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Switching people on to green power in Europe

Researchers are helping residents across the EU opt for clean energy.

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Europe has a common goal of clean energy and numerous paths towards it. One of the routes leads through playgrounds in Berlin.

Outdoor children's spaces in the German capital have been a focal point of efforts to inform women about the roles they can play in accelerating the EU's expansion of renewable energy such as solar and wind power and abandonment of fossil fuels including oil and natural gas.

All aboard

The idea is to spur bottom-up "energy communities" that empower residents across Europe to influence infrastructure changes needed for the EU to achieve its 2050 climate-neutrality target.

'What can we learn to make sure that the energy transition is something which people from all kinds of backgrounds can get involved in?' said Dr Andrea Kollmann, principal research coordinator at the Energy Institute at Johannes Kepler University Linz in Austria.

She led a project that received EU funding to come up with answers. Called DIALOGUES, the project wrapped up in April 2024 after three years and brought together universities, research institutes and climate organisations in countries ranging from Austria and Germany to Switzerland and Turkey.

The DIALOGUES team organised “Citizen Action Labs” to promote awareness and understanding of changes in the energy landscape. That’s where Berlin playgrounds enter the picture.

Previous research had indicated that people with higher incomes and a technical educational background – often men rather than women – tended to be more engaged in the hands-on questions related to local energy supply and consumption.

As a result, the project partners in Berlin reached out to people who were unlikely to be involved but who have an important stake in the whole matter.

‘In their case it was women,’ said Kollmann.

Mother movers

She said that, at the playgrounds, the team asked mothers to join discussions of two to three hours about “energy cooperatives” – a business model in which residents jointly own and control an enterprise that promotes renewable power or energy savings.

The Berlin discussions – four focus groups – took place between 2022 and 2024 and drew 41 participants in total. The team offered childcare at some of the sessions, enabling some mothers who might otherwise have been unable to take part to have their say.

Many of the women were part of Berlin’s large community of Turkish migrants. Most had never heard of an energy cooperative and expressed interest in it, according to Kollmann.

‘It doesn’t necessarily take an electric car or a photovoltaic panel on your roof to be an active energy citizen,’ she said.

Lessons learned

The Swiss city of Geneva and the Bulgarian town of Belene were a basis for other project work.

In Geneva, where efforts by local authorities and companies to green energy production and consumption are relatively advanced, an action lab focused on the role of households and encouraged residents to take an active role.

A lab in Belene, where public participation in energy matters is a new idea, spurred people to talk about choices and raised general awareness.

One main takeaway from DIALOGUES as a whole is a need to create – or reinforce – ways for ordinary people to get involved in decision-making about energy and environmental policies.

A second is that subsidies, tax incentives and other financial support are important in helping people invest in renewable energy. A third conclusion is that public support is often necessary for people to develop skills to participate in the energy transition.

Local power

Renewable-energy communities feature in new European legislation aimed at expanding the market share of renewables to at least 42.5% in 2030 from 23% in 2022.

The idea is that, during Europe’s increasing shift towards clean power, local actors can and will play growing roles ranging from altering consumption habits and shaping storage systems to anticipating labour demands and speeding up national approval procedures for renewable projects.

Energy accounts for around three-quarters of Europe’s greenhouse-gas emissions, highlighting the importance of the push to expand the supply of renewable sources.

Like Kollmann in Austria, Dr Annika Wolff in Finland has worked to remove practical barriers to local green-energy initiatives in the EU.

An associate professor in user-centred software engineering at Lappeenranta-Lahti University of Technology, or LUT, Wolff led an EU-funded project that focused on helping widen energy options for people.

Called GRETA, the project ran for two and a half years through October 2023.

'The starting point was how to empower people to take control of their own energy choices,' said Wolff.

Obstacle course

The project team conducted a Europe-wide survey of a total of 10 000 people, small businesses and policymakers in 16 EU countries ranging from Belgium and the Czech Republic to France and Poland.

The survey grouped participants based on information about how they consume energy, view power production and stay informed on related topics, among other things.

The participants fell into six categories ranging from the most engaged and tech-savvy to indifferent. Middle categories included "young mindfuls" and "resource-constrained".

The results indicated that 58% of participants were already actively taking part in the energy transition.

But the survey also found that a significant proportion of people was unlikely to get more involved without further support.

The biggest barriers for greater engagement were financial constraints, lack of knowledge and an attitude that one person can't make a difference, according to the survey, which also indicated that many people still expect governments to take the lead.

The project showed that even involved and experienced people in the field can encounter energy-transition obstacles, according to Dr Lurian Klein, senior innovation developer at a Portugal-based climate-tech company named Cleanwatts Digital.

GRETA included six case studies in Finland, Germany, Italy, the Netherlands, Portugal and Spain.

Klein was in charge of GRETA's Portugal case study: a nationwide energy cooperative named Coopérnico that was established in 2013 and supplies solar power to thousands of people, small and medium-sized enterprises and municipalities.

Contracts for change

For Coopérnico, one challenge has been getting the cooperative's voice heard among other, more powerful energy-market players that prefer the status quo.

Regular dialogue among energy players – including policymakers – to highlight people's contributions to the transition would help to overcome this obstacle, according to Klein.

The project produced policy recommendations for a people-centred energy transition. One recommendation is for "energy citizen contracts".

These are voluntary commitments to coordinate sustainability practices and goals between energy communities and policymakers. The contracts can, among other things, help identify the resources needed to meet shared targets.

For Klein, the EU's push for local initiatives to spur energy change in Europe will increasingly encompass everything from small gestures to headline ones.

‘The role of citizens in the transition can correspond to individual or collective initiatives and social or political ones,’ he said.

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