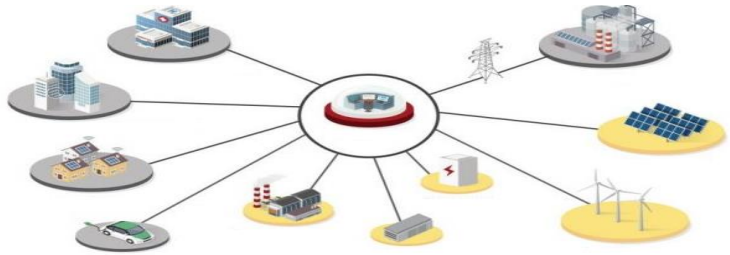
FORBES ENERGY

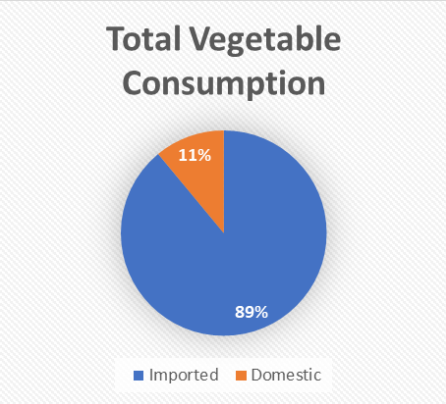
Energy and Food Security for Puerto Rico

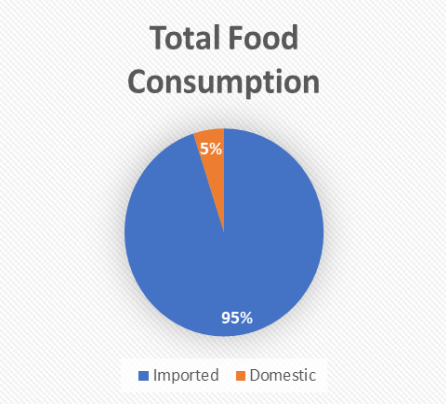


Forbes Energy is focused on two of the largest problems facing the island of Puerto Rico today, food security and energy independence.

Food Security

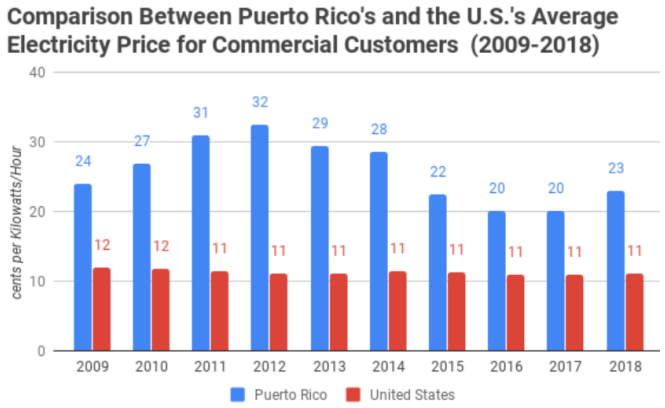
- PR imports 95% of all food consumed and 89% of all vegetables
- On average, food prices are 70% higher compared to the states, especially green vegetables.
- Before the hurricanes, Puerto Ricans were four times as likely to be food insecure as the average American.
- 90% loss in crops post Maria and Fiona





Renewable Energy

- For fiscal year 2021, fossil fuel-fired power plants generated about 97% of PR's electricity
- Prices keep increasing, averaging today $0.3400/kWh, while resilience remains at the bottom tier.
- Services interruptions (20% on average) cost households and businesses $0.18/kWh and $0.57/kWh respectively
- The electricity network that serves 3 million people in Puerto Rico has long suffered from outages that experts blame on poor management and under-investment.



Forbes Energy subsidiary will utilize solar power, battery storage and company produced renewable diesel back up generation to produce 1.5MWh for approximately 100 homes, 8 businesses and 10 Farm In The City (FITC) agricultural production units. This renewable baseload power provides lower electricity cost, grid stability and food security from organic vegetables, in conjunction with our technology partners and local businesses for the Puerto Rican market.

