Abstract Submitted
for the APR16 Meeting of
The American Physical Society

Power Distribution at the Bottom of the Pyramid: Illumination through Affordable and Sustainable Solution of Gram Power NISHA PANDEY, VES Institute of Management, Mumbai, 400076, Maharashtra, India, PRASHANT SARSWAT, University of Utah, Salt Lake City — Energy plays a vital role in the socio -economic development, mainly due to the dependency of indispensable amenities on electricity. However, a matter of concern is developing country domestic power needs and inadequate supply. One of the cases is Indian subcontinent, where more than 50,000 villages still not have access to uninterrupted electric power. 'Power theft' is a major challenge due to the lack of adequate energy supply and the financial constraints. Long distances, inaccurate and inflated electricity bills are the other issues lead to default on payments. Gram Power, a social enterprise, is providing a smart metering and affordable solution in areas where the extension of existing grid supply is economically not viable. India's first solar powered micro-grid (centralized array of solar panels) in Rajasthan was established by this initiative. The core innovation is a smart distribution technology that consists of smart meters with recharging facility and grid monitoring, to provide on-demand, theft-proof power through centralized servers with a pay-as-you-use schedule. The details of the changes, socio-economic transformation, and operational sustainability of such a community engagement model will be discussed in this study.

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Date submitted: 04 Jan 2016 Electronic form version 1.4