



WORKSHOP

Good practices: energy democracy

CERV Programme Network of Towns

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PORTUGAL'S PINHEL LEADS THE WAY IN MUNICIPAL RENEWARI F ENERGY

The City Council of Pinhel is firmly committed to using renewable energy in its municipal buildings and facilities. This is an important step toward greater sustainability and energy independence.

Focus on Self-Consumption and Energy Efficiency

Although each project may have its own characteristics, the main idea is to produce energy for self-consumption. The city is installing renewable energy systems—mostly solar panels—on buildings and land that belong to the municipality. These systems are typically placed on:

- Public buildings like city hall and administrative offices
- Sports facilities, including pavilions and sports centers
- Schools and kindergartens run by the municipality
- Public lighting systems, using solar energy where possible
- Water treatment plants, to reduce energy use

The energy produced is used directly by these facilities, which helps the city reduce its dependence on the national grid and cut energy costs. By investing in clean energy, the City Council of Pinhel improves its efficiency and shows its support for Portugal's national goals for sustainability.



HYPERION ENERGY COMMUNITY - A DEMOCRATIC SOLAR COLLECTIVE IN ATHENS PROMOTING ENERGY JUSTICE

The Hyperion Energy Community stands as a beacon of energy democracy in Athens, Greece, championing a decentralized and equitable approach to energy generation and consumption. More than just a collection of solar panels, Hyperion embodies the principle of energy justice, empowering citizens to take an active role in their energy future.

Collective for Clean Energy and Local Empowerment

At its core, Hyperion operates as a solar collective. This means that local residents, businesses, and organizations come together to jointly invest in, own, and benefit from renewable energy infrastructure, primarily photovoltaic (PV) systems. These installations are strategically placed on suitable rooftops and available land within the urban fabric of Athens, transforming everyday spaces into hubs of clean energy production.

Generation and Distribution for the People

The energy generated by Hyperion's collective solar installations is primarily aimed at self-consumption by its members. This reduces reliance on the traditional, centralized grid and helps members lower their electricity bills. Any excess energy can be fed back into the national grid, contributing to Greece's overall renewable energy targets. The beauty of this model lies in its distributed generation, where power is produced closer to where it's consumed, minimizing transmission losses and increasing grid resilience. Furthermore, the profits or savings from these shared ventures are distributed among the members, fostering a sense of shared ownership and tangible benefit.

Promoting Energy Justice and Community Resilience

Hyperion's mission extends beyond simply generating clean energy; it's about fostering energy justice. This means ensuring that the benefits of the energy transition are accessible to everyone, not just a select few



GREECE Dimos Alimou

FCOTOLIRISM IN DINGLI

eople Power Up: Friends of the Earth Malta's Vision for Community Energy

Friends of the Earth Malta (FoEM) is at the forefront of advocating for a truly democratic and sustainable energy future for the archipelago through its "People Power Up" initiative. This vital campaign is dedicated to establishing and promoting Renewable Energy Communities (RECs) across Malta, recognizing their transformative potential for both environmental protection and social equity.



Empowering Citizens Through Collective Ownership

The core principle behind "People Power Up" is to shift energy generation from centralized, often fossil fuel-dependent models, into the hands of citizens. RECs, as envisioned by FoEM, are democratically controlled and transparent organizations - such as cooperatives or social enterprises - where households, families, small and medium-sized enterprises (SMEs), and local authorities can co-own and implement renewable energy projects. This allows individuals who might not have access to suitable rooftops or those at risk of energy poverty to collectively invest in, for example, solar panels on public buildings like schools. They can then benefit from the energy generated, either directly through self-consumption or through revenue from feed-in tariffs...

A Call for Action and a Sustainable Future

"People Power Up" represents a clear call for Malta to harness its significant renewable energy potential, particularly solar, by empowering its citizens. By putting "people power" at the heart of the energy transition, Friends of the Earth Malta is advocating for a more just, resilient, and sustainable energy landscape for all Maltese residents.

ENERGY CITIZENSHIP IN THE BALTIC STATES - CITIZEN-LED INITIATIVES DRIVING THE ENERGY TRANSITION

Energy Citizenship in the Baltic States: Citizen-Led Initiatives Driving the Energy Transition

The Baltic States - Estonia, Latvia, and Lithuania - are increasingly embracing the concept of energy citizenship as a vital component of their ambitious energy transition goals. Moving beyond traditional consumer roles, their citizens are becoming active participants, or "prosumers," in shaping their energy systems, fostering a more democratic, secure, and sustainable future for the region.



