Transition dynamics in state-influenced niche empowerments: Experiences from India's electricity sector

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India experiences transitional changes in its electricity sector from fossil fuels towards renewable sources. An electricity sector with 0% wind and solar (of 16 GW total installed capacity) in 1974 has been transformed and reached a status with 11% wind and solar (of 302 GW total installed capacity) in 2016. The observed changes have complex dynamics, shaped by the decisions of public and private actors in a semi-liberalised market condition, while profoundly influenced by government's supporting policies. It is called a state-influenced empowerment of the renewable niches in the electricity sector. This paper presents an empirically-underpinned theoretical framework to explain the specific dynamics of this context. Understanding of the dynamics provides strategic insights on how government's policies have driven the niche empowerment to date and what should be done to further promote this transition in future. The core concepts of the framework are developed through an iterative process between theoretical deduction from the existing theories in the sustainability transitions field and empirical grounding in the Indian on-grid solar electricity as a case study. Four strategic insights for the further empowerment of solar electricity in future are identified based on the implementation of the framework in the case study.

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