Sizing mini-grids with OnePower Lesotho

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OnePower Lesotho

- Solar startup based in Lesotho
- Mini-grids as well as industrial scale solar projects
- Focus on rural electrification
● 71% rural population
● Energy in urban areas subsidized by semi-state owned utility
● Rural electrification extremely expensive
● Power mostly all from South Africa
● Rarely expands the grid
Alternative Resources

Building mini-grid simulations with different resources for future power projects

- Wind mini-grid simulations using hypothetical wind data
- Hydro mini-grid simulations using hypothetical stream data
- Goal of toggling all three resources
My work on mini-grid models

- **Solar Availability**: Determine solar availability throughout the year
- **Mini-grid Composition**: Determining petrol vs solar generation capacity
- **Project Finance**: Minimizing loan principal required for projects
- **Accounting for Price Elasticity**: Ensuring changes in tariffs are reflected in demand simulations
Thank you to the Energy Access Project!