



European public local authorities' network
for driving the energy transition

Accelerating energy transition in European municipalities



Project co-funded by the European Union Horizon 2020
research and innovation programme GA 1010324450



European public local authorities' network
for driving the energy transition

One of the main challenges to achieve the Energy Transition objectives is to improve the coordination between local authorities and regional governments in order to optimise the decision-making process, coherence and consistency of the implementation of energy transition measures in towns and cities. However, current platforms used by EU regional and local authorities to manage Energy Transition are heterogeneous, which leads to a loss of information and difficulties to share data and engage communities.

ePLANET H2020 is a European project addressing this challenge. ePLANET facilitates and eases the deployment of coordinated energy transition actions by the public sector. The project uses the most innovative tools in big data together with an innovative clustering governance to boost Energy Transition Plans at the municipal level. Besides, it fosters the digitalisation of energy data available in dispersed data sources, of the energy transition measures and of the Sustainable Energy and Climate Action Plans (SECAPs), enabling an ecosystem of data and tools to support decision-making on Energy Transition.

Published in September 2023 by ePLANET Consortium

ePLANET Consortium

CIMNE International Center for Numerical Methods in Engineering
ICAEN Institut Català d'Energia
CRES Centre for Renewable Energy Sources and Saving Foundation
FEDARENE Federation Europeene Des Agencies et des Regions pour l'Energie et l'Environment
ICLEI European secretariat GMBH
Diputació de Girona
RDFC Perifereiako Tameio Anaptyksis Kritis
EAZK Energeticka Agentura Zlinskeho Kraje Ops
LIMA Low Impact Mediterranean Architecture
3OC Three O'Clock

Disclaimer

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101032450.

The views expressed in this publication are the sole responsibility of the author/s and do not necessarily reflect the views of the European Commission.

License Creative Commons CC0



The Objective

ePLANET is a three-year project aiming to deploy a new **clustering governance model for Energy Transition** based on a digital framework, allowing to share harmonized information and to facilitate the adoption of coordinated energy transition actions by the European public sector.

In particular, the project will provide local and authorities with an improved governance model to enhance decision-making and deployment of Energy Transition plans.

The Testing process

ePLANET includes a proof-of-concept of the solutions. This phase ensures the correct deployment of tools and effective focus on real needs of public authorities, by validating them in three European pilot regions.

- 3 PILOT REGIONS
- Girona region (CAT)
 - Zlín region (CZ)
 - Crete island (GR)

The Replicability

ePLANET will widen the project impact by scaling up project achievements into the whole region territories of the pilot sites, and by supporting the integration of project results in other European regions, including some follower regions.

- 7 FOLLOWER REGIONS
- Agency for Energy Efficiency and Environmental Protection (RO)
 - South East Energy Agency (IE)
 - Black Sea Regional Agency for Energy Management (BG)
 - Regional Development Fund of Central Macedonia (GR)
 - Regional Council of Baix Llobregat (CAT)
 - Municipality of Fily (GR)
 - Inter-municipality community of Tâmega e Sousa (PT)

- 1 SHARING INFORMATION PLATFORM
- The ePLANET platform allows digitalization of European **Energy Action plans** and related energy transition measures, including data harmonization following an ontology approach to identify relations between different elements of the available data, data visualization and information sharing within selected clusters.

The Expected impacts

603

Memorandums of Adhesion

Institutionalised collaboration on the Energy Transition between public authorities and ePLANET.

764

Stakeholders

Trained and active in delivering the energy transition.

