Portfolio of energy support systems and participation platforms

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As energy prices have surged throughout Europe, affecting all households (directly or indirectly) through their energy bill, citizens increasingly want to contribute to the renewable energy transition. Next to market parties and government, the role of citizens in energy communities (ECs) in developing Positive Energy Districts (PEDs) can and should be strengthened, and wider groups of citizens can be involved. From this shared problem and understanding across Europe, the project will work on 'Creating, Optimizing and Planning Positive EneRgy districts while connecting citizens' energy at different geographical levels' (COPPER).

The first objective is to co-develop P2P citizens-based support- and information systems that are inclusive of energy-vulnerable groups and which foster active energy citizenship. In P2P platforms information is exchanged on the energy transition, support and coaching are given, and citizens are trained to become civil energy coaches. This starts from specific neighborhoods, and leads to exchanges between different communities and (eventually) in the wider region. Citizens' support and information systems more generally are identified, based on desk research and contact with key stakeholders and resident groups in each country (the Netherlands, Portugal, Denmark, Norway). Then these platforms are evaluated in terms of the autonomous role of citizens, facilities offered, sharing of tools, P2P help and coaching, nature of topics and challenges discussed among residents, degree of inclusiveness, and potential for innovation towards PEDs.

Introduction

- This portfolio presents energy support systems and participation platforms that were identified in the context of the project COPPER (page 2) and how to implement them in a just and inclusive way.
- Energy support system are places and organisations that foster community responsibility for the care of energy needs and maintenance of urban spaces in Positive Energy Districts
- Participation platforms are channels and mechanisms to encourage collective action and shared stewardship, balancing power in decision-making processes in Energy Communities
- This portfolio includes a diversity of platforms from institutional to informal, from national, municipal to neighborhood initiatives, both online and face-to-face interactions with practical guides and further resources to implement flexibly depending on the context (page 7-18)
- These platforms are both existing and future aspirations or modifications. They are collected from desk research, participatory observations and co-creation workshops (page 4)
- As marginalized groups are often excluded from the participation or lack of resource to implement these system and platforms while being the ones who need them the most, it provides some questions to evaluate the inclusiveness and feasibility in implementing the platforms (page 5-6)
- For a platform to sustain and be effective, the portfolio also recommends some guiding principles for inclusive communication ecology that consider all the material, social and discursive layers to ensure distributive, recognition and procedural justice (page 19)

Co-creation workshops and participatory observations

Besides desk research, this portfolio is built based on participatory observations and co-creation workshop with citizens in Portugal, the Netherlands, Denmark and Norway

- Co-creation workshops is a method of action research which positions researchers and participants equally in the production of knowledge, the analysis of problems and the proposal of solutions. It helps explore lived experiences and diverse needs of citizens regarding energy support systems. Hence, it is useful to create new or improve existing platforms.
- Participatory observation is a method of ethnographic research which allows researchers to take notes on the context and interaction in energy support systems and participation platform. It helps answer descriptive question such as “who is helping whom to do what with what impacts?”. Hence, it is useful to understand how existing platforms work and what hinders its inclusivity.

Together, these methods complement each other to access the inclusivity of the platform and how to implement and improve it in the following pages.



Co-creation workshop in Encosta de São Vicente, Torres Vedras with elderly citizens, using collage to voice their concerns.



Lunch workshop on energy saving in Hatert, Nijmegen, the Netherlands

“Is this Energy Platform inclusive?” - A Q&A to assess that

Sometimes, an energy support system and platform could be exclusive, for example:

- It does not address the energy needs of vulnerable citizens such as the elderly, women and gender minorities, racialised and migrant people, low-income and precarious households, people with mobility difficulties and need more care, people living in peripheries without means of transport or mix between these situations.
- It does not include and facilitate their active participations in the creation and decision-making processes of the platform, seeing them as passive beneficiaries.
- It does not address the structural problems that perpetuate the conditions for exclusion in the future such as financial requirements and ownership.

Therefore, this portfolio provides some Q&A to assess the inclusivity of the energy platforms and advocates for a co-creation process with vulnerable citizens.

What energy needs are being served?	How can the platforms help?	What is missing to make it more useful?
Who is the owner of the platform?	How to organize and share responsibility?	What are criteria to participate in the platform?
What is the role of the participants?	What are stakeholders involved and their relations?	What support (financial, legal, technical) is needed?