Project location

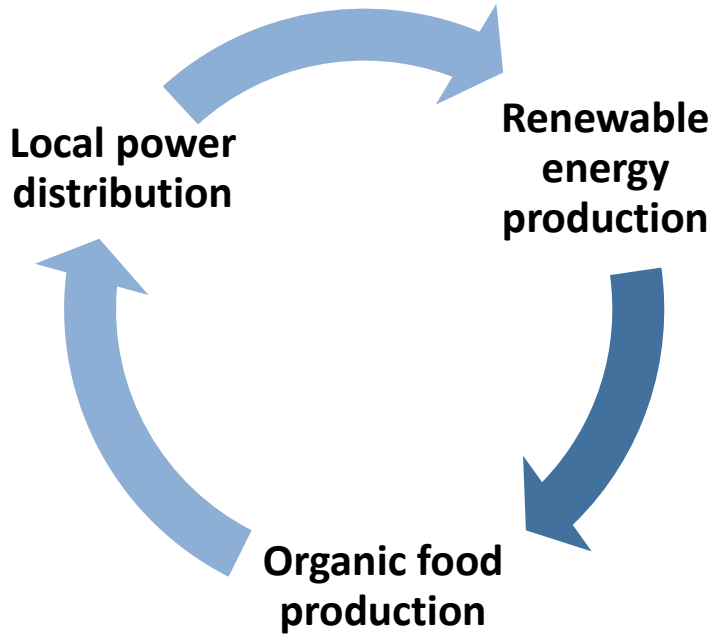
- Phase 1 in Lares PR, serving a town of approx. 28,000 potential customers
- Jobs creation by the Community Microgrid around grid stability and food operations adding economic benefits to the Lares communities.

Project configuration

- Project anchored by FITC units and backed by FE
- Attractive risk adjusted return from Phase 1 scaling into Phase 1+n, serving its long-term consumer base
- Diversified revenue stream from the power and food sales
- Group level business synergy including clean diesel fuel supply into the power backup generation running 20%+ of the time

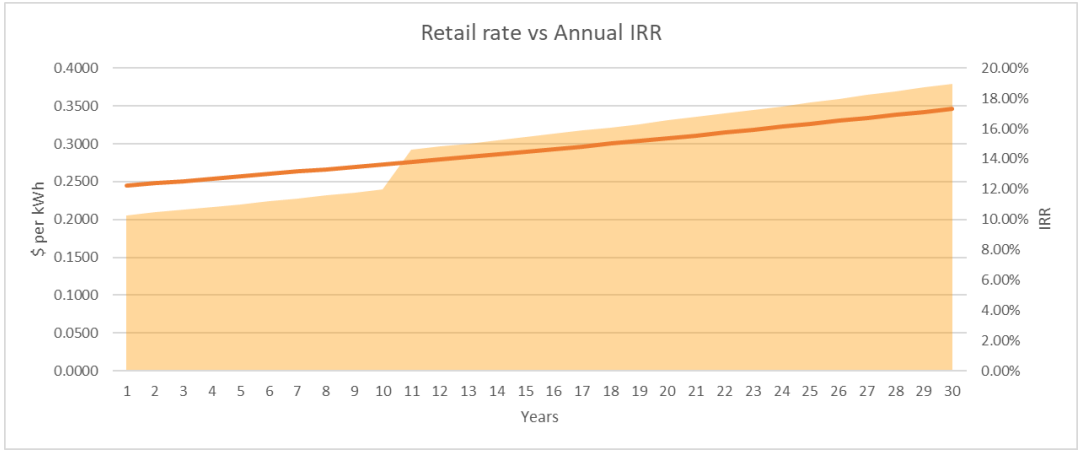
Market information

- Food sales processed as contractual basis with major supermarket chains through collaboration with FITC
- Additional food revenue from local markets sales
- Forbes Energy to supply the renewable diesel to the project as early as Phase 1, amounting to be 8,000+ gallons of diesel annually and scaling



Project Financing plan

- Forbes Energy demonstrated value proposition to investors is a 15% required maximum annual IRR throughout the lifetime of the project (assumed 30 year) as mandated by the Puerto Rico Energy Bureau (PREB). Financing sources are selected from a variety of different financial stakeholders including local banks, private investors and DOE sponsored programs. Through this blend of financing, the project model will be able to provide strong returns to investors while maintaining low cost, reliable and resilient power for our consumer base.



