

Newsletter

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Welcome to the quarterly newsletter from EC²: Energy Citizenship and Energy Communities for a Clean Energy Transition.

Funded by the EU's Horizon 2020 Research and Innovation Grants, EC²'s aim is to discover what it takes for energy citizenship and energy communities to thrive.



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Introduction: Energy Communities in a time of uncertainty?

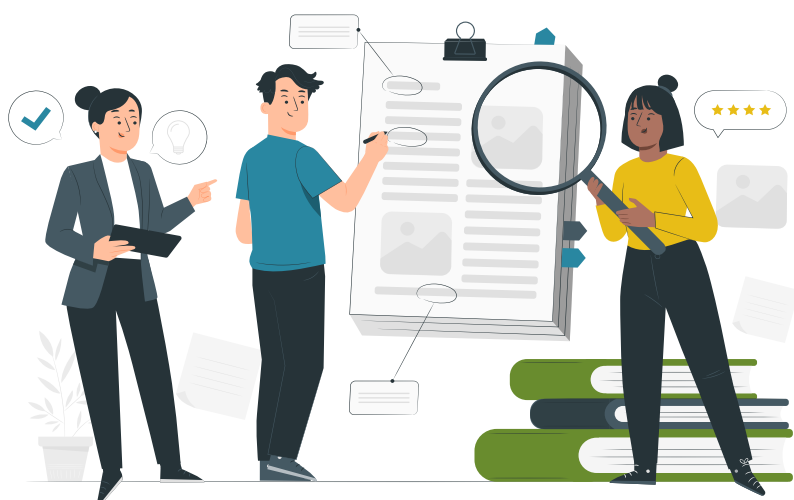
Welcome the Spring 2022 newsletter from EC²: Energy Citizenship and Energy Communities for a Clean Energy Transition. Funded by the EU's Horizon 2020 Research and Innovation Grants, EC²'s aim is to discover what it takes for energy citizenship and energy communities to thrive.

In this issue, you'll see that research has begun in earnest: we've finalised our [viable concept of energy citizenship](#) and analysed the economic conditions for energy communities in six countries. We've also begun sitting down with citizens, public administration and actors from across the energy sector in our first co-creation workshops to get an in-depth understanding of their perceptions of the legal, economic and technical challenges facing energy communities. This understanding will be deepened with our longitudinal studies, which will be starting soon (want to take part? Read on to learn more!)

Of course, the months since our last newsletter have seen major changes on the world stage, and we feel them closely. Some of our partners in Poland have been on the front lines of receiving refugees, while the Ukrainian members of our GEN Europe partners have been working to welcome those fleeing war into their communities. Clearly, the panorama in the energy sector has changed too, with rapid price rises hitting consumers and concern about the security of energy supplies. At the same time, the most recent IPCC report has issued yet another stark warning about the speed of change that's required to halt the most dangerous global heating.

Energy communities can be an important piece of the puzzle as all these developments show the urgency of the low-carbon transition ever more clearly. With the right support, education and policies, community-owned renewable energy can secure energy supplies, reduce reliance on fossil fuels, and generate many local and regional benefits. So our work on understanding the barriers and facilitators of energy citizenship feels more relevant than ever, and soon we'll begin working on tools and policy recommendations to help speed up the citizen-led energy transition, too.

We hope you enjoy reading our updates!



What is **energy citizenship**?

Find out in our new deliverable!



Karen Hamann, University of Leipzig

Energy citizenship is one of the central concepts of EC² - but what does it really mean? After many months of research, in February we released our deliverable on an interdisciplinary understanding of energy citizenship: *"Energy Citizenship as a Viable Concept: An Interdisciplinary Understanding to Unfold the Potential of Legal, Economic, and Psychological Perspectives on the Citizenship-Based Energy Transition."* In this deliverable, we develop a viable concept of energy citizenship, on which scientific, political and practical debates on energy citizenship and energy communities can build upon.