A Shifting Landscape Towards Decentralized Power

Historically, the Baltic energy landscape has been marked by a strong push for energy independence, particularly from external suppliers. This has primarily involved significant investments in large-scale renewable energy projects like wind and solar farms. However, the notion of energy citizenship, defined as the active engagement of individuals and collectives in promoting sustainable energy, is gaining traction. It signifies a crucial shift towards decentralization, where local communities, rather than just large state or private entities, play a direct role in energy production, consumption, and even distribution.

Emerging Models of Citizen-Led Generation

While the concept of energy communities is relatively new in the Baltics compared to some Western European counterparts, the legal frameworks are increasingly being put in place to enable them. Countries like Latvia and Lithuania have recently adopted or amended laws to define and support Renewable Energy Communities (RECs) and Citizen Energy Communities (CECs). These legal entities allow households, private individuals, small and medium-sized enterprises (SMEs), and local authorities to collectively invest in and benefit from solar photovoltaic (PV) installations, often on the rooftops of apartment buildings or public facilities. The primary aim is the local self-consumption of this generated electricity, which reduces reliance on the grid and significantly lowers energy bills for the members.

A prime example of this emerging shift is the Estonian Islands Energy Agency (EISEA). This not-for-profit organization is dedicated to delivering a large-scale energy transition across the Estonian archipelago

DEMOCRACY ENERGY A NEW REVOLUTIONARY CONCEPT

In the small town of Žygaičiai, located in western Lithuania, a community-led solar energy project has become a model of energy democracy in action.

The local municipality, together with a group of residents, initiated the installation of a community-owned solar power plant. Instead of depending on large energy companies, the town invested in producing its own electricity using photovoltaic panels installed on public land.



- Ownership and Participation: The project is partly funded by local citizens, who own shares in the plant. This gives them a say in decision-making and a share in the financial benefits.
- Public-Municipal Cooperation: The local government facilitated the legal and technical framework, providing land and initial support.
- Clean, Local Energy: The solar plant produces electricity for public buildings like the local school, administrative offices, and street lighting. Surplus energy is sold back to the grid, creating revenue for the community.
- Education and Awareness: The project has also helped raise awareness about renewable energy, especially among young people. School visits to the solar plant are part of environmental education programs.

Benefits for the Community:

- Lower energy bills for the municipality
- Greater energy independence
- Local economic benefits, as profits stay within the community
- Active citizen engagement in energy transition

This example shows how energy democracy empowers citizens to take part in decisions about their energy future while also promoting sustainability and community resilience.

ENERGY DEMOCRACY: GOOD PRACTICES FROM THE CITY OF BREDA



The "See2Do" project illustrates how Breda puts citizens at the heart of its energy transition. Recognizing that energy loss can be an invisible problem, the city, in collaboration with the local energy cooperative BRES, implemented a multi-faceted approach to engage residents directly: THE NETHERI AND

Thermographic Camera Surveys: The first phase involved taking thermographic pictures of residential building exteriors. These images visually highlighted where and how much energy was escaping from homes, turning an abstract problem into a clear, visual reality for homeowners. As Pieter Klep, the See2Do project leader, noted, people might know single-glaze windows are inefficient, "but when they see it in a picture, they really understand what that means."

Kitchen Table Conversations: For those households showing interest, the project moved to a second phase: personalized "kitchen table conversations." These detailed discussions, based on the thermographic images, provided residents with specific, tailored advice on how to improve their homes' energy efficiency. This direct, personal interaction was key to moving from awareness to action.

Door-to-Door Outreach and the "Greenhopper: Breda learned that to effectively involve residents, they needed to bring the information and solutions directly to the people, rather than expecting residents to come to them. This led to the creation of the "Greenhopper," a mobile information station staffed by volunteers from the local energy cooperative BRES. The Greenhopper travelled through various neighborhoods, informing residents about energy-saving strategies and building trust within communities. This direct, accessible approach helped to raise awareness and enroll residents in Breda's energy transition efforts.

Beyond "See2Do," Breda also fosters collaboration with various partners, including citizens, companies, knowledge institutes, and existing energy cooperatives, highlighting a multi-stakeholder approach to achieving its carbon-neutral target by 2044. Their focus on a "bottom-up approach," particularly in engaging businesses in large-scale photovoltaics on business parks, further reinforces their commitment to empowering local actors in the energy transition

SINGEL SAFARI IN TOWN FILAKOVO

Filakovo in southern Slovakia is the gateway to the region's rich biodiversity and offers a variety of ecotourism opportunities for nature lovers. The surrounding areas are characterized by diverse flora and fauna, making it an ideal destination for those interested in the natural heritage of Central Europe. The region around Filakovo has a mixture of woodlands and meadows that are home to a variety of flora, small mammals, birds and many invertebrates. The surrounding landscapes provide hiking trails



SLOVAKIA Mesto Fil'akovo

and the observation of local flora and fauna. Participating in wildlife tours, such as deer and bird watching, is not just a fun experience for children.