129

GWh

Primary energy savings triggered by the project

7

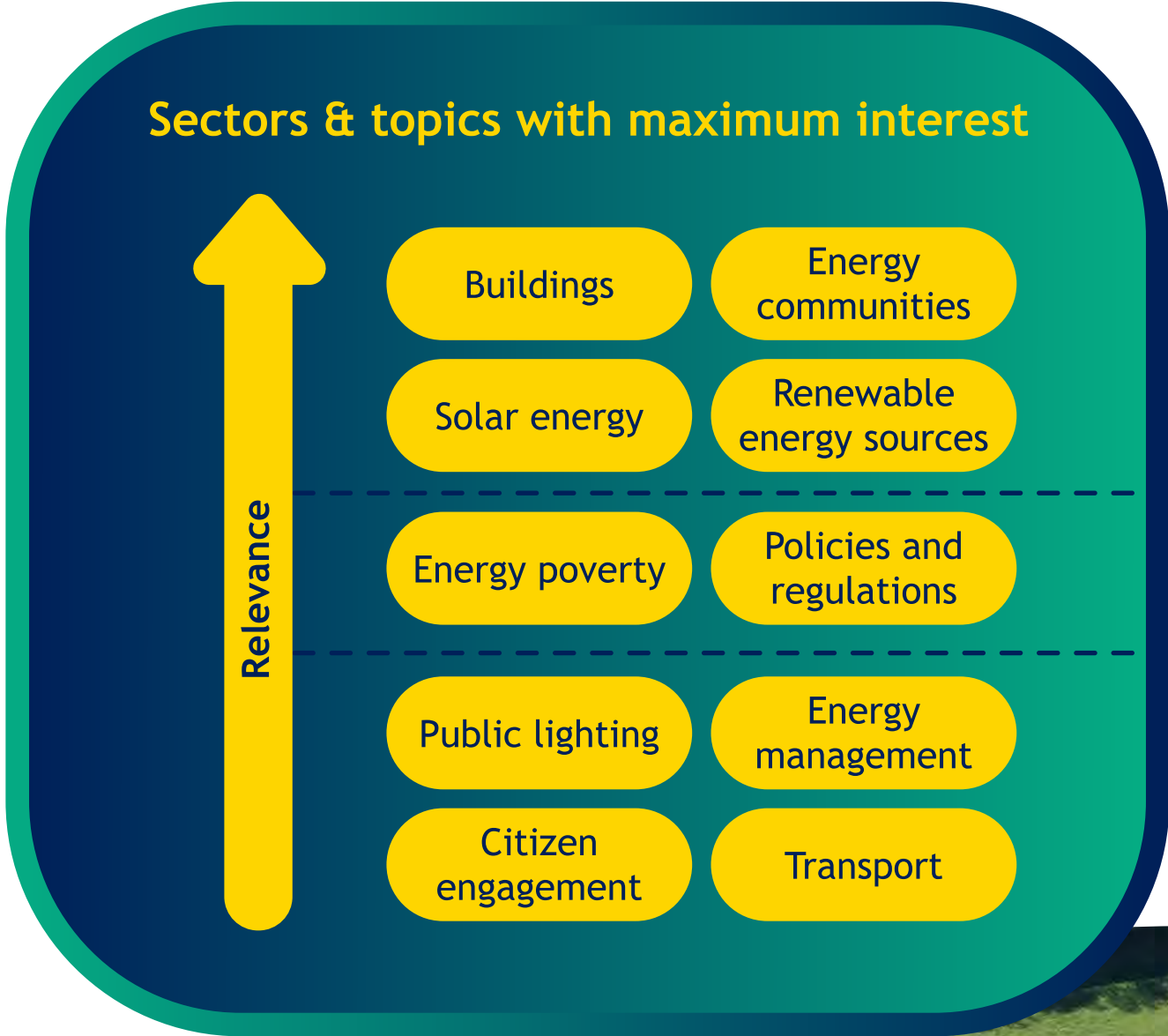
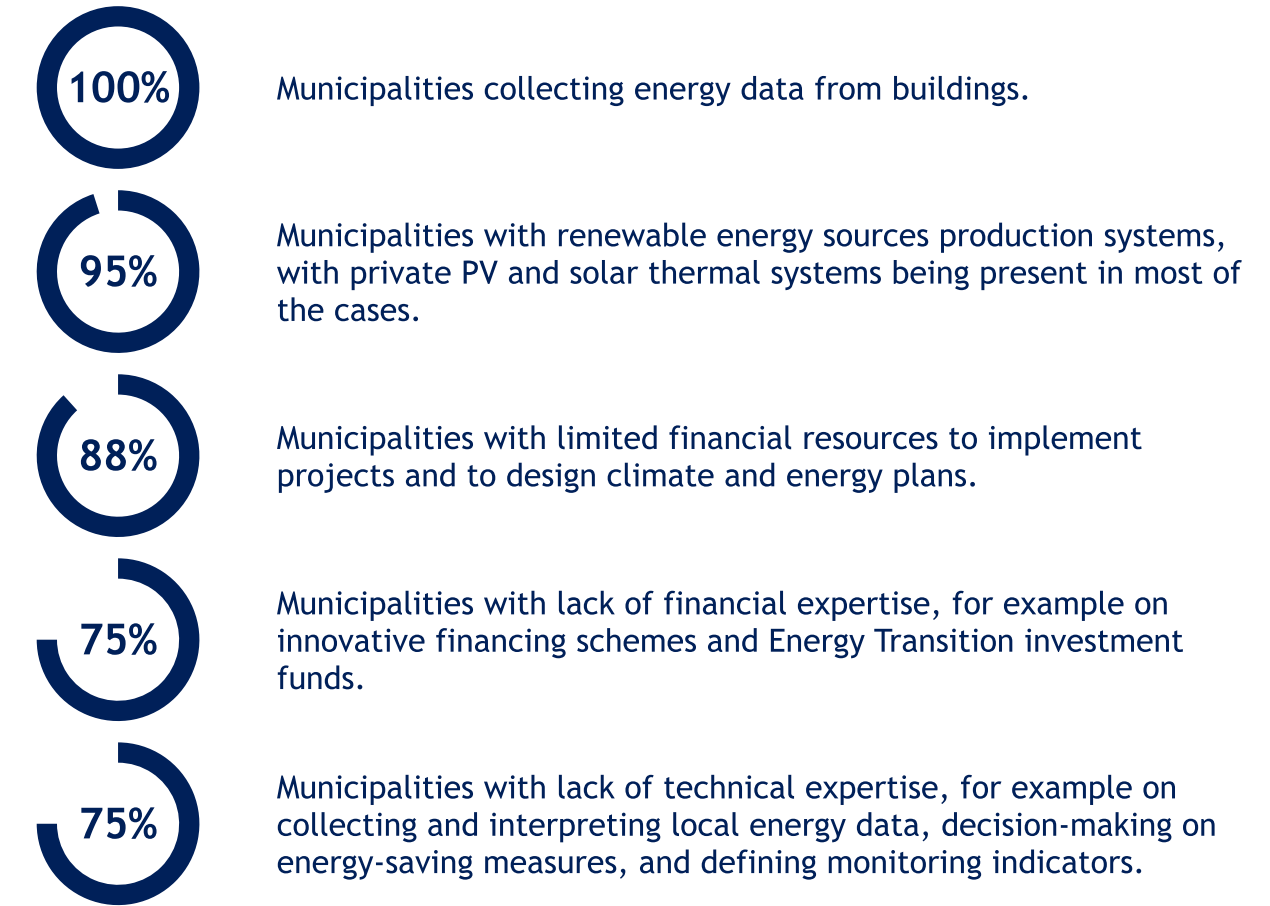
Million €

