

Empowering local and regional authorities to design clean **EN**ergy **TR**ansition plans through **Cap**acity and **K**nowledge building actions

Insights from Mediterranean rural communities to shape inclusive, effective energy efficiency strategies

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The ENTRACK ethnographic study shows that meaningful energy transitions in rural Mediterranean communities cannot rely solely on technical or financial solutions. Structural barriers - economic, institutional, and social - continue to limit the adoption of energy efficiency measures, but these barriers manifest in context-specific ways that are crucial for understanding how to foster change locally.

- High upfront costs for energy-efficient technologies, limited access to public transport, weak electricity and mobility infrastructure, and uneven availability of renewable solutions prevent households, particularly those that are low-income and geographically isolated, from engaging with sustainable options.
- Social and cultural factors, such as low energy literacy, intergenerational differences in environmental awareness

and varying trust in public institutions, further influence citizens' willingness to adopt clean energy practices. Deep-seated mistrust in top-down, authority-driven policies often undermines the effectiveness of incentives, even when they are available.

- At the same time, local authorities - who are best positioned to engage communities and facilitate participation - are frequently underfunded or excluded from national policy frameworks, limiting their ability to act as mediators between citizens and broader energy policy.
- The study highlights that **active citizen engagement can help overcome these barriers**. Involving residents directly in research, decision-making, and local initiatives builds awareness, trust, and a sense of shared responsibility. Community involvement (as per Climate Explorers in ENTRACK)

and intergenerational knowledge-sharing are particularly effective in bridging gaps in understanding and motivation, connecting traditional, resource-conscious practices with contemporary sustainability and digital skills. Communities that participate in co-creation processes develop a stronger sense of ownership over energy transition strategies, which leads to higher adoption rates and more resilient local practices.

➤ Based on these insights, the guidance for policymakers emphasizes the need for an **integrated approach combining technical, financial, and infrastructural measures with participatory, socially grounded strategies**. This includes providing tailored support for low-income and isolated households, simplifying and decentralizing administrative procedures to increase accessibility, empowering local authorities through capacity-building and training, and fostering initiatives that embed sustainable practices into everyday community life.

➤ By aligning short-term actions with the long-term development of trust, knowledge, and local capacity, policymakers can ensure that energy transition efforts are both effective and sustainable, supporting inclusive, resilient, and empowered rural communities in the Mediterranean.

Policy Context and Relevance - The Issue

Despite the European Union's strong legislative framework for energy efficiency - via the Energy Efficiency Directive (EED), Fit for 55, and REPowerEU - a major implementation gap persists at the citizen level, particularly in rural and peripheral areas. Awareness of energy-saving practices, clean energy options, and available incentives remains alarmingly low among vulnerable populations, undermining the EU's 2030 target of at least 11.7% energy consumption reduction.^[1]

In Southern Europe, rural communities often face higher energy poverty (up to 20% of households in regions like Greece and Portugal), lack access to infrastructure (e.g., public transport, smart grids), and report limited trust in institutions. Without tailored, community-driven engagement strategies, current top-down policies risk missing their targets - and excluding the very citizens they are meant to serve.

This issue is time-sensitive: Member States are now revising their National Energy and Climate Plans (NECPs), and the Social Climate Fund (2026-2032) will soon deploy €86.7 billion across the EU to support vulnerable groups.^[2] If local realities are not integrated now, the effectiveness and fairness of the transition will be jeopardized.

The ENTRACK project directly addresses this gap by engaging citizens in rural Mediterranean municipalities through participatory ethnography. Its findings demonstrate the urgent need to embed lived experiences and social dynamics into EU energy efficiency strategies.

[1] Energy efficiency targets (no date) Energy. Available at: https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-targets_en (Accessed: 18 August 2025)

[2] Social Climate Fund (no date) Climate Action. Available at: https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets/social-climate-fund_en (Accessed: 18 August 2025).



Key findings - Results of the ENTRACK ethnographic research

The ENTRACK project employed an innovative, participatory ethnographic approach, involving trained local volunteers - many of them young people - as “Climate Explorers”. By engaging directly with fellow citizens in rural areas of Greece, Italy, Portugal, and Spain, they helped uncover deep-rooted perceptions, habits, and challenges related to energy use and sustainability.

This method not only generated rich qualitative data but also fostered skills development (e.g., interviewing, active listening, critical thinking) among participants. These “soft skills” are essential for fostering climate literacy and empowering citizens - especially youth - to understand and act on complex issues like energy efficiency and climate change.

