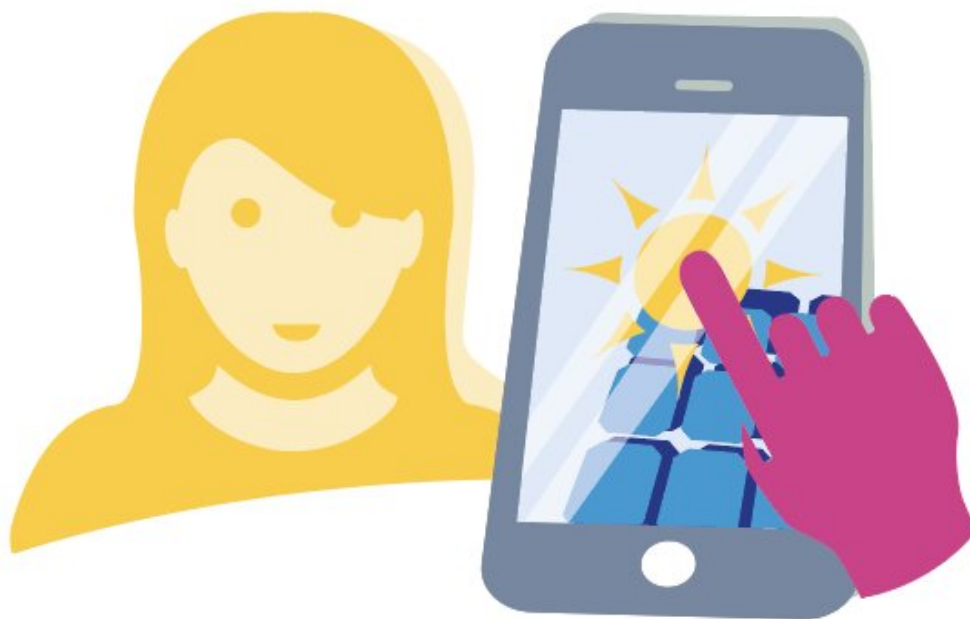


# Using citizen science for the advancement of solar energy

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## GENERATION SOLAR

Credit: Universitat Pompeu Fabra - Barcelona

A team of researchers has used the experience of a participatory strategy to create and launch Generation Solar, a citizen science initiative for research and innovation in solar energy. Generation Solar has been coordinated by the Science, Communication and Society Study Centre at Pompeu Fabra University (CCS-UPF) within the framework of the European GRECO project led by the Institute of Solar Energy of the Polytechnic University of Madrid (UPM). The work has been published in the latest issue of *JCOM, Journal of Science Communication*.

The world is increasingly demanding a shift towards sustainable energy systems that use [renewable energy sources](#) like the sun to combat climate change and other pressing environmental and social issues. Although some technologies have seen price drops and can compete in the market with [fossil fuels](#), we are still a long way from meeting energy demands using renewables. Thus, one of the United Nations Sustainable Development Goals (SDGs) is to ensure access to clean, affordable energy.

"In the advancement of solar energy, citizens have a key role. On the one hand, they can help to obtain data that [scientific community](#) often has difficulty to access since they are scattered or in the hands of the trading companies," explains Gema Revuelta, director of the CCS-UPF. "But in addition, citizens can also help in the formulation of the research questions themselves to be more aligned to their needs and expectations. That's why citizen science is so interesting in this field," she adds.

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Following a co-creative approach, they explored a participatory and innovative citizen science strategy that culminated in the creation of Generation Solar. It was designed, as part of the EU-funded GRECO project, with the aim of becoming a paradigm for transforming the relationship between citizens and researchers working to address the societal challenge of secure, clean and efficient energy.

Generation Solar comes in response to a clear scientific demand, since a major drawback for researchers working in energy modeling and prediction is precisely the lack of information on the locations and specific characteristics of solar installations. In addition, the application creates a [communication channel](#) for solar panel users, who can share information about the use of these devices in a given city or region, or about their limitations and problems.

Various actors have been involved in the development process, including citizens, enterprise, research centers and universities. The research question was also formulated collectively. "First we surveyed 90 professionals related to the field of solar energy and, based on these results, we organized an online hackathon to design the project involving more than 100 people," explains Luisa Barbosa Gómez, the first author of the article. The proposals received were then evaluated and the winning initiative was co-developed with a [technology company](#), some of the hackathon participants, two solar energy research institutions and a science communication team.

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The initiative is currently being disseminated, the information gathered is being linked to the research, and actions for improvement and

sustainability are being considered. The result of the initiative is Generation Solar, an application that aims to co-create an open database of photovoltaic solar installations. It invites domestic solar installation owners and anyone else with access to public or private panels (such as a hospital, school, company, or similar) to register their installation and its technical characteristics.

This process can be replicated in any other field of research. "We find it particularly relevant to promote [citizen science](#) in technology and engineering sectors, which have been far less explored than the biological or medical sciences," Revuelta states. "We hope that the scope of the application will continue to grow, which will allow us to obtain more data and create communities of people interested in [solar energy](#). In this way, we contribute to fostering an active role of the citizenry that can intervene in decision-making and the generation of regulatory policies," she concludes.

**More information:** Luisa Barbosa et al, Participatory citizen science in solar energy research: going beyond data collection to promote the energy transition, *Journal of Science Communication* (2022). [DOI: 10.22323/2.21020806](#)

Provided by Universitat Pompeu Fabra - Barcelona

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