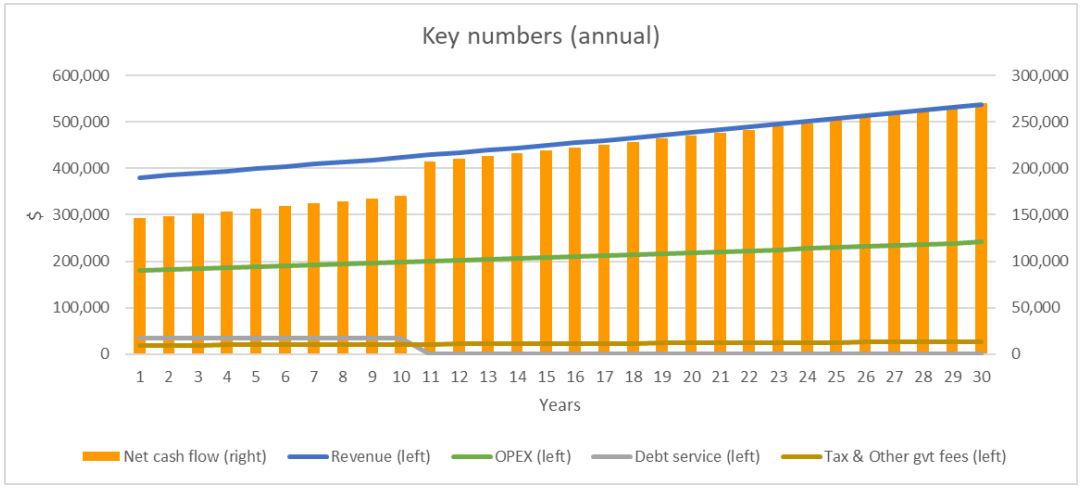
Financing Solution

Estimated CAPEX	$	2,370,020
Estimated OPEX	$	180,653
Loan terms (rate/term)		4% 10 year
Project Lifetime		30 Years

Loan (Levered project value)	Equity (Unlevered project value)	Self funded/ donations/grants**	Assumed Retail rate $/kwh (year 1)	Average Annual IRR over lifetime	Project Lifetime Value
0%	50%	50%	$ 0.2195	14.98%	$ 5,325,429
20%	40%	40%	$ 0.2450	14.83%	$ 6,328,599
50%	25%	25%	$ 0.2900	14.95%	$ 7,974,406
100%	0%	0%	$ 0.3740	14.93%	$ 12,987,971

*All estimates provided by DexGrid Gridlauncher (+/-30%)

**DOE will potentially fund up to 40% of CAPEX for similar approved project



Puerto Rico

- The project is PR Law 17 compliant which requires that the energy grid moves to 100% renewable power generation by 2050
- Scalable electricity alternative through phases growth and duplicative deployment model
- The project provides food security and lower cost island wide through the mass production of leafy green vegetables

Municipalities & Communities

- Resilient power distribution post hurricanes to all communities, especially the underserved communities
- Reliable power service supporting maximum business revenue generation
- Estimated savings to the communities on their electricity of 30% versus LUMA
- Company to train and hire local residents for the project