First, we introduce an interdisciplinary definition of energy citizenship that is parsimonious, unambiguous, and translatable into scientific definitions:

// —————
energy citizenship is people's rights to and responsibilities for a just and sustainable energy transition.

The main part of this deliverable then lays out legal, economic, and psychological perspectives of energy citizenship that are grounded in this interdisciplinary definition, current EU directives, and scientific theorising. The psychological perspective lays the foundation for an energy citizenship scale that is currently in development. Next, we elaborate on commonalities and differences between these approaches, thereby showing how an interdisciplinary discourse can enrich the energy citizenship concept. We conclude with a practical and transdisciplinary definition of energy citizenship that arose in the course of three co-creation workshops and discussions with EC² practice partners.

**Curious to read
the full paper?**

Find it on our [website](#).

Measuring Energy Citizenship: How much of an energy citizen are you?

Johanna Held, University of Graz

The psychological EC² team is currently working on developing an energy citizenship scale to test how energy citizenship manifests psychologically in individuals and various collectives. During bi-weekly online meetings with our psychological and our interdisciplinary team, we developed the theoretical foundation for the scale. Our psychological definition of energy citizenship forms the core of our scale's structure and conceptualization, while all relevant (psychological) aspects of energy citizenship are represented in the scale.

We started out with creating a large item pool of over 200 items covering all relevant aspects of energy citizenship. In a first study, the comprehensibility of the item pool was tested. Based on the results we revised the questions and cut down the item pool to 54 items which were then tested again in a second study. We carried out statistical analysis to discover the best fitting items per sub-category, and in this way we ended up with the current version of the energy citizenship scale. The final product is two nine item energy citizenship scales - one individual level scale and one collective level scale. In the next few weeks, we will validate the scale in psychological studies in at least two different EU countries.

The energy citizenship scale builds a critical pillar for future work packages and project work. It will be used in the following work packages to assess energy citizenship as part of our scientific studies. In psychological studies, we will gather empirical evidence on barriers and facilitators of energy communities and energy citizenship, as well as on the effectiveness of energy citizenship for broader sustainability goals. For that purpose, longitudinal field studies will be carried out to assess people's energy citizenship level, using our newly developed energy citizenship scale. Therefore, the energy citizenship scale serves as a basis for studying energy citizenship psychologically.

Are you interested in finding out how much of an energy citizen you are?

We have created a short quiz in which you can try out the energy citizenship scales yourself and learn how high on energy citizenship you score compared to the Austrian sample of our previous study.

Click [here](#) to take the
Energy Citizenship Quiz
(uni-graz.at)



The comparative analysis of economic conditions for energy communities

Magdalena Rozwadowska, Wrocław University of Economics and Business

After many months of work by a team from Wrocław University of Economics and the University of Graz, we have finalised our comparative analysis of the economic conditions for energy communities in six countries (Germany, Italy, Austria, Poland, Netherlands and Spain). The work reflects a political, economic, social, technological, environmental and legal (PESTEL) analysis.

The analysis of the energy community market is divided into two parts. The first part covers the international, social and technological environment, while the second focuses on the situation of energy communities in six countries. In this part, the analysis is organised around four main topics: economic policy for energy communities and self-consumers and renewable energy cooperatives; economic conditions for potential energy community members; the conditions for the economic activity of energy communities and self-consumers; and finally the development prospects for energy communities.

Energy communities use various renewable technologies, but the crucial, and relatively easy to install from the technological and economical point of view, is photovoltaics. A separate key issue from the point of view of energy cooperative development is the national energy infrastructure (among other things, transmission networks and transformer stations) and industrial networks. Power grids in individual countries were designed for the needs of large generating units. On the other hand, the development of EC requires the decentralization of the energy system, which implies the necessity of technical modification.

