Island Microgrids: Trends and Opportunities

Symposium on Microgrids

Kaitlyn Bunker, Ph.D., P.E.

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The Rocky Mountain Institute Islands Energy Program supports islands in the Caribbean in their clean energy transitions

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<th>PLANNING</th>
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<td>Developing a blueprint for an island’s energy future through Resilient National Energy Transition Strategies (R-NETS)</td>
<td>Identifying and advancing low risk and first-ever renewable energy &amp; energy efficiency projects</td>
<td>Fostering knowledge sharing through communities of practice and mentoring programs</td>
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- Signing of R-NETS document in Turks & Caicos Islands
- Groundbreaking of PV project in Saint Lucia
- Convening leading island women in energy
The Islands Team currently works in 15 Caribbean countries.

We work with the following islands: Anguilla, Antigua and Barbuda, Aruba, The Bahamas, Belize, Bermuda, British Virgin Islands, Colombia (San Andrés and Providencia), Grenada, Guyana, Montserrat, Puerto Rico, Saint Lucia, Saint Vincent and the Grenadines, and Turks and Caicos Islands.
Microgrids are being implemented more and more on islands, and providing key insights for other geographies.
Whole-Island Example: Mayreau

Population: 300
Land Size: 1.5 mi²
Peak Load: 79 kW
Whole-Island Example: Sint Eustatius

Population: 3,200  
Land Size: 8.1 mi$^2$  
Peak Load: 2.3 MW
Sub-Island Example: Saint Lucia

- Population: 180,000
- Land Size: 238 mi²
- Peak Load: 60 MW
Sub-Island Example: Puerto Rico

Population: 3.2 million
Land Size: 3,515 mi\(^2\)
Peak Load: 3,685 MW
The lessons learned in collaboratively transitioning island grids to utilize renewable energy will benefit other isolated grids, other connected microgrids, and larger grid systems.