The research revealed a number of recurring patterns and barriers:

- **Economic constraints are the main barrier:** High upfront costs for energy-efficient technologies and complex, poorly communicated subsidy systems discourage action, especially in lower-income households.
- **Generational divides persist:** While older people tend to view energy saving as an economic necessity, younger people are more open to sustainable values, but often lack the agency or means to act.
- **Low energy literacy:** Citizens are unfamiliar with key terms like “clean energy” or “sustainability”. Awareness campaigns often miss the mark or do not reach vulnerable or rural audiences.
- **Widespread mistrust in institutions:** Many perceive energy policies as bureaucratic, top-down, and disconnected from local realities. Programs are seen as complex or irrelevant.
- **Strong potential for peer learning:** Respondents were more likely to change their behavior based on community examples or trusted local figures than through national campaigns.
- **Latent willingness to participate:** Citizens, especially youth, are open to engagement when involved respectfully and meaningfully, indicating untapped potential for co-creation.
- **Infrastructure remains a bottleneck:** Rural areas lack adequate transport, EV infrastructure, and public spaces to enable energy-efficient behavior change.



Relevant quotes

“Given that Greece is grappling with an aging population, it presents a unique challenge in changing established habits. Elderly individuals often prefer keeping lights and televisions on throughout the day, and they show a strong inclination towards gasoline-powered vehicles. This not only highlights the difficulty in altering long-standing behaviors but also significantly complicates our efforts to transition towards more sustainable environmental practices”.

Female, 30-39 years old, Avdera

“I’m not interested in talking about these things, about energy and sustainability, they don’t fascinate me. I don’t have air conditioning, a dryer, a dishwasher, or any of those things people have. I only do laundry at night because it’s cheaper. Clean energy doesn’t exist: do you really think solar panels are clean? Or electric cars? And how do you build that battery? And then how do you dispose of it? I don’t believe it’s clean energy, in this country nothing is clean, everything is dirty and corrupt”.

Man, 60-69 years old, Vico Equense

“There is a major revolution taking place in terms of energy, and here in Portugal, we have enough solar energy, and we haven’t reached that conclusion yet. But that is bad for big companies. This will take time. People need to have a sense of water. I warn my grandchildren when they flush the toilet 10 times. But things are improving. There is a serious problem because it rained and water needs to be collected, there are no necessary dams. The Catalan use the Alqueva dam without paying, and they practice intensive agriculture. In the Algarve, a lot of water is wasted, with crops that use a lot of water. Water needs to be well managed and adapted”.

Man, 70-79 years old, Ponte do Sor

“We live in a very energy efficient house as it is very well insulated and does not lose heat in the winter nor does much heat enter it in the summer. Some time ago, my wife decided to remove the pipe from the toilet sink and put a bucket under it. We use the water from the bucket instead of pulling the chain and it is impressive how much water we are saving. Everything we have set out to do at a family level, we have been doing to contribute as much as possible to a good, sustainable future. It also happens that when you do it there are neighbors who ask you, so I understand that by reporting, in some way we are also contributing. I’m glad that this type of activity [ENTRACK interviews] is being done so that people are becoming aware little by little”.

Man, 60-69 years old, Sant Quirze de Besora



Why it matters for Policy

- The findings of ENTRACK's citizen-centered ethnography highlight a crucial policy gap: energy efficiency measures are not reaching citizens effectively, especially in rural and vulnerable areas. Without active, inclusive engagement strategies, the EU's energy goals risk being perceived as technocratic, distant, and unfair.
- This matters for policy because **technical solutions alone are not sufficient**. The energy transition is a social process that requires trust, participation, and empowerment. **When citizens do not understand, believe in, or feel part of clean energy plans, adoption stalls, even when incentives exist**. This is particularly critical because the degree of understanding and trust varies significantly based on literacy levels and age ranges. Furthermore, there is a deep-seated **mistrust in top-down** public authority-driven **policies**, which highlights the **need for a bottom-up approach that fosters genuine local engagement rather than simply imposing solutions**.
- **Moreover, local authorities are best positioned to build these relationships, yet they are often excluded from national policy frameworks or underfunded**. This disconnection threatens the credibility and effectiveness of flagship EU initiatives like the NECPs and the Social Climate Fund.
- The ENTRACK experience shows that involving citizens directly- - especially youth - in data collection and awareness building has a dual benefit: it generates context-specific insights and builds the next generation's capacity to navigate climate complexity.
- If policymakers fail to integrate these insights, the energy transition risks remaining top-down, widening social divides and missing the opportunity to foster long-term behavioral change rooted in local knowledge and trust.

Guidance

The ethnographic findings of ENTRACK underscore that meaningful energy transitions cannot succeed without the active inclusion of citizens, especially in underrepresented rural communities. Structural barriers (economic, institutional, social), continue to limit the adoption of energy efficiency measures. To close this gap, policymakers must integrate socially grounded, participatory approaches into energy policy and planning.



For clarity, the recommendations are presented in two categories: **actionable priorities**, which highlight measures that policymakers can implement directly and in the short term, and **longer-term objectives**, which are equally essential as they strengthen the social and institutional context that sustains a just and inclusive energy transition. Both categories should be understood as complementary and interdependent.

