00 - 13:00 CET

Part 3 *of Every1's Digital Energy for Everyone Webinar Series*

Funded by the European Union