Solar Homes in Puerto Rico Powered by Philanthropy

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Resilient Solar Homes and Communities for Puerto Rico

Resilient communities for climate and economic benefit are more than the energy technology. It requires an investment in people:

Communities + Homes and Families+ Workforce + Manufacturers + Investors and Governments =

ENERGY TRANSFORMATION.

Constructing a Sustainable Future Through Community Activation

- Accessing leaders
- Convening people to talk
- Collective participation in the search for better solutions
- First-hand knowledge of what will work best in the community
- Allying with local government and other civic organizations
- Building support for what comes next: community microgrids, virtual power plants

Homes and Families

- Affordable and inclusive for all income levels
- Rates for service lower than the electric utility's
- Members pay only for consumption – no purchase or financing beyond the reach of low- and moderate-income (LMI) homes

- **Home's primary energy source**
- Solar generation
- Durable LiFePo battery
- Home energy management software
- Hurricane wind-resistant racking
- No transmission/distribution losses

Benefits of BE Electric Service

- Free Home Energy Assessment and Inspection
- Electricity Service and Solar System O&M
- Reliable Energy
- Energy Cost Savings
- Resiliency and Peace of Mind
- Continuing Community-Based Education
  - Solar technology, policy, service models

Solar + Home Energy Management
Ready for Grid Services, VPP, and Microgrids

~8 kW de solar panels

~12,225 kWh potential production

ELECTRIQ POWER

PowerPod 2

Inverter

20 kWh battery

LFP BATTERIES

Long life, safer chemistry

7.6 KW OUTPUT

Inverter capable of high watts and current

OUTDOOR RATED

Install indoor or outdoors

BACKUP POWER SECURITY

The utility grid supplies back-up power when the battery and the sun are low

Monitoring App

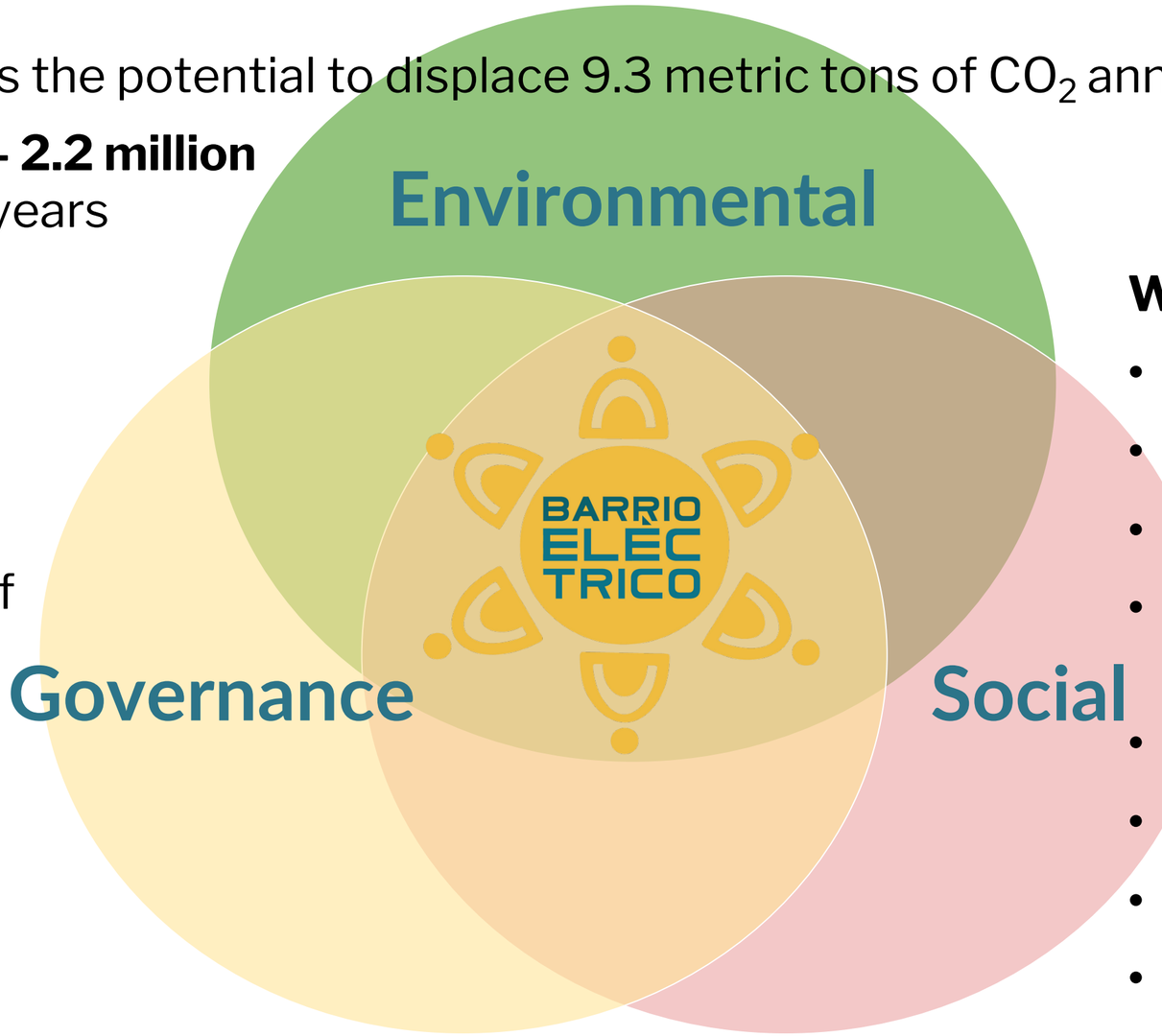
Workforce Development

- High-quality, full time positions in the energy sector operating an alternative electric service
- Local, flexible jobs as home assessors and inspectors
- Low barrier to entry for new installers (no costs of customer acquisition, inventory management, or warranty service)
- Volume implementation provides pipeline of apprenticeship opportunities

Investors and Government:
An Environmental, Social, and Governance (ESG) Investment

Every system installed has the potential to displace 9.3 metric tons of CO_2 annually –

a **reduction of 925,000 – 2.2 million metric tons CO_2** over 20 years (5,000 – 12,000 homes).



By Puerto Ricans, For Puerto Ricans:

- 100% Puerto Rican staff
- Community-centric service model
- Grass-roots institutions decide the future of electric service

We serve people in need:

- 100 homes, 262 persons
- 5.34% under 6
- 22.52% over 65
- 32.82% medically vulnerable (86% of homes)
- 23% on food assistance
- 33% on social security
- 9% on disability
- 8% work from home

Typical Capital Stack for Energy Transformation in Puerto Rico

Capital Source	% of Capital Stack	Indicative $ for 5,000 Home Project
