

BSRS POLICY BRIEF | JUNE 2021

Community Access to Renewable Energy



UNIVERSITY OF BERGEN

Key Points

A fast and sustainable transition to renewable energy is necessary to reach IPCC global warming cutoffs.

Community access to renewable energy is fundamental to reach these goals.

Successful community adoption of renewables hinges on financial, infrastructural, and social aspects of renewable energy projects.

Introduction

Every society needs energy to meet its basic needs, for it is considered a strategic commodity. With current technologies, resources and pathways, it has become technically possible to decouple energy access and use from pollution and climate change. A more widespread use of renewables is needed to meet the IPCC objective of limiting average global surface temperature increase below 2°Celsius, and thus, to avoid catastrophic environmental consequences. Transition to cleaner energy is not a path without challenges. For governments, it may be difficult to provide the needed infrastructure due to the steady reliance on more conventional energy sources, financial and market impediments. For societies, the general acceptance of renewables does not mirror an acceptance of specific, locally sited projects. In this brief, we advocate for communities' need to be assisted by governments in the transition towards renewables. Achieving this would ensure more widespread access to clean energy (SDG 7), the provision of better infrastructure (SDG 9) for more sustainable communities (SDG 11), and stronger commitment towards climate action (SDG 13).

Main Aspects

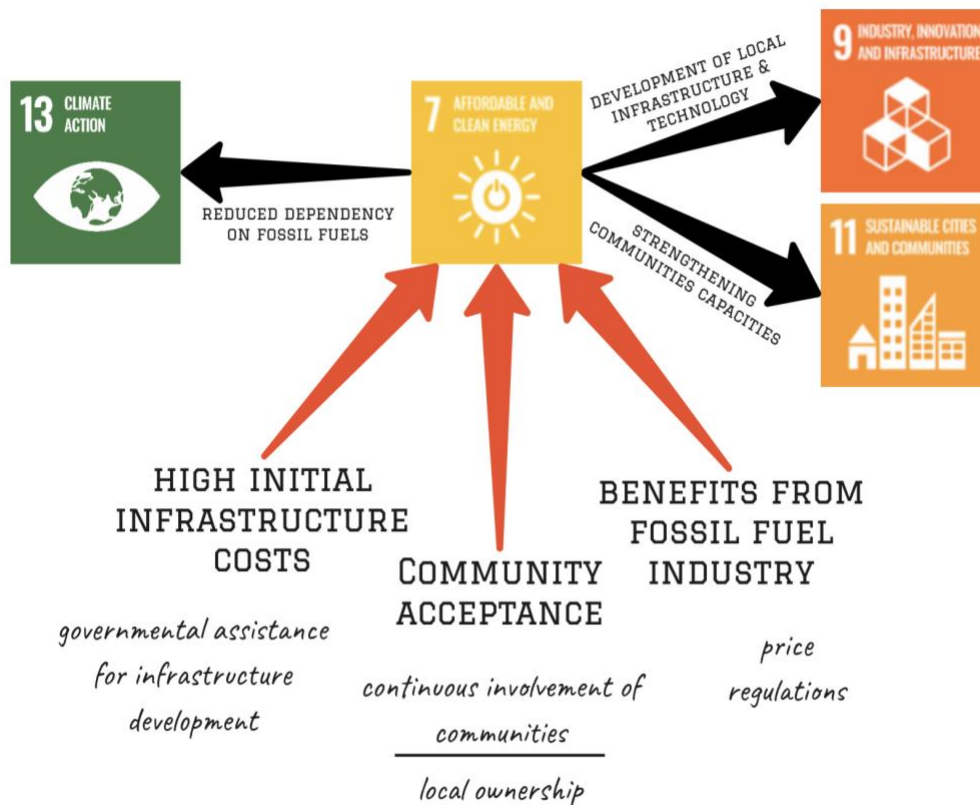
The energy shift towards renewable sources requires significant investments in infrastructure – centralized and decentralized – for energy generation, transmission, distribution. Governmental investments may be impeded by several financial restrictions: high transaction costs, high upfront costs, lack of long-term performance information, low equity return rates due to investment risk, and lock-in effects resulting from investments in long-term capital assets with high switching costs for system changes. Some countries may experience a difficult transition to renewables as they have become “locked” into fossil energy systems through a path-dependent process driven by technological and

institutional increasing returns to scale. Despite financial hardships, the advantages and need of shifting to renewables are now well recognized. Likewise, the cost of renewable investments is decreasing and will continue to do so, contributing to the achievement of target 11.6, together with the costs of renewable energy itself: for example, the costs of both solar photovoltaic systems (PV) and electrical energy storage are decreasing and residential consumers (prosumers) are increasingly taking advantage of these solutions to generate and store electricity, which is driving down electricity prices.. Financing from governments is of great importance, both for initial installation costs, as well as for technology and innovation that can deliver sustainable cost-effective approaches.

A second fundamental aspect for the successful implementation of renewable energy projects sited in local communities is the acceptance by the community of the projects themselves. While citizens are favorable about renewable energy in general, acceptance sharply declines when power plants are to be sited in the vicinity of the community (the “Not In My Back Yard” argument). When attitudes turn negative, citizens are quick to protest and take legal actions, often resulting in schedule delays and financial losses. Community protests lead to the cancellation of multiple renewable projects, such as the deep geothermal plant in Basel, Switzerland. Sovacool and Lakshmi Ratan (2012) offer multiple factors that are essential to local acceptance. As they affirm the importance of competitive installation and production costs and access to financing, they stress the necessity of mechanisms for recursive information sharing and prolific community energy ownership and use. The former issue is embodied in the technology perception literature at large, which posit that region-based informational campaigns engaging citizens from planning to implementation are a more successful in

eliciting citizens' acceptance than national and passive campaigns. The latter issue is correlated to higher support and more positive attitudes toward wind energy in Europe and other regions. Policy tools such as restricting ownership of wind projects to local citizens, as was done historically in Denmark, or mandates to procure wind-generated electricity with a 50% municipal government ownership stake (Quebec), have a good chance of incentivizing stronger forms of community-based energy development. Renewable energy projects are being developed by communities for individual consumption,

peer-to-peer exchange or through the establishment of renewable energy communities, and some success factors from international experiences are governmentally provided stable arrangements motivating communities' investments (e.g. Feed-in-Tariffs). Social structures supporting implementation of community renewable energy projects have been found to play a crucial role along with grid regulations and assistance in the design of the infrastructure.



Recommendations

- Continuous involvement of the community within each stage of the energy project - from planning to completion. Acceptance maximization, transparent and open two-way communication with the community in order to build initial trust. Recognition of the uniqueness of each context and strategies' adaptation.
- Community ownership of energy can help build a positive perception of projects. Projects can be a two-way street: governments can also function as catalysts for the implementation and expansion of community-born-and-led projects.
- Explicit allocation of national budgets to government or community-led energy projects through Grant, Debt or Equity. Introduction of renewable energy as one section of the budget linked to a country's net-zero objectives.

Authors

Costanza Cincotta, Department of Business and Management Science, Norwegian School of Economics (NHH)

Tobia Spampatti, Swiss Center for Affective Sciences, University of Geneva

Christina Gkini, Department of Psychology; Department of Social Sciences, University of Bergen

Amal Alharbi, University College London (UCL)

Mary Wanjau, Department of Population Reproductive Health. Kenyatta University

Andreas Jørgensen Tveito

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