The town park of Filakovo was originally created from Turkish gardens in the second half of the 19th century. Count Berchtold built his mansion under the castle. The castle belonged to the largest owners of Filakovo until the Second World War. They followed the style of English gardens, keeping the natural vegetation. The paths and small bridges were adapted to the environment, and flower beds were planted only near the manor house. In addition to local trees and plants, many exotic species were planted. There is a lake on the edge of the park, below the castle.

One of the attractions of the park is a small zoo (supposedly the first in Slovakia in the 1950s), located on the left side of the stream flowing out of the lake.

Nowadays, the new project of the town of Filakovo, "Revitalization of Filakovo City Park" will improve the park's microclimate. Landscaping helps the park's environmental stability and serves as an eco-corridor for wildlife. Planting more densely will increase vegetation, help absorb more water and reduce evaporation. A zone of water-filtering plants around the lake creates a natural barrier and a smooth transition to the environment. The main goal of the project is to renew the park with natural water absorption principles, make it more attractive, strengthen biodiversity, and create a pleasant environment. Catchment tanks collect rainwater from nearby building roofs to fill the lake. A footbridge over the lake connects the area, and new sidewalks and ramps make it accessible to everyone. The functions of the proposed modifications include ecological, architectural, urban and psychological aspects, among others.

Visitors can gain a deeper appreciation of Fil'akovo's rich biodiversity and contribute to the sustainable development of ecotourism in the region. Guided tours and local ecotourism services can enhance the visitor experience. Learning about nature conservation efforts and the importance of biodiversity in the region can be helped with educational programs and guided tours. Sustainable tourism initiatives are supported to balance visitor access with environmental protection.

FROM DEPENDENCY TO RESILIENCE - COMMUNITY ENERGY AS A TOOL FOR REDUCING FOSSIL FUEL RELIANCE

On the northern side of Lake Velenje, where agricultural land predominates, two eco-remediation islands, each covering an area of 50 m², have been installed on the water surface. The project aims to protect the lake's natural heritage as a counterbalance to the development of tourism infrastructure. By utilizing natural systems and processes for environmental restoration and protection, plants help reduce excess nutrients in the water and restore essential oxygen levels. The islands serve as a habitat for numerous species, from microorganisms and fish



to birds. The goal is to maintain and improve the lake's water quality, enabling further sustainable development on, in, and around the lakes.

The eco-remediation islands on Lake Velenje are floating structures planted with wetland vegetation that purify the water and enhance the lake's ecosystem through natural processes. Their primary function is to remove excess nutrients, thereby reducing the risk of algal blooms while enriching the habitat for microorganisms, invertebrates, fish, and birds. The plants on the islands not only filter the water but also contribute to greater biodiversity and the stability of the aquatic environment.

The construction of the eco-remediation islands took place in three phases. The first phase involved plant preparation, which lasted several months. The investor provided space for growing native wetland plants collected from the vicinity of the lake. The surface was shaped into a shallow basin, and the plants were carefully nurtured until they were ready for transplantation onto the islands. The second phase involved the assembly and planting of the islands, which took up to two weeks. The floating modules were assembled at the launch site, then planted and connected into two larger units. The final phase included transport and anchoring, during which the islands were launched onto the water surface and secured using sustainable materials. The installation process was carried out in collaboration with the investor, experts from the company Limnos, and on-site support.

The project was funded with the support of the European Agricultural Fund for Rural Development, with the Municipality of Velenje responsible for its implementation. The managing authority designated for the execution of the Rural Development Program of the Republic of Slovenia for the period 2014-2020 was the Ministry of Agriculture, Forestry, and Food.

Total budget: 30.000 EUR

https://www.velenje.si/projects/za-aktivnejsi-jutri/

EXAMPLE OF ENERGY SAVING IN GALICIA

Vía Verde del Eo, located between the municipalities of A Pontenova and San Tirso de Abres, is a perfect example of sustainable ecotourism in Galicia. Stretching over 12 kilometers, this greenway follows the former railway line that once connected the mines of A Pontenova to the Eo River, transforming this historic industrial route into a trail that combines biodiversity, unique natural landscapes, and cultural heritage.