“How to implement inclusive Energy Platforms?” – The 5W1H checklist

Having an idea about an inclusive energy platform does not secure its successful implementation or improvement because there is no one-size-fits-all energy platform.

- Depending on the context in a country or municipality that the structural supports for citizen’s initiatives are available or not
- Different societies and cultures have different levels of trust in local government, businesses and associations
- Different communities have different characteristics of interpersonal relations and cohesion levels, hence, their different ways to communicate with each other

Here is a feasibility checklist to implement & improve energy platforms:

- Which kinds of platform are most suitable for the citizens in need?
- What are other existing or future solutions that are offered out there to have synergy?
- Who are stakeholders that need to be involved ?
- Where are the resources (knowledge, connections, materials) to build it?
- What is the timeline for implementation?
- How to keep the platform accessible and sustainable in the long run?

1. Energy space (Espaço energético) (existing in Portugal)

National plan to create 50 energy spaces as one-stop shops to support citizens in terms of energy efficiency

Rede Espaço Energia – Adene



Objective: To "facilitate citizens' access to support services in the preparation and application of energy efficiency and renewable energy measures, as well as to support services for the adoption of sustainable behaviors in terms of energy use, through greater energy literacy." (Despacho n.º 7100/2024 de 21 de Junho)

- In Torres Vedras, it is created by municipality council in partnership with ADENE – Energy Agency, located in the city center and run by energy technician
- Citizens can book appointment online (https://redeespacoenergia.pt/) and go in person for free consultation session, such as:

- Receive explanations of invoices and support in the efficient management of consumption;
- -Get personalized advice on energy contracts, equipment, and renewable energy solutions.
- Request an energy assessment of the dwelling, with proposals to reduce costs and improve thermal comfort.
- To learn about the available public and private support and funding for investing in energy efficiency.
- Contribute to the National Observatory of Energy Poverty by sharing information that will help build fairer and more effective solutions.

Practical guide to make Energy Space more inclusive

The co-creation workshops with citizens in Torres Vedras, Portugal suggested some improvements for the existing energy space.

- Providing supports that are sensitive to vulnerable citizen's needs (synergy with Smart AT)
- Provides home visits to evaluate energy needs and capacity, especially precarious households (synergy with LOCATEE)
- Organises workshops to facilitate citizen participation in energy communities including underrepresented groups
- More awareness about energy space and being mobile to cover peripheral areas, providing direct feedback to the local authorities
- In the future, citizens could create and run energy space through capacity building program and participatory budgeting

Smart AT - Assistência técnica inteligente para melhoria de energias renováveis



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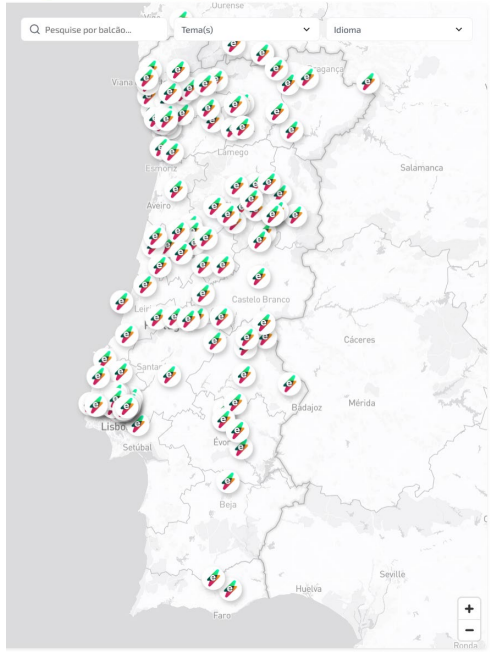