Investment in sustainable energy triggered by pilot regions in the project

Empowering Municipalities for Energy Planning

A comprehensive needs-assessment process was conducted from January to May 2022 to identify the capacity-building needs, knowledge gaps, and barriers faced by municipalities in the ePLANET pilots regarding energy planning and measures. This process served as the foundation for co-designing tailored capacity building strategies and activities in each region.

Key findings

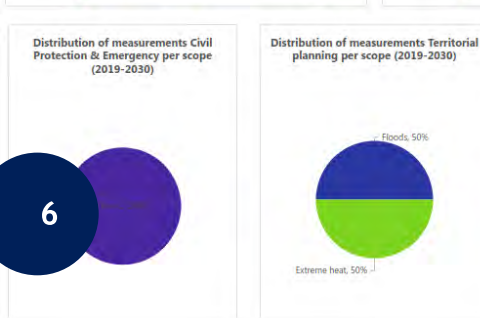
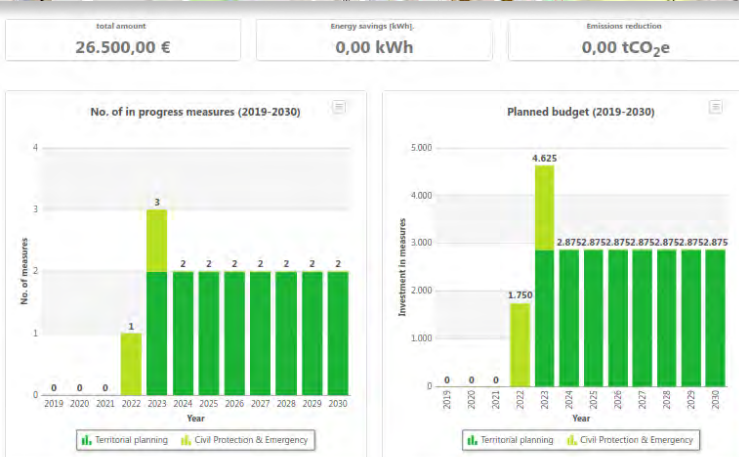
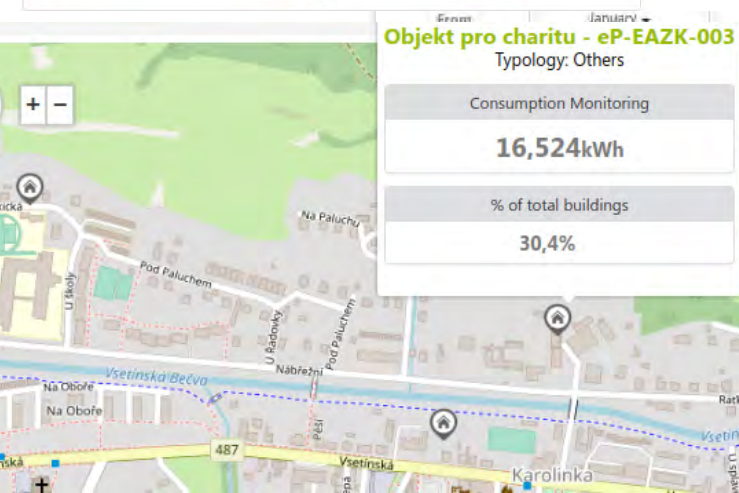
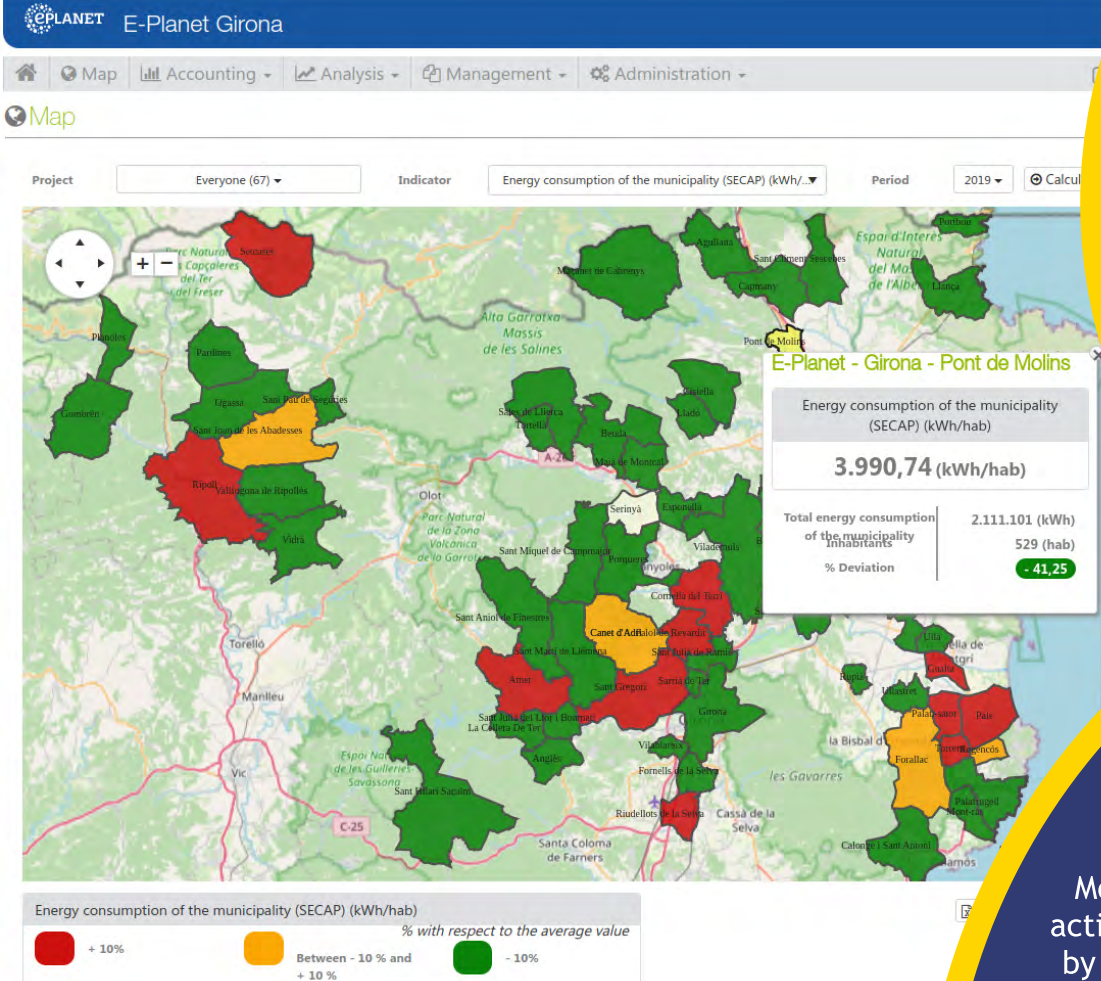




“ePLANET tool is very helpful for municipalities because it enhances decision-making process of Technical Services regarding buildings facilities and energy management”

Despoina Tsiliki
Technical officer at Platania municipality (GR)





The ePLANET platform

A set of tools to help pilot and follower regions implement energy transition measures, making local energy policies and decisions on evidence-based facts and figures.

The data harmonization layer

Making data interoperable.
Data cleansing and anomaly detection.

SECAPs digitalisation and monitoring

Monitoring the progress of active energy transition plans by public administrations to specify and periodically update the status of completion of each of their planned energy transition measures.

