



COMMUNITY THROUGH COLORS

# Vieques Microgrid: development of a community owned, financially accessible, resilient solution for the historically underserved and disadvantaged island Vieques, PR.



Figure 1. Map depicting Vieques, PR



Figure 2. Exposed submarine cable

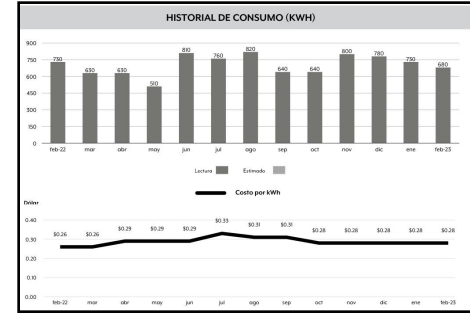


Figure 3. 2022/23 Vieques electric bill

## Household Savings

Currently, cost of electricity fluctuates monthly to reach **\$0.33 per kWh**, double the reported national average. The goal will be to reduce cost of electricity to \$0.26, which is a twenty percent reduction.

## LMI Households

The **median income on the island is <\$15,000**, placing **over 50% of residents in poverty**. With the cost of energy between \$0.26-0.33 per kWh, the cost to power only a small fridge, lights, and phone charger exceeds **14% energy burden**.

## Resilience and Grid Benefits

Each system will be equipped with **battery backup**, providing insurance on cloudy days and reducing grid burden during peak usage. Current infrastructure results in frequent brownouts and blackouts during regular operation.

## Community Ownership

The microgrid will be operated by a **local energy coop**. Further, once the local energy provider (LUMA) finalizes wheeling guidelines, system hosts may profit from their participation.

## Equitable Workforce Development

In a time where global interdependence is not only available, but also expected, access to reliable electricity is the first step in ensuring an equitable workforce. Further, we aim to connect locals with opportunities to receive **Master Electrician training**.