LOCATEE – Combate à pobreza energética em edifícios multifamiliares



LOCATEE

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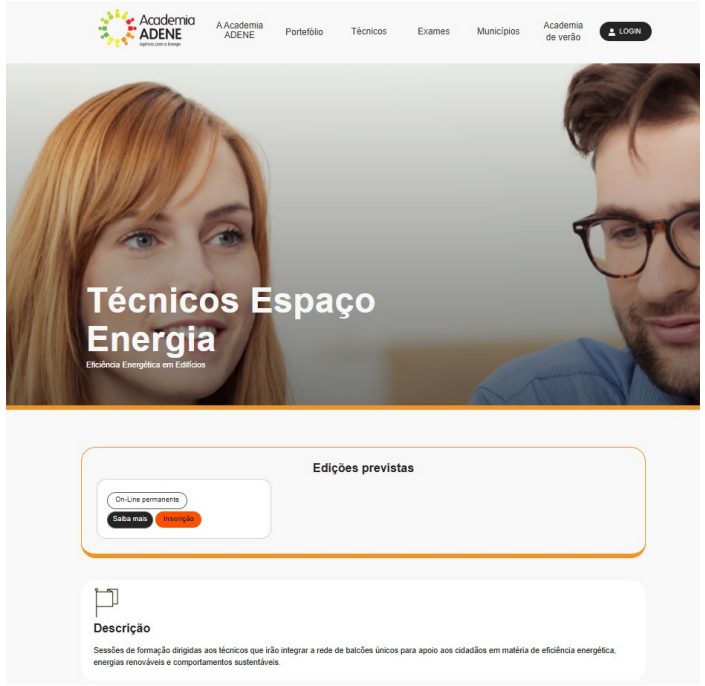


2. Neighbourhood’s online group (proposal for future)

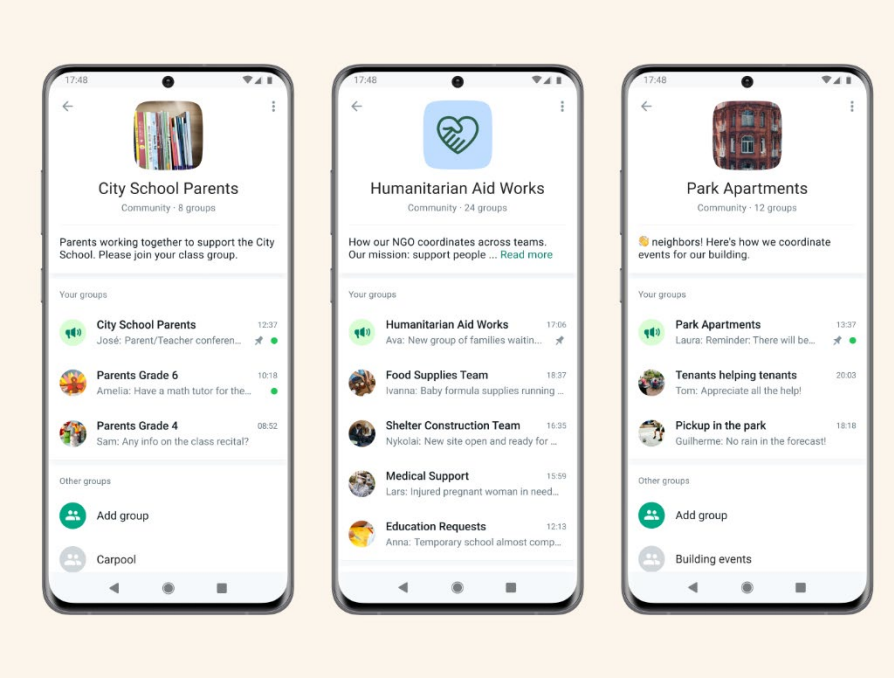


Illustration: Sub channels of neighbourhood’s WhatsApp group.
Adapting to energy online groups: Share ride, share tools, energy efficiency information, financial support/solidarity, feedback to municipality...

Some neighborhoods or condominium already have their online group chat to coordinate common issues between residents. Creating another sub channel in these groups to focus on energy and mobility is easy and practical to:

- Shared rides and shopping trips for vulnerable households
- Coordinate maintenance of common spaces and energy-related facilities
- Share tips of energy efficiency, retrofitting, renewable energy installation, financial support...
- Share feedbacks with relevant municipal departments (urban planning, civil protection, social inclusion...), for exemple, about bus stop location and schedule.
- Building energy community together in the future.

The platform is locally owned, free to access online by mobile and run by volunteers in the neighbourhood with experiences in online community mediation.