SPAIN Asociacion Cultural Enrédate

This itinerary traverses an area of great ecological value,

recognized as the Río Eo, Oscos, and Terras de Burón Biosphere Reserve. Along the route, visitors can enjoy an immersive experience in nature, discovering a rich biodiversity that includes native flora and fauna. The predominant trees include chestnuts, oaks, and alders that make up the riverside forest, while birds such as herons, kingfishers, and cormorants offer unique spectacles for birdwatching enthusiasts.

The route is ideal for walkers and cyclists, featuring a smooth and accessible path that allows visitors to enjoy exceptional landscapes like the Eo River, whose crystal-clear waters wind through mountains and valleys. Along the way, travelers pass through tunnels, historic iron bridges, and rest areas that invite them to pause and appreciate the tranquility of the surroundings. Informative panels along the route explain the history of the railway and its importance to the region's economic development.

The Vía Verde del Eo stands out not only for its natural richness but also for its commitment to sustainability. By promoting environmentally friendly tourism, it encourages the conservation of this protected area while boosting the local economy. Small villages such as A Pontenova and San Tirso de Abres offer rural accommodations and typical local products that enhance the experience, allowing visitors to enjoy Galician gastronomy and the warm hospitality of the region.

This route is much more than a path; it is an example of how environmental conservation can be integrated with the enjoyment of active tourism. The Vía Verde del Eo invites you to discover the most authentic side of Galicia, where history and nature come together to offer an unforgettable experience, becoming a model of ecotourism that respects and celebrates the region's biodiversity.

'MICRO-ADVENTURES' IN THE GRAND AVIGNON: THE ART OF FINDING EXOTIC PLACES NEXT DOOR

In the Avignon region (Vaucluse, France), the citizen-led cooperative Énercipa (Énergie Citoyenne du Pays d'Avignon) has pioneered a community energy model grounded in photovoltaic technology and local engagement. Since its establishment in 2019, Énercipa has evolved into a SCIC cooperative, backed by local citizens, public authorities, NGOs, and local businesses, with the municipality of Avignon supporting its installations and development



One of the first flagship projects came online in April 2024: a 35 kW solar cluster installed on the rooftop of the Arrousaire kindergarten in the Saint-Ruf district. This system, equipped with 86 solar panels, now produces roughly 47-49 MWh per year, enough electricity to meet the annual needs of some 41 people (excluding heating and hot water).

Énercipa also wants to expand to private roofs and gives reports every month about how much electricity is used, helping the local consumption instead of giving energy to the grid. Many public buildings are part of the project, and it's important that people like parents, teachers, and city workers help with decisions. This makes people feel involved.

Parallel to these efforts, Avignon's municipal government has supported long-term energy autonomy goals through projects like Cap Sobriété Énergétique, covering municipal buildings. For example, a modern aquatic centre now uses PV and geothermal energy to supply up to 60% of its energy needs. Public libraries and schools are being upgraded with solar panels, rainwater recovery, green roofs, LED lighting, and advanced insulation, aiming for high standards such as Bâtiment Durable Méditerranéen and positive-energy buildings (BEPOS)

The municipality works for energy independence with projects like solar panels and better insulation in schools, libraries, and even a swimming pool that uses solar and geothermal energy. They try to reach high green standards.

So, in Avignon, they mix solar energy, local involvement, and modern buildings to make a model that is clean, democratic, and good for the community.

IZGREI INITIATIVE IN BEI OZEM - A CITIZEN ENERGY PIONEER

Izgrei initiative in Belozem, southern-central Bulgaria, serves as an inspiring example of grassroots renewable energy. Founded by two brothers with a passion for sustainability, Izgrei began modestly—with just nine solar panels and four co-owners—but carried a bold vision: to democratize the production and ownership of clean energy.

This citizen-led energy community was designed to empower local residents by involving them directly in decision-making and sharing the benefits. Rather than relying solely on large companies or state-run utilities, Izgrei put control in the hands of ordinary people.

\$\triangle\$ Shared ownership model: Participants jointly own the solar infrastructure, which fosters transparency and collective responsibility.

Community governance: Decisions—from energy pricing to maintenance—are made collaboratively, giving each member a voice.

① Local impact: Energy generated from the panels powers nearby homes and buildings, reinforcing the idea that energy should be produced and consumed locally.

Scalability: Although it started small, Izgrei is designed as a model that can be replicated in other towns and regions across Bulgaria, including places like Pleven.

By focusing on civic participation, renewable energy, and local benefit sharing, Izgrei represents a new wave of energy democracy in Bulgaria. It's a compelling case for how small initiatives, when rooted in community and purpose, can lead to transformative change.



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