

## **Distributed Electricity Generation and Resilient Cities: Governance for the Energy-Climate-Poverty Nexus in Brazil**

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A transition to low-carbon energy systems is widely accepted as a necessity for mitigating climate change. Distributed electricity generation, DG is a growing trend for incentivizing renewables and increasing energy efficiency in electricity sector and is expected to play an important role in this transition. DG could help tackle two Sustainable Development Goals: 7) ensure access to affordable, reliable, sustainable and modern energy for all; and 13) take urgent action to combat climate change. Sustainability transition literature provides a framework for analyzing changes in socio-technical systems, such as the electricity sector, but it does not address how social inclusion becomes one of the core attribute of a transformation in an emerging economy, such as in the case of Brazil. Through the study of three pilot projects in low-income and urban communities, this paper will explore how a renewable energy policy in a developing country may contemplate positive synergies with social policies and can become a strategic niche within a low-carbon transition. The three pilot projects included in the analysis represent distinct archetypes of distributed generation. They differ in scale but also in the regulatory arrangement and socioeconomic benefits generated; two pilots take place within the context of a low-income mortgage program, one generates income for the families through the sale of electricity, while the other offsets their residential consumption. The third pilot takes place within an urban slum (favela) and offsets consumption at a time in which electricity is transitioning from illegal connections to regulated and metered ones. Through the comparison of the three projects, the paper will draw attention to lessons for the strategic management of the niche and a conceptual model for the governance of DG policy interventions so that it may contribute to a sustainable and socially inclusive transition in the Brazil.