



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE

Directorate C – Energy, Transport and Climate
Energy Efficiency & Renewables

Workshop on Local Communities and Social Innovation for the Energy Transition

22-23 November 2018

JRC Ispra Site

Room 101/1003

Via E. Fermi, 2749

IT-21027 Ispra, Varese, Italy

Brief description of the event

Local communities take with them a huge and often neglected potential for the development of social innovation initiatives that can foster a radical transformation towards renewables. The reasons for this disregard have to be mainly found in how current research and policies approaches dealing with this transformation are mostly based on a principle of technological substitution and modification of individual behaviours around technologies. Energy inputs are their almost exclusive target. Either they focus on a reduction of CO2 emissions or also acknowledge the necessity of combining CO2 emissions reductions with energy efficiency improvements, they devise interventions assumed to mostly affect amounts and types of used energy inputs without substantially affecting energy outputs (i.e. without substantially affecting what people do and how they organise their daily life through energy end-use technologies). Due to their one-sidedness, they miss taking into account the huge opportunities represented by a transition to renewables as achieved by jointly dealing with supply and demand (i.e. by jointly dealing with inputs and outputs), notably by an active and more democratic re-organisation of energy production and consumption practices and, more in general, of social practices related e.g. to mobility, shopping, eating, housing, etc.

Being highly distributed and mostly linked to land, renewables can re-define energy sources and equipment ownership and re-compose demand and supply in new ways through the active participation of local communities. Renewables can in principle allow to partially or totally (re)conduct consumption-production cycles under the responsibility of the people who they serve. A large number of synergies between reductions of CO₂ emissions and improvement of social well-being can in principle be identified and exploited in this way. Researchers and policy makers are becoming increasingly aware that economic, technical and quantitative considerations concerning substitution or reduction in the consumption of non-renewable energy inputs cannot be the only starting point to design and implement actions for wide scale decarbonisation. They are realising the important contribution to decarbonisation coming from local initiatives undertaken by communities to increase energy sustainability by changing the way in which these communities provide for their needs and wants. Generally speaking, market economies cannot for example presently guarantee that a transformation towards renewables will not serve to boost a multiplication of useless end-uses that will make this transformation unsustainable in the long term. Similarly, they cannot guarantee that this transformation will not result in increased social injustice and centralization. A transition to renewables can therefore represent an invaluable opportunity to re-discuss social well-being thanks to local communities devising new strategies to achieve it more sustainably by managing energy supply and demand.

Local communities' social innovation initiatives for higher sustainability can however greatly contribute to the energy transition even without being specifically designed to target energy production and consumption. Despite the usually quite limited energy impact of single initiatives, they can significantly foster decarbonisation on the large scale through innovation actions that are highly diversified and can in principle flourish with own specificities all around the world. These initiatives include for example wind energy, community supported agriculture, social technologies, car clubs, repair cafés, participatory design, agro-ecology, eco-housing, recycling, shared machine shops, rainwater harvesting, complementary currencies, credit unions, socially useful production, seed swapping, community energy cooperatives, garden sharing, community forestry, green spaces and many, many other ideas and practices. These initiatives are usually much more situated in history and in the contexts where they develop and often represent a way to re-discover pre-existing old social practices whereby people have organised production and consumption in given geographical areas.

Their local character and the high level of diversification over the geographical areas where they develop represent however an important challenge when it comes to understand how they can be supported and fostered. They typically are innovation niches and the possibility that they can survive and/or diffuse and that they can be integrated or displace so-called incumbent socio-technical regimes depends on a variety of factors which are often contingent. Nevertheless, their thriving depends principally on questions of innovation governance. It depends on how questions of power and fairness are dealt with, on how the different interests, assumptions and frameworks carried out by involved human and not human actors are addressed within innovation initiatives, on how new ideas about energy sustainability can be discussed and explored, on how existing social innovations niches are possibly supported and allowed displacing or being stably integrated within incumbent regimes whenever this can be beneficial.