Practical guide and resources for online group

- It can share information of other existing platforms and programs (such as Energy Advisory Office – GAE, Somos Energia)
- Available on-demand mobility program and free public transport in the region (Flexible Transport)
- Ask for technical supports from local vocational school that has energy related training
- In Portguese: Online kit for energy solidarity from Energy cooperative (Coopérnico)
- In English: Online platform to support energy community (Energy Community Platform)

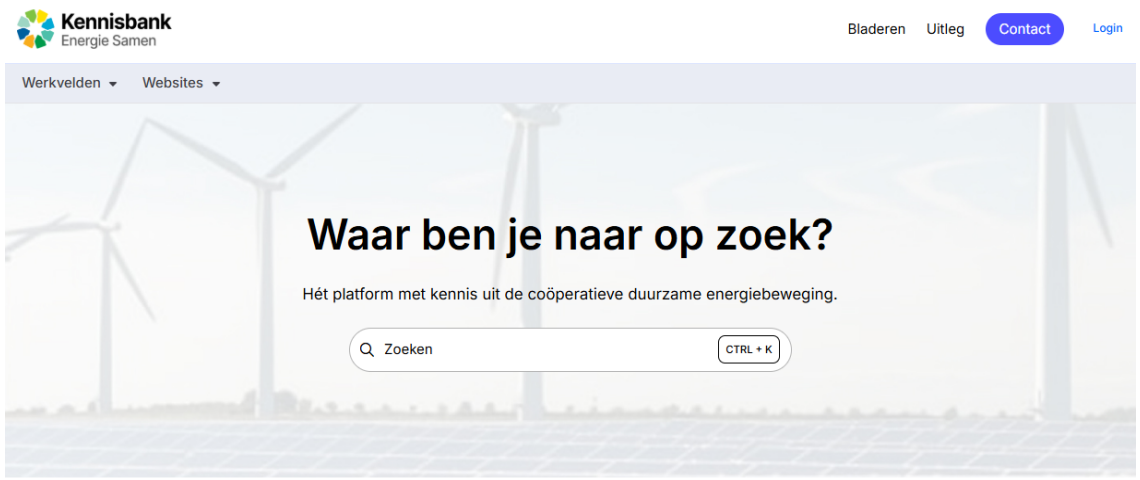


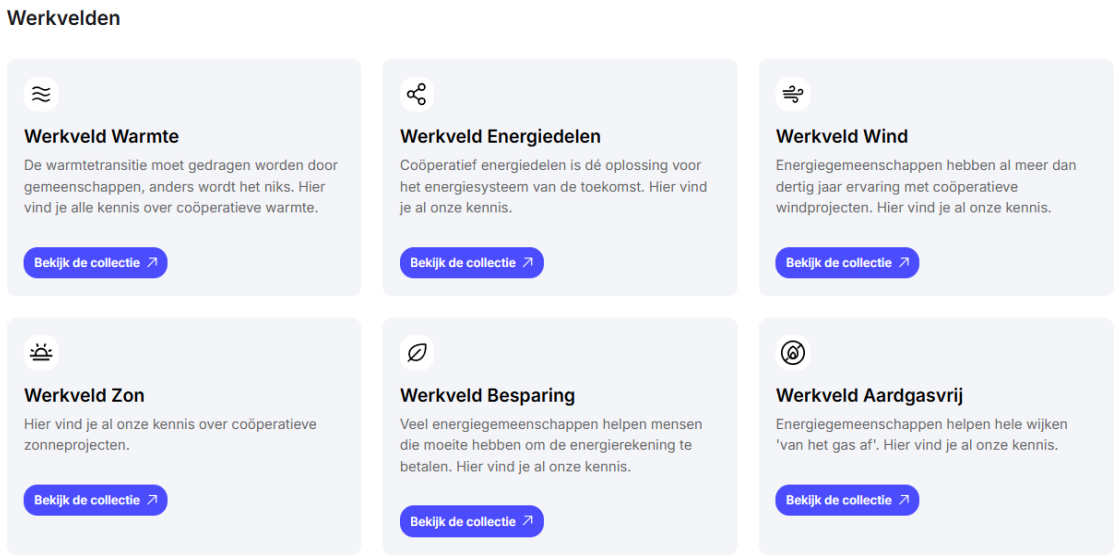






