Energy citizenship and energy justice (project GRETA)
A sociological inquiry

1) GRETA: a brief presentation

The GRETA project (an acronym for GReen Energy Transition Actions) aims to improve understanding on the conditions and barriers for energy citizenship emergence.

Energy citizenship has come to represent a form of active participation within energy systems that ultimately supports local and global decarbonization goals. It can manifest in many ways, such as individual homeowners choosing renewable energy solutions or electric vehicles, participation in energy communities, or advocating for climate change. But not everyone has the possibility to participate. This can be due to a range of factors, including being unaware of issues or their practical solutions; being excluded from debates and decision-making; being prevented from taking action due to lack of resource or lack of power.

Through a multinational survey and six participatory case studies (one of which is the renewable energy district of Pilastro-Roveri in Bologna), GRETA will develop frameworks and models to reveal what factors affect energy citizenship. These will be utilized within case studies to identify problems, frame solutions and reach consensus on roadmaps for change, formalized through Energy Citizenship Contracts. Findings throughout the project will be utilized to inform and encourage policymakers to advocate energy citizenship.

Within the "100 climate neutral cities by 2030" mission, GRETA foresees the testing of two interlinked instruments: Community Transition Pathways (CTPs) and Energy Citizenship Contracts (ECCs). CTPs represents the vision for communities toward decarbonization goals, including a roadmap of key steps for the transitioning; ECCs are the operative result of the pathways through which communities and stakeholders can mutually recognize roles and benefits. GRETA will investigate how CTPs can strengthen and regulate the relations among the actors involved in the transition through the creation of Energy Citizenship Contracts (ECCs).

The project will deliver two major outputs:

- The GRETA Open Portfolio for Civic Energy Empowerment (OPCE), which will curate project outputs, such as anonymized data in questionnaires, interviews, surveys (including one EU-wide survey), novel knowledge on energy citizenship emergence, the GRETA framework for energy citizenship emergence.
- Policy recommendations delivered as thematic policy briefs, based on findings from across the project.

The GRETA team is composed by eight partners:

1. Lappeenrannan-Lahden Teknillinen Yliopisto (LUT), Finland (Coordinator);
2. Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek (TNO), Netherlands;
3. Alma Mater Studiorum - Università di Bologna (UNIBO), Italy;
4. Fraunhofer Society of Applied Research - Fraunhofer Institute for Systems and Innovation Research (FhG), Germany;
5. Virtual Power Solutions, S.A. (VPS), Portugal;
6. Kaskas Media (KAS), Finland;
7. GESIS – Leibniz Institute for the Social Sciences (GESIS), Germany;
8. Fundación Tecnalia Research & Innovation (TEC), Spain.

The GRETA project is divided into eight complementary work packages (WPs).

WP1 focuses on better understanding and further advancing knowledge on energy citizenship phenomena, factors that drive or prevent its emergence, evolving perspectives over what it means, and its unwanted side effects.

WP2 uses findings from WP1 to realize how can different ways of presenting data and information derived from digitalization and social media, impact on energy citizenship development and establishment processes.

The realization and evaluation of the GRETA case studies will be managed in WP3. This WP also serves the facilitating role of collecting, compiling, and channeling energy and non-energy related data from the case studies and project surveys, including the GRETA multinational survey.

WP4 will develop and test predictive energy and non-energy related models, as well as devise scenarios for future emergence of energy citizenship while taking into consideration different geographical levels.

In WP5, GRETA will study the interactions of citizenship phenomena across different geographical levels using the concept of community pathways, informed primarily from scenarios modelled in WP4.

WP6 has a synthesis role, compiling results from the various GRETA WPs and devising lessons learned, while translating them into actionable policy insights co-designed with communities and policy stakeholders (as well as EEAB members).

A fully transversal WP7 will tackle GRETA’s communication, dissemination, and exploitation activities.

WP8 is about the project coordination, including activities such as quality assurance, and risk management.

2) **Sociological contribution and expected research actions**

UNIBO team is engaged in all the WPs of the project, but the contribution is particularly important in WP1, WP2, WP3 and WP5.

Three departments are engaged in the project: the Department of Architecture (DA), The Department of Sociology and Business Law (SDE) and the Department of Electrical, Electronic and Information Engineering (DEI).

As regards the SDE contribution, the research fellow is expected to participate to the tasks of WP1 - "Framework to understand and predict energy citizenship emergence".

The main objective of WP1 is to further elaborate on the concept and method proposed in a detailed and harmonized manner across all WPs. Intrinsic to such harmonized approach is the advance of current understanding on energy citizenship contributing to the energy transition. The aim is to further clarify different concepts, definitions, and evolving perspectives on energy citizenship. The sub-objectives are:

- To further elaborate a framework that defines and characterizes the structural and dynamic emergence of Energy Citizenship;
- To explore the role that energy justice plays in energy citizenship emergence;
- To ensure alignment between the framework developed with subsequent work packages.

The **research fellow** is expected to contribute to the accomplishment of the Tasks 1.1 and 1.2.

Task 1.1 - Structural and dynamic features of Energy Citizenship

This task focuses on reviewing the state of the art in both the structural and dynamic features of engagement in energy citizenship. We will thus conduct as broad review of aspects affecting citizens engagement in energy citizenship at the individual and collective levels. This includes:

- Drivers and barriers that influence the emergence of different types of Energy Citizenship. These factors are found on different levels: societal (e.g. type of policy), group (e.g. social cohesion), and individual (e.g., attitudes, habits, values, and world views). This includes exploring preferences of key stakeholders in related institutions (government and business) affecting dynamic features of energy citizenship.

- Social group dynamics as well as institutional collaboration in the emergence of energy citizenship, including factors that influence institutional actors, and factors which influence the interaction between citizens and institutional actors;
- Identification of (policy) interventions that have been proven successful in enabling citizens to engage in the different identified types of energy citizenship).
- It will establish hypotheses for causality of different factors affecting the emergence of energy citizenship.

Task 1.2 Energy citizenship, energy justice and the emerging Energy Union

This task uses an Energy Justice Framework whose tenets indicate that an energy system (as well as its transition) should harbour distributional, procedural, and participatory justice (this becomes even more relevant in context of the COVID-19 pandemic, as several forms of energy poverty are expected to increase).

The framework will help to devise more effective ways of involving citizens and ultimately leading to greater social acceptability as well as more durable governance arrangements and socioeconomic benefits. This implies just citizenships, just policies on local level, social just dynamics between EC's and policies.

Task 1.2 will conduct:

- Analysis of implications of energy justice theory for the different levels and forms of energy citizenship and factors affecting it-
- How energy justice can enhance drivers and take away barriers at individual and collective levels.
- An exploration and analysis of the interaction of governmental policies and plans on EC's neighbourhood and regional level, reflected by the energy justice theories.
- An exploration and analysis of interrelations between emerging forms of energy citizenship and their perceived justice and acceptance
- A case study, with an ethnographic approach, in collaboration with SDE research group

3) Deliverables

The research fellow is expected to contribute to the following deliverables:

1. Analytical framework with state-of-the art review on current status knowledge on energy citizenship – GRETA framework for energy citizenship emergence.

2. Vision document on energy citizenship-based energy union (persons, essays, scenarios, winners and losers of energy transitions).

3. Report on the case study