Finally, it has probably to be pointed out that local communities' social innovation initiatives should not be considered as a panacea. A large scale energy transition cannot e.g. generally take place

without energy redistribution and the implementation of the technical solutions enabling it. In a way that is very similar to what is assumed to happen within globalised market economies, it is exactly the redistribution of energy generated from local renewable energy sources within complex networks that is supposed to make the energy transition possible while generating the benefits typically associated with it. The question is therefore also how and whether local communities' social innovation initiatives can contribute to generate the organised complexity (Jacobs, 1961) and the level of energy systems resilience and flexibility that is needed for this transition to happen.

The present workshop aims a) to study the local communities' social innovation potential for the energy transition under both a theoretical and practical lens and b) to formulate policy and research recommendations allowing better exploiting it. It will discuss how this potential generally derives from existing possibilities to re-combine demand and supply cycles in a variety of economic sectors in a way that allows in principle higher and more democratic participation and involvement of people. Moreover, it will discuss existing barriers to and conditions fostering the expression of this potential as well as alternative and new innovation governance approaches needed to allow the thriving, consolidation and diffusion of local communities' social innovation initiatives. The workshop will then focus on the specificities of local energy communities. In this respect, it will first discuss their achieved level of recognition within EU regulations and how their diffusion can be fostered at the EU policy level. Then it will focus on some main existing examples of local energy communities' initiatives being developed in the EU while highlighting associated innovation potential as well as specific barriers to and factors fostering their development. In doing so, special attention will be dedicated to the important role that can be played by municipalities both as local energy communities and as facilitators and enablers of social innovation initiatives that can be developed on their territories.

Workshop participants will be 35 maximum and will include invited speakers and JRC researchers active in the field. These speakers will be acknowledged researchers and policy analysts working on the targeted topics, representatives of the European Commission dealing with local energy communities, representatives of local energy communities' aggregators and organisations supporting their diffusion at various levels.

Speakers will be requested to provide extended abstracts describing their contributions. These extended abstracts will be distributed among participants before the workshop takes place. Information included therein together with workshop conclusions and research and policy recommendations produced by discussants will be summarised in a report that will be published by the JRC after the event.

Draft Agenda

First Day - November 22nd, 2018

08:45 – 09:00 **Welcome and Opening**

09:00 – 09:30 **Setting the Scene**

The workshop conveners will explain what is expected from the workshop, the organisation of the event over the two days and will propose possible next steps.

Discussion Panel 1: *Local Communities and Social Innovation for the Energy Transition: how can the local communities' social innovation potential be characterised? Which factors enable/prevent its expression?*

Moderator: Nicola Labanca (JRC Energy Efficiency and Renewables Unit)

09:30-10:00 *Community Innovation for Sustainable Energy: Theoretical lenses*

Sabine Hielscher (University of Sussex – UK)

10:00-10:30 *Local Energy Communities and their Social Innovation potential for the Energy Transition in the EU*

Josh Roberts (RESCoop.eu, Belgium)

10:30-11:00 *Panel Discussion*

Participants attending this discussion panel will be invited to express their views on what presented and write their reactions and ideas arising from this experts' conversation. This material will be utilized in the follow-up of the workshop.

11:00 -11:30 **Coffee Break**

Discussion Panel 2: *Governance and Local Communities' Social Innovation: which governance approaches are needed to stimulate this innovation?*

Moderator: Paolo Bertoldi (JRC Energy Efficiency and Renewables Unit)

11:30-11:55 *Pooling Economy, Tech Justice and Urban Experimentalism for a Human Rights-based Approach to the Sharing Economy*

Christian Iaione (LUISS Guido Carli University, IT)

11:55-12:20 *Community Energy as a Commons*

David Hammerstein (Commons Network)

12:20-12:45 Against and with the Wind: Local Opposition to and Support for the German Energiewende
Fritz Reusswig (Potsdman Institute for Climate Impact Research, DE).

12:45-13:15 Panel Discussion

Participants attending this discussion panel will be invited to express their views on what presented and write their reactions and ideas arising from this experts' conversation. This material will be utilized in the follow-up of the workshop.