3. Community energy knowledge database (in the Netherlands)



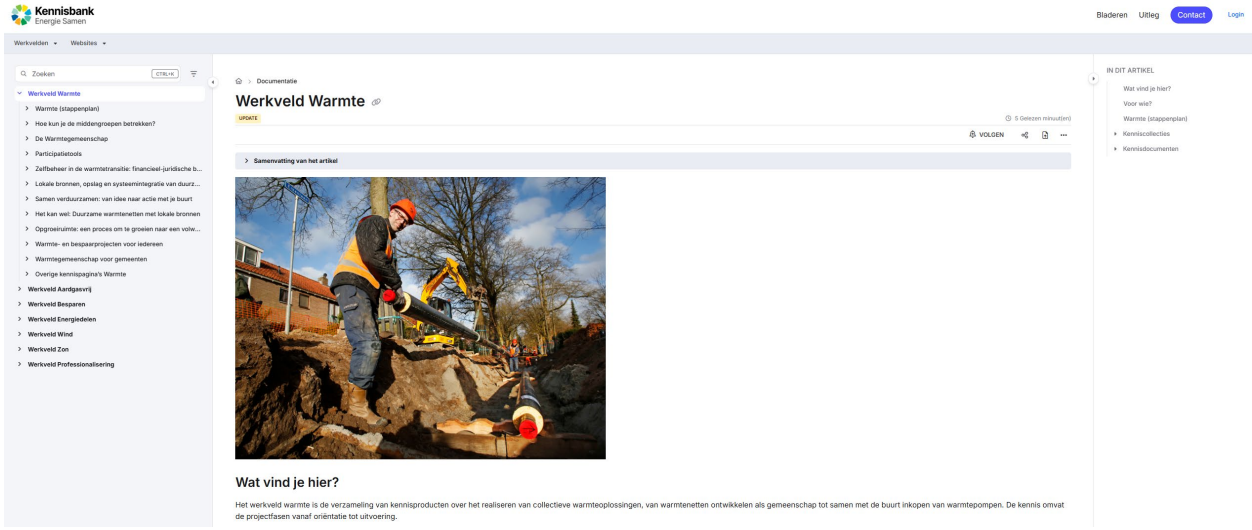


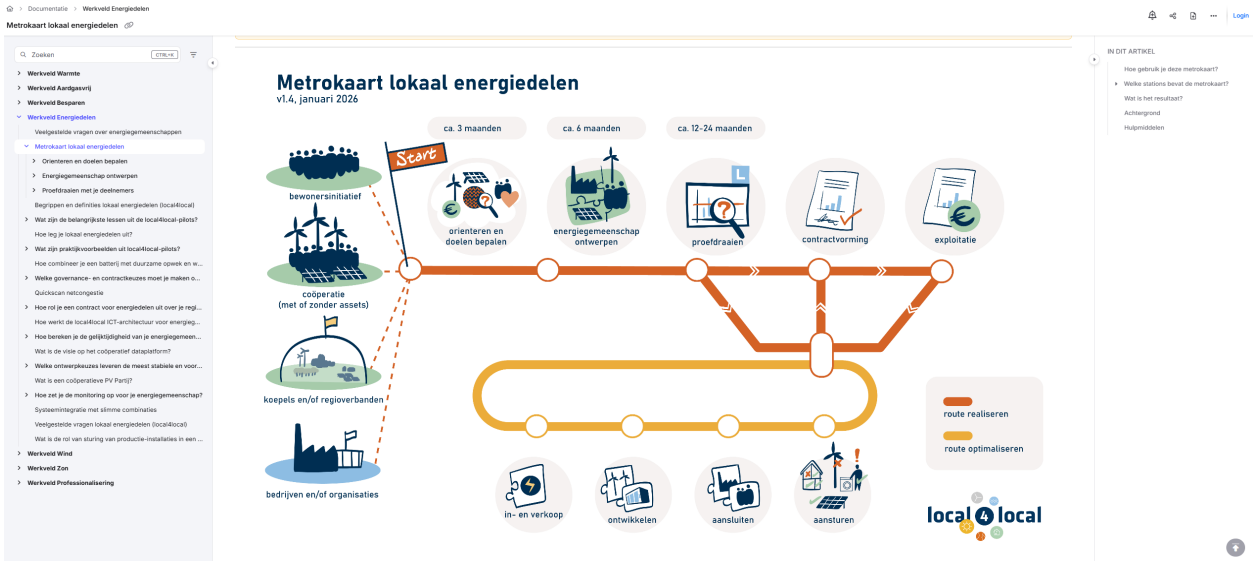
- Online platform presenting information about different aspects of community energy, including heating, energy sharing, wind energy, solar energy, energy saving, and moving towards natural gas-free neighborhoods
- Created and hosted by Energie Samen (the Dutch national umbrella organization of and for energy communities), in collaboration with their member organizations
- Content is based on knowledge sessions, communities of practice, and interviews with representatives from Dutch energy community initiatives

