

## Wires vs Panels: Is Traditional Electrification a Poor Choice for Developing Countries?

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"Poles and wires" or "panels and batteries" - is traditional electrification suitable for countries with very low current electrification rates? Or would distributed generation prove to be not just more economic, but also faster to roll out? Taking Myanmar as an example, with a current (January 2013) electrification rate of only 26%, much of the country is still lighting their way with candles in the evening. Children study by candles that blow out, or worse, are a fire risk. Babies are delivered by candlelight in many villages still. For these villages, air-conditioning is not the goal - for them - electrification means lights in the evening; power to power mobile phones and a TV so that they can find out what is happening in the world. Refrigeration to stop food from spoiling may be a next step. But with such a huge population of over 60 million people to electrify, and no money do so do, how long will these people have to wait for power on a traditional transmission + distribution + central large scale generation rollout of power? Currently there are power shortages even for those people who are connected to the grid and many commercial, legal and technical barriers to the new build of power plants. Conversely, a distributed, village scale solution may be more practical. Smaller scale, probably renewable, solar panels, micro-hydro or even wind turbines could be combined with battery technology to electrify single homes or villages. It may not provide the power for industry, but as a start to bring light and communications to remote communities could be a cheaper and faster way to bring the 20th century to Myanmar than waiting for a traditional solution - funded by aid money or neighboring Governments with all the ties that might entail. This paper will explore the economics of this proposal and highlight a possible path for Myanmar, and other developing countries, might follow.