13:15 – 14:15 Lunch Break

Discussion Panel 3: *Local energy communities and complex renewable energy networks of the future: how can community based approaches to energy generation and consumption be beneficially integrated within future complex renewable energy networks? Which is their added value? Which are the associated challenges?*

Moderator: Albana Kona (JRC Energy Efficiency and Renewables Unit)

14:15-14:40 Citizens Ownership and Multilevel Policies for an Energy Transition to 100% Renewable Energy Systems
Frede Hvelplund (Aalborg University, DK)

14:40-15:05 Non-hierarchic Polycentric Regimes Facilitating Intelligent Distributed Energy Systems – The Common-Pool Resource Nature of Renewables
Maarten Wolsink (University of Amsterdam, NL)

15:05-15:30 Integrated Community Energy Systems
Binod Prasad Koirala (University of Twente, NL)

15:30-16:00 Coffee Break

16:00-16:30 Panel Discussion

Participants attending this discussion panel will be invited to express their views on what presented and write their reactions and ideas arising from this experts' conversation. This material will be utilized in the follow-up of the workshop.

16:30-17:00 Wrap up and preliminary exploratory workshop outcome

Second Day - November 23rd, 2018

9:15 – 09:30 **Introduction to the second day of the workshop**

Workshop conveners will briefly summarise the main conclusions of the first day and will explain what is expected from the discussion panels organized for the second day.

Discussion Panel 4: *Existing policies and regulations supporting local energy communities' social innovation at the EU, national and regional level: how are they being implemented? How could they be improved?*

Moderator: Daniele Paci (JRC Energy Efficiency and Renewables Unit)

09:30-09:55 *Local Energy Communities and EU Legislation*

Jan Steinkohl (European Commission, DG ENER, Brussels)

09:55-10:20 *Representing Energy Communities Interests in EU Policy*

Dirk Hendricks (European Renewable Energy Federation, Brussels)

10:20-10:45 *Microgrids Integration and the Active Role of Distribution Systems Operators*

Nikolaos Hatziaargyriou (National Technical University of Athens, EL)

10:45-11:15 **Coffee Break**

11:15-11:45 *Panel Discussion*

Participants attending this discussion panel will be invited to express their views on what presented and write their reactions and ideas arising from this experts' conversation. This material will be utilized in the follow-up of the workshop.

Discussion Panel 5 – Part 1: *Local energy communities, municipalities and social innovation: description of some main existing experiences in the EU and of associated innovation potential.*

Moderator: Fabio Monforti (JRC Air and Climate Unit)

11:45 -12:10 *An Insight into Community Oriented Approaches in EU Demand Side Management Projects*

Anna Mengolini (Energy Security, Distribution and Markets Unit, Joint Research Centre)

12:10 – 12:20 Clarification questions and answers

12:20 – 13:30 Lunch Break

Discussion Panel 5 – Part 2: *Local energy communities, municipalities and social innovation: description of some main existing experiences in the EU and of the associated innovation potential.*

Moderator: Fabio Monforti (JRC Air and Climate Unit)

13:30-13:55 *Opportunities and Challenges Associated with the Development of Local Energy Communities in Germany*

Sarah Rieseberg (Arepo Consult, DE)

13:55-14:20 Community Energy in Italy: Lessons from Existing Evidence

Chiara Candelise (IEFE Bocconi University, IT) & Gianluca Ruggieri (Insubria University, IT)

14:20-14:45 Come Together – the History of Swedish Energy Communities

Dick Magnusson (Linköping University, SE)

14:45-15:10 The Case of Ghent Municipality

Verhoeven Sofie (Ghent Municipality, BE)

15:10-15:40 Coffee Break

*15:40-16:05 A Citizen Boosted Participative Process to Define Participation Spaces for Barcelona
Energia*

Lourdes Berdié (Network for Energy Sovereignty – Barcelona)

16:05-16:45 Panel Discussion

Participants attending this discussion panel will be invited to express their views on what presented and write their reactions and ideas arising from this experts' conversation. This material will be utilized in the follow-up of the workshop.

16:45-17:30 Harvesting the past two days and follow-up

Moderators: N. Labanca, P. Bertoldi, A. Kona, D. Paci, F. Monforti

This final session will be dedicated to:

- a) bring together different perspectives.
- b) allow European Commission Directorates General (DGs) colleagues to express their views on the discussed perspectives.
- c) follow up activities that can be of interest for participating researchers and policy makers.