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A crowd financing approach to street lighting upgrades

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Street lighting is one of most critical elements of urban infrastructure. It is a key service that public authorities need to provide for ensuring adequate lighting on roads which leads to enhanced safety and security in the city as well as improving visibility during evenings and night. The use of energy efficient technologies like LEDs has the potential to save costs because of reduction in electricity consumption. In India, the Urban local bodies or ULBs (also called municipalities) are responsible for deploying, maintaining and replacing the street lights. The primary financing options available to finance the lighting upgrades are via internal funding through capital budgets, debt financing or via energy performance contracts with Energy Service Companies (ESCOs). This study takes an innovative approach in conjunction with existing financing mechanisms, by partially utilizing a crowd funding framework to pay for the street lighting upgrades. The three pillars of this proposed model will be: ESCO, Municipality and the Citizens. The success of a Public- Public partnership model can prove to be the cornerstone of other such models in the energy sector. The municipalities can upgrade the infrastructure at no additional costs and simultaneously cut down on their expensive operation and maintenance. After proposing a program structure, this paper will discuss the legal, economic, social and technical factors affecting the feasibility of the proposed structure in the Indian context. This work focuses specifically on tier 2 cities in India, which are defined broadly on the parameters of population (demographics), finance (living costs) and infrastructure (transport systems). This will be followed by a summary of the potential risks and challenges that are inherent in the model and how to address them.

Biography

Mayank Saraswat is a second-year Master's student in Energy and Environmental Policy at the University of Delaware. With a background in Chemical Engineering from one of the most prestigious institutes in India, IIT BHU, he worked with Reliance Industries for over 2 years on biofuel extraction technologies. After moving to Delaware in August 2016, he has been continuously involved in Energy Efficiency projects at the university. In 2017, he was selected as an EDF Climate Corps fellow at CA technologies. He helped advance CA's sustainability goals and presently is working on affordable sustainable solutions for underprivileged sections of the economy, through innovative financing mechanisms. He remains highly motivated to advance sustainability in those parts of the community which are under-represented.

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