Analysis of the energy performance of the public building stock

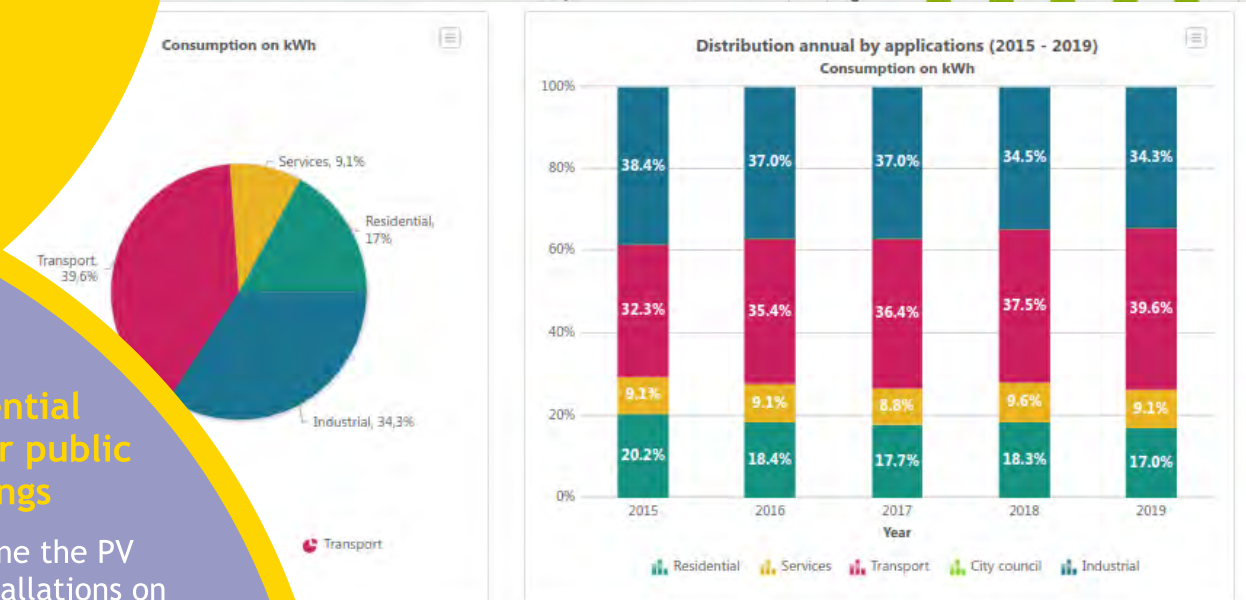
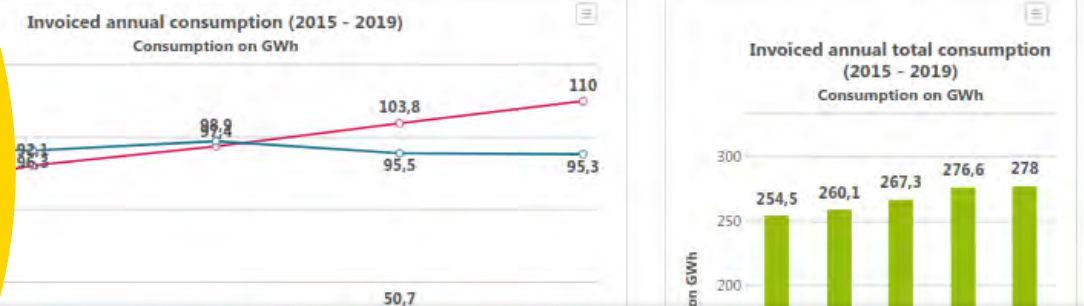
A database of public building energy use and energy efficiency measures applied to them. The database is targeting public administrations looking for data that can back the effectiveness of different actuations and management strategies used on public buildings, allowing also to benchmark the energy efficiency's buildings.

PV potential analysis for public buildings

To determine the PV potential installations on public buildings and the self-consumption ratio they can achieve.

GEO-Tools for the promotion of energy communities

GIS-mapped visualisations to support the definition of the energy transition strategy at municipal level. Users are able to switch between different visualisation scales (building block, municipal, postal code levels) and perform benchmarking comparisons in areas of interest.



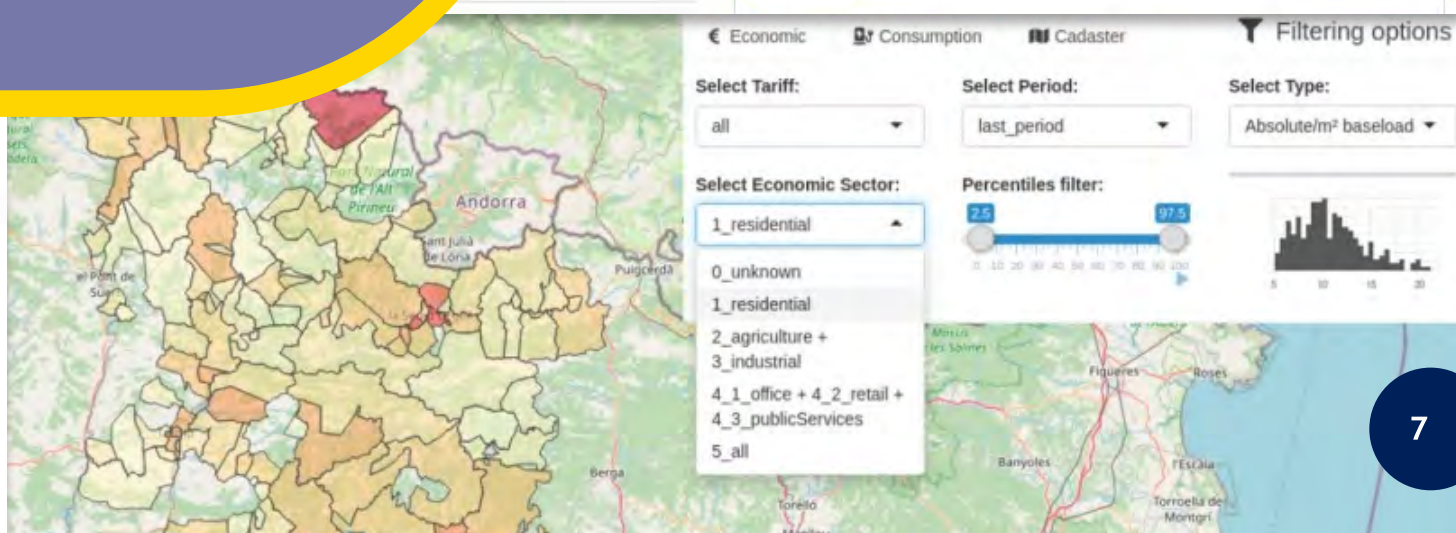
Consumption by applications and sources (2019)