Manufacturer: short-term equipment financing	1	$2.6 million
Tax equity investors: 30% solar investment tax credit (ITC) + 10% and 20% bonus tax credits for serving LMI homes and Energy Communities	50	$130 million
Equity investors: capital in exchange for returns from system operation*	4	$10 million
Public funding: DOE Puerto Rico Energy Resilience Fund; USDA PACE Program; EPA Solar for All	35	$80 million
Municipal assistance: office space and furniture, subsidy funds for neediest families (Operations)	N/A	In-Kind
Philanthropy: grants for community organizing and investment underwriting	10	$26 million
*Family Energy Payments – Operations Costs = Returns from system operations (twenty-year service term)	N/A	$153 million - $127 million (OM) = $26 million

Investment Tax Credit (ITC) Strategy

- Power Purchase Agreement (PPA) with family
- Corporation with federal tax liability as investor and solar project owner
- Federal public funds as cash equity (0% ROI)
- Puerto Rico-based operator provides customer care (development of sites and operations & maintenance)
- Homes divided into 5 MW tranches to capture bonus tax credits for a minimum of 40% tax credit to investor
- Investor earns return from ITC + depreciation + cash returns from energy payments
- Construction financing (short-term debt) to initiate project
- Investment and return on a rolling, quarterly basis
- Federal public funds for replacement costs (operations side)

How Philanthropy Fits In

Grant Support for Development Activities

- Community Organization / Education
- Workforce training for community residents
- Institution building / Technical assistance
- Building alliances with NGOs & local governments
- Family & community energy counseling
- Application for outside resources for home repairs, appliances exchanges, energy efficiency
- Training and managing “good neighbor” volunteers

Participation in Capital Activities (Invest)

- Bridge loans for equipment purchases
- Short-term loans to pay for legal and CPA costs
- Reduction in soft costs:
  - Customer Default Guarantee
  - Reserve to insure against tax credit recapture by IRS
  - Reserve for equipment replacement in event of catastrophic loss

VULNERABLE FAMILY CO-PAYMENT PLAN:

Donate to a fund that provides resiliency and peace of mind to those with financial hardship

Board of directors: Experts in Electricity, Sustainability and Community

Lauren Rosenblatt

Director - Founder

- Lawyer and Electricity Markets Expert
- FERC, Berkshire Hathaway Energy, solar tech start-up

Awilda Camacho

Director

- Social Worker, Community Leader, Barrio Obrero, San Juan
- Board Member G8 Martín Peña communities

Jorge Gaskins

Board President
Community Relations

- 40+ years experience developing alternative energy and agriculture projects in Caribbean

Dr. Fernando Abruña

Director

- Professor of Architecture UPR
- Father of PR Green Design and Construction

Dr. Marcel Castro-Sitiriche

Director

- Associate Prof. Electrical Engineering UPR-M
- Research in resilient power for remote communities

Contact Us

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