The situation is similar in the case of district heating networks developed, in particular, in large cities. Moreover, technical modification of the system (hybridization) is necessary, considering the combination of low-temperature technologies based on RES with traditional combined heat and power plants.



Energy prices are one of the factors that are considered when deciding to commit to renewable energy. In the analyzed countries, the price spread of energy for households is quite large. The lowest energy prices, at 58% of average EU prices, are in the Netherlands, while the highest price level is in Germany (146%).

The international tension caused by the Russian military aggression in Ukraine may have important consequences for the development of energy communities in Europe. The growing pressure to increase energy independence and faster reduce the share of fossil fuels in energy production in European Union countries is expected. Decentralization and democratization of the energy system will increase the energy security of the European Union countries. This will require creating new capacities in the energy system to enable new energy communities and individuals to connect.

Barriers and facilitators to energy citizenship:

make your voice heard!

A key aspect of our current work is providing empirical evidence for the barriers and facilitators of energy communities and energy citizenship identified in the project. In the New Year, we have been working on finalising our survey, which is now being translated into different languages (Dutch, German, Spanish, Italian and Polish) for use across multiple countries in Europe. We aim to target a broad range of energy communities and municipalities to involve in our longitudinal field study, which will take place during a time window of 9-12 months. This longitudinal study enables a better understanding of the interplay between the set-up of an energy community (in legal, economic and social terms), and the development of energy citizenship among members and non-members of the energy community over time.

We are currently collecting data for our pilot study on the remote Irish island of Inishbofin, located seven miles off the coast of Connemara, in County Galway. The island provides an opportunity for an interesting case study, as it is currently beginning its energy transition towards renewable energy sources. As such, there is potential for setting up a new energy community, which provides us with an exciting opportunity to study its setup as it happens. We are also planning the data collection among various ecovillages from the Global Ecovillage Network and among various local initiatives associated with Buurkracht in the Netherlands.

Are you part of an energy community? Make your voice heard!

We are looking to involve a diverse range of energy communities and municipalities in our research, and as such are looking to expand our network. If you are interested in participating, please contact: Fleur Goedkoop (f.goedkoop@rug.nl).



Workshop Reports: Scalenghe and Arterra Bizimodu

As part of work on gaining a **systematic comparative understanding of the legal and economic conditions that shape the creation of energy communities and energy citizenship**, we are running knowledge co-creation workshops in four regions with actors from across the energy sector, municipal authorities, and citizens. Find out more about how our first co-creations went!

Scalenghe

Lucilla Borio, Ture Nirvane

On Saturday March 26th the first co-creation workshop took place in Scalenghe, a small town on the outskirts of Turin. It was organised by Emanuel Gi-raudo (Municipality of Scalenghe), Lucilla Borio (Ture Nirvane Social Cooperative), Anna Grignani and Alessenaro Sciuillo (University of Turin).

The attendance was higher than originally planned, with 23 attendees: a very good mix of local administrators, academics (some very well known locally), green activists, students and interested citizens, coming from six or seven neighbouring municipalities. The group was almost gender balanced, with a slight majority of men, and a nice age mix (between late twenties and early seventies).

The discussions were highly participative, inclusive and respectful of all present; and interesting content was shared and recorded all along the work day.

After a short introduction to the EC² consortium and the general concept of energy communities, the topics addressed by the group were the perception of energy communities as they are today, how much citizens know about them, and what the expectations and fears are about setting up a local energy community.

A detailed analysis was conducted on the legal and financial aspects, using a SWOT matrix to collect and categorise the outcomes of the four working groups. After a very pleasant lunch break, the discussion was organised as a world cafe-style workshop focused on three tables: legal aspects, financial aspects, and technical aspects.



WHAT DID WE LEARN FROM OUR PARTICIPANTS?



Technical aspects

The need to have competent technical support is evident, and feasibility studies must be carried out on macro areas that comprise several municipalities; the difficulty of buying and maintaining PV panels and the need to find a sustainable way to dispose them; the limits of the electric grid to support and distribute all the electricity that can be locally produced.