	2016	2017	2018	2019
%	kWh	%	kWh	%
Transport	92.115.946	35,42	97.413.657	36,45
Industrial	96.279.968	37,02	98.877.212	37,00
Residential	47.904.148	18,42	47.370.770	17,72
Services	23.790.878	9,15	23.593.739	8,83
City council	0	0,00	0	0,00
Total	260.090.940		267.255.378	

Export data to Excel

Consumption by applications and sources (2019)

Sources	Electricity	Fossil fuel	Natural gas	Fuels	LPG	Renewables
Applications	kWh	%	kWh	%	kWh	%
Transport	-	-	0	-	109.962.231	93,10
Industrial	56.735.880	66,02	0	-	38.540.008	53,92
Residential	12.024.960	13,99	0	-	25.051.540	35,89
Services	17.176.148	19,99	0	-	7.282.884	10,19
City council	0	0,00	0	-	0	0,00
Total	85.936.988	0	71.474.432	118.105.761	2.484.880	0

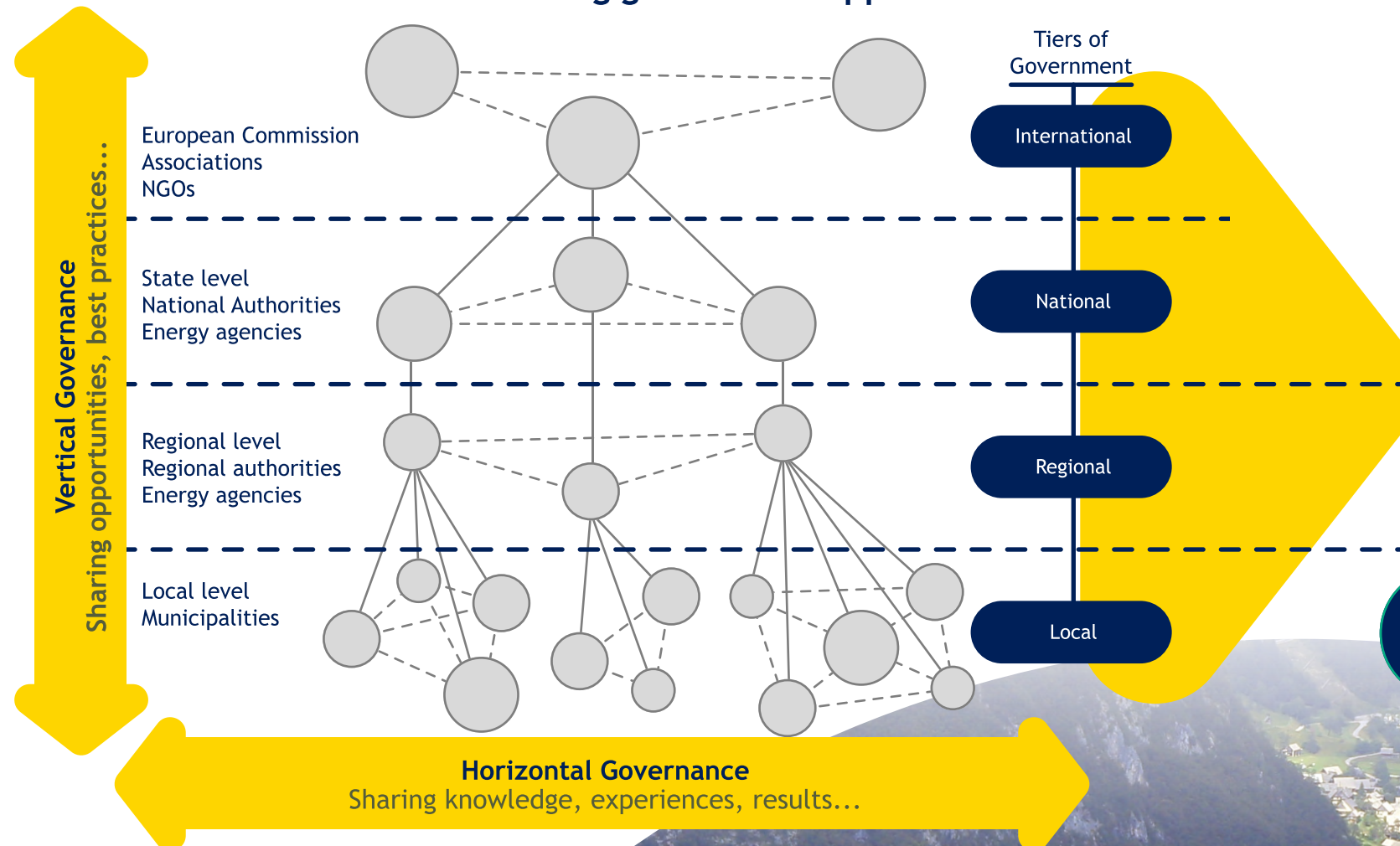


Clustering governance of Energy Transition

Clustering governance refers to managing and governing a cluster of entities from different structural levels, working together towards a common goal.

