

How do urban microgrids represent social groups?

Considering the districting of urban microgrids, determining the right number and boundaries of microgrids is crucial for the fair representation of social groups within microgrid communities. However, the literature often overlooks the diverse composition of these groups as a factor for fostering equitable participation.

What are microgrids & how do they work?

Microgrids 12, 13 are small, localized energy systems that can generate, store and distribute energy independently or in conjunction with the main energy grid. In this context, community power storage systems are gaining relevance 14 and can serve as nuclei for microgrids in urban areas, offering potential interconnection possibilities 13, 15, 16.

How to plan urban microgrids?

Planning urban microgrids must consider the possibility of outages affecting critical services at both city and municipal levels, hence decision-making processes in a city must entail assessing social vulnerabilities, household needs and the criticality of critical services (Fig. 2).

Will microgrid-induced employment additions differ from IEC's existing system?

With regard to microgrid-induced employment additions, it is likely, although not definite, that the resource mix of a microgrid will differ from that of IEC's existing system, thereby requiring employees with a different skill set.

Do socioeconomic factors affect urban microgrid planning?

However, disregarding socioeconomic factors in defining microgrid boundaries risks perpetuating inequalities and impeding progress towards other SDG 11 targets, including fair democratic participation. Our approach integrates social and technical indicators to bolster urban microgrid planning.

Are microgrids a facilitator of renewables integration?

The environmental benefits focus primarily on the avoided social costs of carbon, generally estimated between \$20 and \$50 per ton. Studies addressing microgrids as facilitators of renewables integration include ABB (2015), Industrial Economics Inc. (2015), and Morris, Bogart, Dorchak, and Meiners (2009).

The collective setup of these resources is referred to as a microgrid. Here, we carry out a survey to study the preferences of 1021 US residents on how the finite energy stored in a community ...

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This paper follows a structure outlined as follows: Section 2 presents a review of the literature on community

engagement and social acceptance, identifying gaps related to the social aspects ...

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The main objective of this paper is to select the optimal model of a hybrid renewable-energy microgrid (MG) system for a village in India. The MG comprises solar photovoltaic (PV) ...

The study highlighted that microgrids significantly enhance socio-economic dimensions such as inequality, distributional impacts, poverty alleviation, livelihoods, firm productivity, food ...

The incorporation of the social indicator, employment generation factor, job factor or employment creation potential as a key objective in the multi-objective optimal sizing and ...

The first step on the road to energy access for 1 million. The microgrid project is one element of the wider £1.3m Scottish Government funded Decentralised Rural Energy Access through ...

social focus has become a key means of embedding energy justice concepts in business models for energy provision [8]. 3. Defining Characteristics of a Solar Microgrid Social Enterprise ...

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