Financial aspects

Energy communities can be very important and useful from a social point of view because they can contribute to reducing energy poverty, but it is fundamental to understand that energy communities have to bring economic benefit both to citizens and to the enterprises.

Legal aspects

The participants presented many concerns about the legal and administrative aspects; they feel that there are many more problems than available solutions or answers (the rights and duties of those who join an energy community, the lack of time to efficiently manage the government Recovery Plan funds, the social purpose of the community versus the economic viability, and the possibility to set up an energy community totally based on public structures in which a municipality acquires funds from the national recovery plan fund and constitutes an energy community as the only energy producer.

The participants at the end of the workshop were satisfied with the organisation of the day and, in particular, they found the short legal focus that was presented to them very instructive. Moreover, the participants underlined the utility of the exchange with the other local administrators as well as the heterogeneity of the group, with local administrators, citizens and local entrepreneurs all involved.

The workshop process was much appreciated, all participants felt included and actively involved, and felt they contributed to the outcome of the workshop. Some pointed out the role of facilitation to make the process smooth and light, and were much more motivated than at the beginning of the day.

Finally, the participants asked to be informed of the outcome of the other workshop that will be held within the EC² project in order to better understand how the creation of energy community works in other countries. A request was shared to have a follow-up workshop in some months from now to evaluate the progress achieved and define the next steps.

I found someone who shares my same concerns. I have found people who have the same problems and needs as me. It is essential to have some ideas from those with experience and a vision of how to eliminate and overcome some of them.