Effective clustering governance in Energy Transition involves designing and implementing policies and procedures that encourage collaboration and cooperation among cluster members. In addition, it involves creating a supportive environment that facilitates innovation and growth in Energy Transition.

ePLANET clustering governance approach



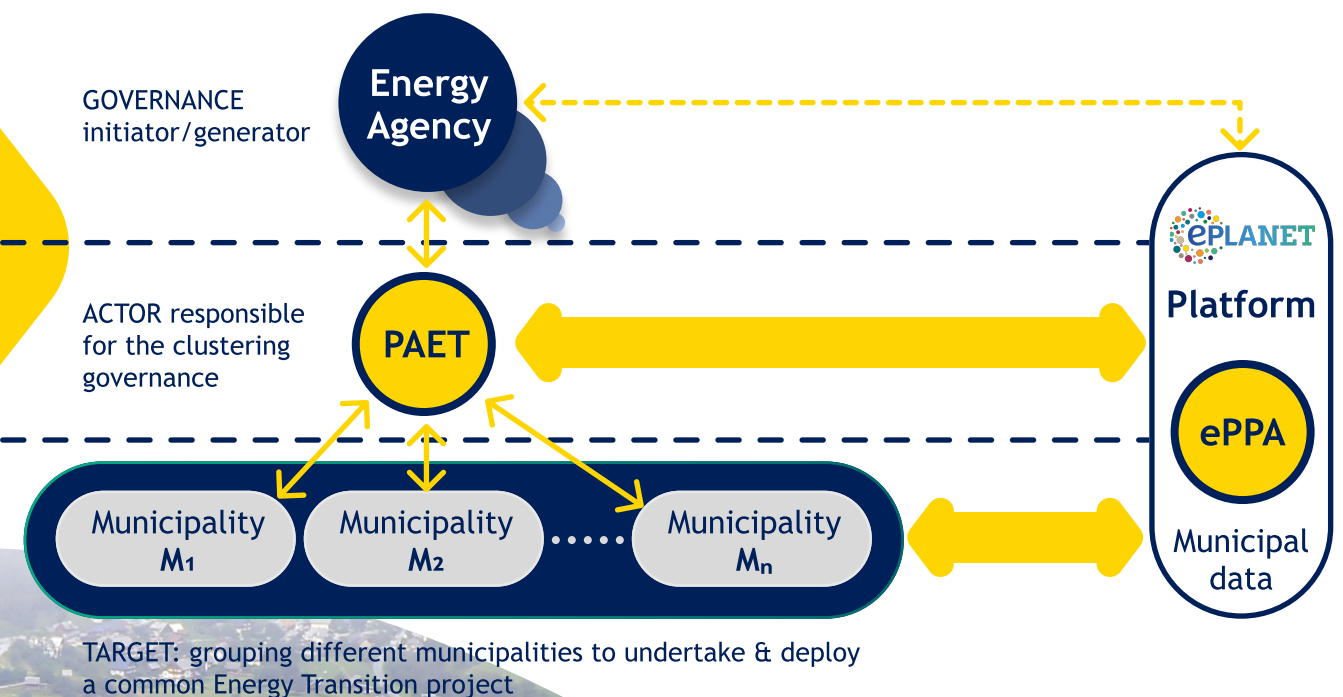
New actors to facilitate clustering governance

The innovative approach of ePLANET clustering governance requires some new roles to be deployed within the governance structure, together with the use of specific tools to facilitate data mining and information sharing, and fostering dialogues and common initiatives between the different cluster members.

PAET

Public/Private Advisor in Energy Transition
reaching out municipalities in a cluster, fostering a partnership to deploy a common Energy Transition project.