Knowledge database on energy community initiatives, facilitated by Energie Samen (https://energiesamen.document360.io/)

Practical guide and resources to implement

- Knowledge database allows both starting and more mature energy community initiatives to easily access knowledge and expertise about relevant topics, with no additional financial cost
- Provides the latest insights from both practice and research about topics relevant for energy community initiatives
- Offers concrete examples from practice on these various topics, allowing energy community initiatives to exchange experiences and collaborate in a targeted manner
- Requires substantial time and effort to build up, but parts of this knowledge database were developed with support from projects, programs, or government agencies (at both national and local levels)
- Nested structure to present information (knowledge documents, knowledge collections, step-by-step guides and 'metro maps', thematic fields, and knowledge session notes) allows for easier navigation





4. *"Room to Grow"* training for energy communities and municipalities



Image source: https://energiesamen.nu/opgroeiruimte/



- The “development space” (*'opgroeiruimte'* in Dutch) is the space that a community initiative and a municipality allow each other to jointly and carefully shape their collaboration, enabling both to grow into new roles (see: Energie Samen).
- Based on this concept, Energie Samen and consultancy Duneworks (commissioned by national government-led knowledge program DuurzaamDoor) have developed a *"Room to Grow"* training that serves as a joint explorative workflow for municipalities and community initiatives collaborating on the heat transition.
- The training consists of workshops and reflection assignments that help community initiatives and municipalities explore their (new) roles in collaborations.

Video explaining the 'development space' concept and the "Room to Grow" training (see: YouTube Duurzaam Door)

Practical guide and resources to implement

- The "Room to Grow" training helps community initiatives and municipalities:
  - Get the collaboration between these parties off to a good start and keep it on track
  - Achieve successful collective heating projects at the project level
  - Create successful public-civil society collaborations at a higher level
  - Form close, long-term, and cross-project partnerships between municipalities and resident initiatives
- Municipalities and community initiatives can jointly apply for the training sessions, the costs of which are often carried by the municipalities.
- The training has been piloted in three Dutch municipalities (Zwolle, Zutphen, Amsterdam) and is now applied in Eindhoven and Utrecht.
- Although the focus is on sustainable heating, the training guidelines can to some extent also be applied to other fields in which communities can take initiative, such as regarding collective solar energy, greening, water management, food, and healthcare.

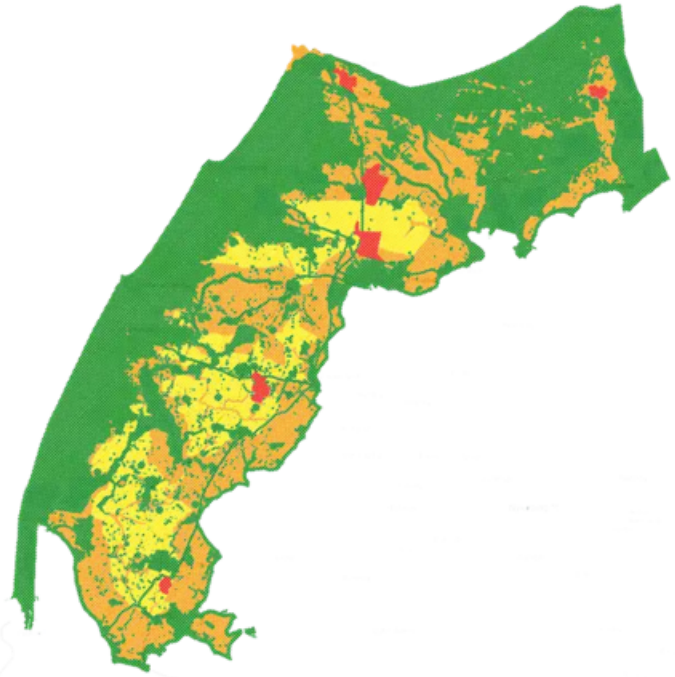


Image source: https://energiesamen.document360.io/docs/opgroeiruimte-een-proces-om-te-groeien-naar-een-volwassen-partnerschap-1?highlight=opgroeiruimte



Image source: https://energiesamen.nu/nieuws/ervaring-training-opgroeiruimte-zuidoost-brabant/