Workshop Report: Arterra Bizimodu

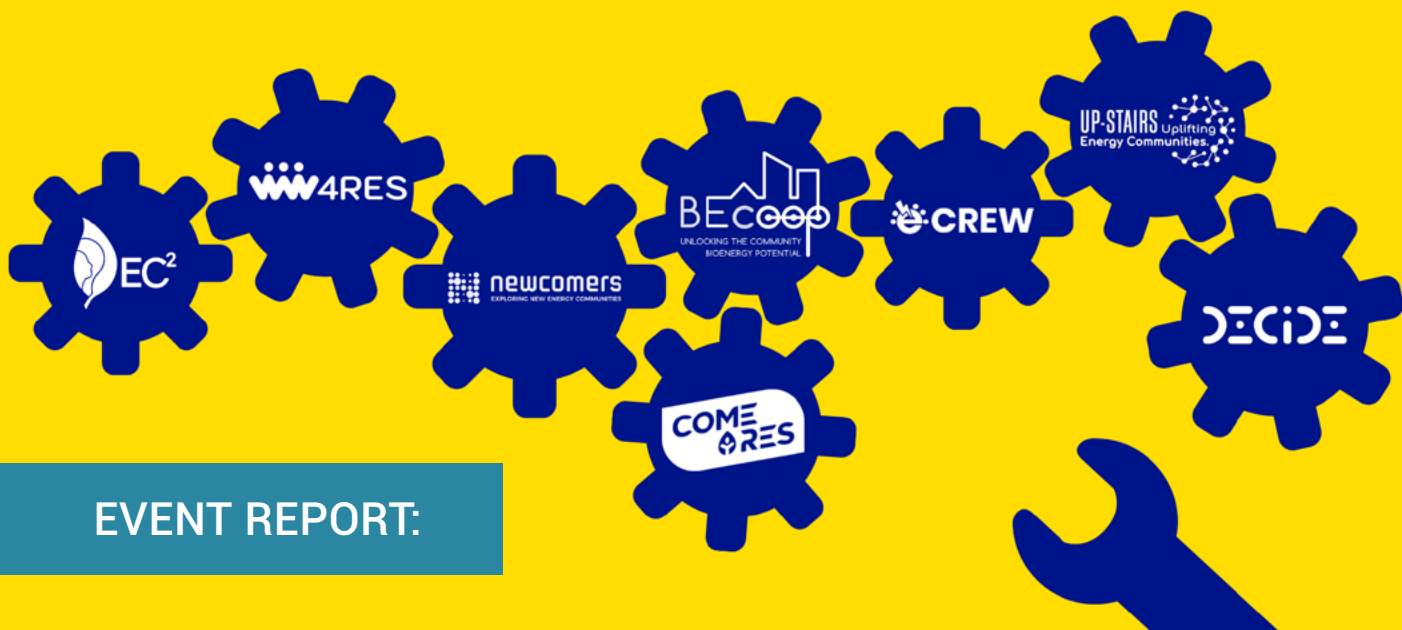
Arterra Bizimodu

Fanny van Hal, Arterra Bizimodu

Our next co-creation workshop took us to northern Spain, to Arterra Bizimodu ecovillage in Navarra. A group consisting of 15 people from diverse backgrounds, ranging from policymakers and practitioners to citizens and energy cooperative representatives, spent the day in a facilitated co-creation workshop on energy citizenship. There were engaging exchanges between experienced energy communities who shared their positive experience of collaboration with local government, and the current struggles of newly started energy communities. At the same time, the day proved fruitful as the group collaborated on making a timeline for the implementation of an energy community, looking at barriers and facilitators. Overall it was a wonderful exchange that will inform our future outputs and we are looking forward to seeing the outcomes of the workshop being integrated into the research of EC².



From setting up energy communities to making them thrive: WHAT ARE THE TOOLS AVAILABLE?



EVENT REPORT:



These projects have received funding from the European Union's Horizon 2020 research and innovation programme. The sole responsibility for the content of this document lies with the EC², BEcoop, DECIDE, eCREW, UP-STAIRS, COME RES, NEWCOMERS, and W4RES projects and does not necessarily reflect the opinion of the European Union.

EC² recently co-organised a public, online event, giving nine EU-funded projects the opportunity to present the tools they have been producing in relation to their work on energy communities. Energy communities have high potential for moving away from imported fossil fuels, and tools made for various market players, from citizens to technology providers, can support this transition.

The event considered not only ways to get more people to energy communities, but also to ensure a just transition and increased inclusivity within energy communities in the future. Here, EC² was able to present (and gain valuable feedback on) plans for its upcoming *Energy Citizenship Academy**, to be released in April 2023. Other notable tools with a focus on inclusion include the W4RES project's tools on women's empowerment in the renewable heating and cooling sector, as well as the POWERPOOR project's Energy Poverty Mitigation Toolkit.

The event highlighted the need for tools which are accessible to the public, such as those which support energy literacy, break language barriers and allow for adaption to national and/or regional contexts.

*Working title



A recording of the event, as well as a briefing showcasing all tools and projects is available [here](#).

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Participating projects:





Upcoming Event: “Decarbonizing the electric grid” at ICLEI World Congress 2021 - 2022

11 May, 2022 (13:45-14:45 CEST, in Malmö)

The ICLEI World Congress in Malmö (11-13 May) gathers local and regional governments to discuss and collaborate on sustainable development. The “Decarbonizing the electric grid” session is an opportunity to learn from local governments about their efforts in securing a decarbonized electricity supply for their communities. Electrifying the grids is central for cities to energy transition and for cities to achieve their climate goals. With panelists from Europe, the USA, and Korea, the session will discuss the policy and regulatory approaches to this, as well as efforts to ensure equity and justice in doing so. Citizen participation, community energy, and social innovations play an important role in the transition, and the panellists will also reflect on how the active citizens are changing the dynamics in the transition.

[More information](#)

Stay connected

Whether you're researching energy citizenship, a member of an energy community, working on energy policy, or - we invite you to stay connected with us on social media:

[Website](#) (available in English, Dutch, Spanish, Italian and Polish)



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