The ePLANET implementation: Put into practice



ePPA

ePLANET Platform Advisor

Key actor keeping the information sharing platform operable and active beyond the project duration



“The target of ePLANET Clustering governance is to obtain a multi-execution of Energy Transition projects in groups instead of dealing with individual ones”

Marta Chàfer

ICAEN, Catalan Energy Institute

Spreading the seed in Energy transition

ePLANET project includes a wide set of activities to build capacities, raise awareness and disseminate the project outputs, including training, workshops, webinars, site visits, and specific activities for most engaged stakeholders.

24 Capacity Building Activities

The ePLANET Capacity Building Programme targets technical staff of public authorities, addresses the needs identified on the pilot regions, and covers a wide range of thematic areas.

✓ Training on ePLANET platform

- ✓ on SECAP digitalization and analysis.
- ✓ on analysis of buildings' energy performance.

✓ Workshops

- ✓ on buildings and energy efficiency.
- ✓ on RES and energy communities.
- ✓ on innovative financing.
- ✓ on mass transit systems and shared mobility.
- ✓ on public lighting.

✓ Webinars & showcases

- ✓ Geo-tools for the promotion of energy communities.
- ✓ Planning and prioritising energy savings interventions at local level.
- ✓ Creating local energy communities in industrial environments.
- ✓ Governance of the Energy Transition.

12 STAKEHOLDERS FORUM

A series of events to inform early adopters and follower regions and collect their feedback on the recent project developments to tailor the next steps towards maximising the usability of regions.

10 STUDY VISITS TO PILOT SITES

Follower regions benefits from tailored support to enhance their energy transition policy, including study visits to one of the pilot regions, peer to peer guidance and tailored webinars and workshops.

8 INTERNATIONAL CONFERENCES AND CONGRESSES

The ePLANET governance methodology and the ePLANET platform will be presented in different conferences to enlarge the dissemination reach.

1 REPOSITORY OF BEST PRACTICES

including solutions for energy transition that can be adopted by public authorities for accelerating their progress towards energy transition.

“Thanks to the ePLANET project platform, we can also be inspired by examples of good practice throughout the whole Europe”

Daniel Šenkeřík

Mayor of Hostětín municipality (CZ)



Conclusions and strong recommendations

ePLANET introduces a new opportunity to enhance the governance of Energy Transition by public authorities. The project has forged a novel framework wherein local and regional authorities within a specific area can collaboratively identify, address and overcome shared barriers and concerns regarding the definition and deployment of Energy Transition action plans.

ePLANET proposes to embrace an innovative clustering governance strategy, complemented by the introduction of novel roles within public authorities. This visionary approach fosters collaboration and synergies among all stakeholders within a given cluster, thereby enhancing the efficacy of decision-making processes and reducing the necessary investments to deploy Energy Transition actions within the designated area.

ePLANET makes a significant advancement in Energy Transition governance. Through the introduction of the novel methodology, coupled with a suit of tailored instruments, ePLANET is poised to facilitate public authorities in realizing a seamless and highly efficient energy transition.

- ✓ **Methodology**
Clustering governance strategy for Energy Transition
- ✓ **Actors**
PAET - Public/Private Advisor on Energy Transition
ePPA - ePLANET Platform Advisor
- ✓ **Tools**
ePLANET Platform
Repository of best practices and solutions for energy transition



“ePLANET platform reduces the technical resources municipalities need to track and evaluate for energy transition plans enhancement, which is crucial in small municipalities”

Gerard Laguna

ePLANET project coordinator, CIMNE (ES)

Thanks you to all those who contribute with small daily actions to the energy transition and a more sustainable planet.



And to all who has been working in the ePLANET project, specially:

Jordi Cipriano, Gerard Laguna, Josep Mayós, Francisco de la Rosa, Maite Sellart, Benedetto Grillone, Natalia Alonso (CIMNE); Marta Chàfer, Josep Maria Granollers, Francesc Vidal (ICAEN); Eleni Chatzigeorgiou, Katerina Sfakianaki, Markos Damasiotis (CRES); Elodie Bossio, Nadège Seguel, Matthias Watzak (FEDARENE); Marcelo Lampkowski, Jurijs Grizans (ICLEI); Anna Camps, Xevi Palomé (DDGI); Georgia Piligotsi, George Pantelakis, Nikolaos Zografakis (RDFC); Miroslava Knotková, Jan Vidomus, Tomáš Perutka (EAZK); Segis Verdaguer, Claudia Briongos, Olga Barrachina (LIMA); Esti Sanvicente, Chloe Chavardes, Eva Boo (3OC); and Dimitrios Sofianopoulos (CINEA Project Officer).



Coordinator and technological development



Developers and facilitators



LIMA

Low Impact Mediterranean Architecture



Pilot regions



www.eplaneth2020.eu



eplaneth2020



@ePlanetH2020



Project co-funded by the European Union Horizon 2020 research and innovation programme GA 1010324450