5. Energy associations



Example: Energy associations in Thisted municipality, Denmark

- Eight energy associations has been established on the initiative of Thisted Municipality (Northwesten Denmark) as part of the so-called Thy-Model
- Organise local communities on matters related to renewable energy (PV, Wind, power-to-X)
- Open for participation for all local citizens
- Serve as a local arena for dialogue and represent the local community in communication with other stakeholders such as municipality and energy project developers
- Can facilitate local community discussions and negotiations on proposed RE projects
- Can help distribute economic resources locally after establishment of a RE project

(https://www.thisted.dk/politik-demokrati-and-indflydelse/thy-til-groen-omstilling/vedvarende-energi/energiforeninger)

Practical guide and resources to implement

Capacity building

- The energy associations have had access to an independent energy consultant (legal and financial matters) in the RE negotiation process
- Costs for energy consultants have been covered by Thisted Municipality
- Each energy association can be viewed as a pooling of resources within the local community
- Beyond the local community, the energy associations hold networks meetings to share experience and learn from each other

Challenges

- Work in the energy associations is voluntary, and members point to time as a limited resource
- The local legimacy the energy associations is to be earned continuously



(https://www.thisted.dk/nyheder/2023/december/energiforening)

6. Energy festival (example from Norway)





The Egersund Energy Festival, held on 21 June 2025 (www.energifestivalen.no)

- The Energy Festival is an excellent example of how local partners create meeting places for dialogue and learning. Such events are family-friendly, interactive, and provide opportunities for direct contact with experts and local stakeholders.
- The goal is to inspire both children and adults to learn more about energy and sustainability, and to show how everyone can contribute to a more sustainable future.
- The event offers a range of activities, including:

- Smart demonstrations of solar power, wind power, and hydrogen as energy sources, allowing the public to experience the technology firsthand.
- Interactive board games exploring how the choices we make today shape the future of energy.
- Expert panels where professionals in energy and sustainability are available to answer questions and discuss local solutions.
- A student exhibition featuring creative models and ideas from local schoolchildren, showcasing their visions for future energy solutions.

Practical guide and resource to implement

Extended Outreach on Sustainable Energy

Collaboration with Schools and Youth

- Young Enterprise: Through partnerships with organisations like Young Enterprise Rogaland, the festival engage schoolchildren in projects such as the SMART competition, where pupils develop creative energy solutions. This fosters early awareness and encourages young people to think innovatively about energy.
- School Visits and Educational Materials: The festival provide knowledge and resources to local schools, such as projects involving pupils from Husabø School.

Website and Digital Platforms

- Dalane Energi's website serves as a central information hub, sharing news, energy saving tips, details about projects like COPPER, and practical advice for households and businesses.
- Social Media: The festival uses platforms like Facebook, LinkedIn, and Instagram to share updates, tips, and stories about local energy projects.



The festival is designed for all ages and has a low threshold for participation, with an emphasis on fun, learning, and local engagement. Through practical examples, creativity, and dialogue, the organisers aim to raise awareness about energy use and inspire action—both individually and collectively.

Recommendation for inclusive communication ecology

Communication ecology	Procedural justice	Distributional justice	Recognition justice
Infrastructure layer: The devices and connecting media, (and governance structure), that enable communication and interaction	Participation mechanisms that actively lower structural barriers through multilingual materials, accessible formats, offline channels and embedded facilitation	Adaptive benefit-sharing regimes responsive to territorial conditions, institutional structures and shifting material stakes	Designs that accommodate epistemic diversity, varied routines, health conditions and financial constraints shaping retrofit strategies, flexibility expectations and digital interfaces
Social layer: People and social modes of organizing those people such as friendship groups, community organizations, companies or legal entities	Residents, including vulnerable groups, hold meaningful influence over governance arrangements and co-define local energy futures	Vulnerable groups, tenants or long-standing communities experience disproportionate burdens	Align with residents' linguistic, cognitive, physical and cultural capacities through multimodal, visual and facilitated engagement channels
Discursive layer: Content of communication, the ideas or themes that constitute the known social universe that the ecology operates in	Opening agenda-setting and problem framing to contestation rather than privileging technocratic expertise	Transparent narratives about which benefits and burdens will be generated and how they are defined and justified	Avoidance of narrow constructions of the 'ideal energy user' and recognition of heterogeneous narratives about comfort, risk, identity and belonging



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