Actionable priorities for policymakers

Address economic and infrastructural inequalities

Provide tailored financial support and targeted programs for low-income households and rural areas. High upfront costs, lack of accessible mobility, and weak energy infrastructure still prevent many from engaging with sustainable options. Subsidies, low-interest loans, and free upgrades should be accompanied by expanded investment in public transport and EV infrastructure, particularly where vulnerability and isolation overlap. Synergies with sister initiatives such as *RENOVERTY*, which specifically targets energy poverty in rural and vulnerable households, can help ensure that financial support and infrastructure development are better adapted to those most in need.

Simplify access and decentralise support

Bureaucratic complexity discourages participation. Administrative procedures must be simplified and adapted to local contexts. Municipal-level one-stop-shops - with in-person assistance and clear, inclusive guidance- are essential to ensure equitable access, especially for those with low digital or energy literacy.

Build behavioural change through education, incentives and local leadership

Information alone is not enough to change habits. Policies should integrate behavioural science by combining awareness campaigns with incentives, role modelling, and social reinforcement. Local authorities and civil society organisations should lead by example, embedding sustainable practices into their operations and outreach.



Longer-term objectives to strengthen the local context

Simplify access and decentralise support

Foster collective energy practices, such as community-owned renewable projects and cooperatives. These initiatives increase access and engagement, especially for renters and low-income groups. At the same time, promote intergenerational knowledge sharing by connecting the resource-conscious practices of older generations with the digital and sustainability skills of younger people, through schools, community centers, and civic initiatives.

Strengthen local capacity through training and cross-sector collaboration

Local actors are increasingly responsible for delivering energy policy, but often lack adequate support. Training programmes should equip public officials, community leaders, and civil society with both technical expertise and participatory skills. Partnerships with NGOs, universities, and private actors can help bridge these gaps and align action across sectors. In this context, synergies with sister projects - such as *PROSPECT+*, which works with local and regional authorities - are crucial. These initiatives contribute to building a long-term community of practice that will continue beyond the lifetime of ENTRACK, strengthening collaboration and supporting the EU in addressing inequalities and advancing an inclusive energy transition.

Scale up participatory models like ENTRACK's "Climate Explorers"

ENTRACK's ethnographic approach proved effective not only in generating valuable insights, but also in activating participants, especially youth, as agents of change. Involving citizens directly in research and outreach builds awareness, critical thinking, and a sense of shared responsibility. These participatory models should be replicated across regions as part of a broader effort to integrate soft skills, reflection, and dialogue into climate and energy policies.



Next Steps / Call to Action

- Citizen engagement must evolve from being an optional add-on to becoming a structural component of European energy efficiency policy. Evidence from ENTRACK shows that when citizens are actively involved, policies gain legitimacy, local needs are better addressed, and behavioural change is more likely to endure. By contrast, purely top-down measures, while sometimes faster in design, often face low adoption rates, mistrust, and uneven outcomes, particularly in rural and vulnerable areas.
- In the next phase, ENTRACK will continue to share its findings and methods with regional authorities, municipalities, and the ENTRACK Municipality-Region Partnerships (MRPs). Beyond dissemination, the project will actively create and support collaborative spaces - such as its Community of Practice, sister project collaborations, and MRPs - to foster dialogue, mutual learning, and the practical application of participatory approaches like the Climate Explorer model.
- Rather than prescribing a single way forward, ENTRACK invites institutional partners at all levels to reflect on how these approaches can be adapted to their own contexts. The goal is not to replace established decision-making, but to strengthen its impact and ensure that energy efficiency measures reach those who need them most. By engaging with ENTRACK's collaborative spaces, authorities and stakeholders can test innovative participation methods, identify local solutions, and enhance the delivery of their energy efficiency goals.
- Ultimately, the energy transition will only succeed if it is trusted and embraced by citizens. Empowering people to be part of the process is not a matter of ideology, but of effectiveness: policies designed with citizens are more likely to be implemented, more resilient over time, and better aligned with the EU's ambition of a just, inclusive, and lasting transformation



ABOUT ENTRACK

ENTRACK is an EU-funded project under the LIFE programme, providing technical support for clean energy transition plans and strategies in municipalities and regions. It aims to accelerate the shift toward climate neutrality by strengthening the energy policy capacities of eight small to medium-sized rural municipalities in the Mediterranean.

The role of local and regional authorities is pivotal to energy transition, as real implementation must occur at the local level. These institutional bodies should act as facilitators and enablers of change.

In this context, ENTRACK supports local authorities in co-designing social energy policies that address the specific and real needs of citizens, with particular attention to vulnerable groups. The project equips regional and municipal policy actors with scientific-technical knowledge, capacity, and a methodological framework to develop and implement inclusive energy strategies, engaging citizens throughout the process and integrating their input into local agendas.

Project information:

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