Commercial Partners

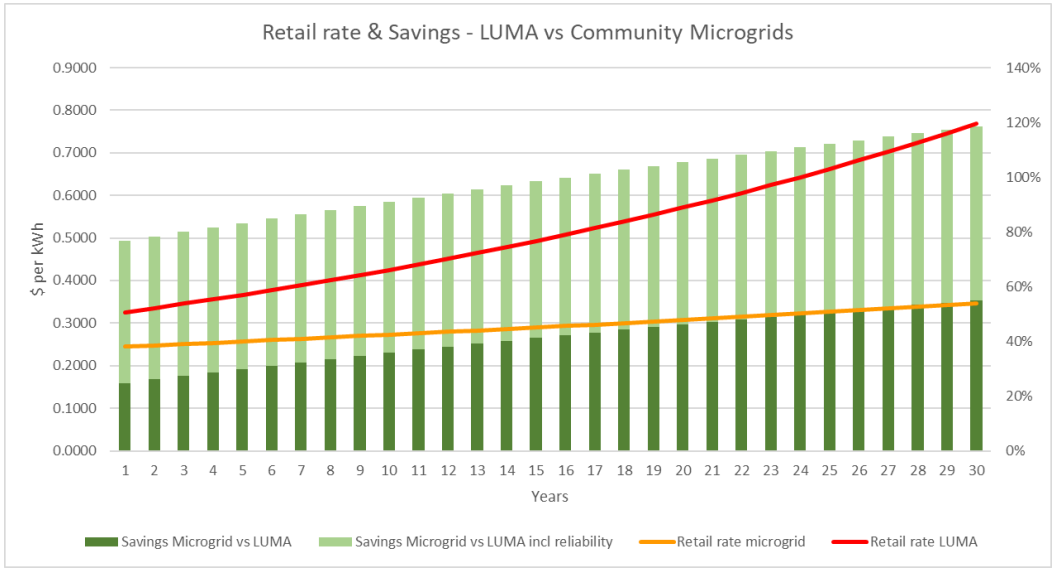
- Contractual agreements to purchase market price organic food produce
- PR5G network communication sustainability

Investors

- PR boasts the lowest corp. income tax rate in the states under Act 60 (4% fixed federal income tax)
- A 0% to 1% income tax from innovative activities
- Renewables taxes incentives ITC 30% + special rebates for investing in machinery and equipment
- Tax savings passed through to investors
- Overall credit risk mitigated by diversified consumers base, electricity prepayment and “next-in-line” consumers

Forbes Energy Advantage

- With a potential 100% increase in LUMA energy costs and a 3% year-over-year mandate cost increase, the people of Puerto Rico might end up paying over $0.70/kwh within the next 30 years. Forbes Energy will maintain a 0.12% increase year-over-year keeping our overall customer price below $0.30/kwh

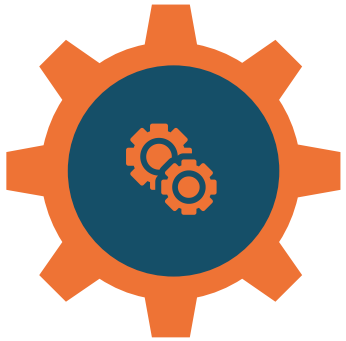


Graph calculated without potential 100% contemplated price increase

Technology Partners

FARM IN THE CITY	(www.farminthecitynow.com) The "Farm in the City" project was born after the Hurricane Maria, utilizing advanced and automated technology to produce vegetables in containers, the crops can be produced in an organized manner and, at the same time, protect the harvest from possible atmospheric phenomena. This achieves a sustainable production system that is fully accessible to local consumers.	Farm In The City will be providing the project with the agro-industrial container units to produce a range of vegetables to meet the specific needs of the Puerto Rican market. Their current market partners are prepared to buy the projects produced goods.
DexGrid	(www.dexgrid.io) DexGrid is a software company headquartered in Puerto Rico, providing its customers with a comprehensive solution to sell their excess electricity to their communities. Enabling microgrid anchors such as microgrid developers, businesses, manufacturers and homeowner associations to sell their electricity to their neighbors making it affordable, reliable and resilient.	The GridLauncher App assists in pre-launching the projects, providing the project feasibility and coordination with financial and technical experts. The First Touch Campaign onboards the customers to the microgrid. Its GridUser app supports all customers interactions and microgrid software operations.
Technical experts Microgrid developers	Through DexGrid's library of microgrid experts, and preferred service providers, the project will receive competitive quotes as part of the pre-launching technical engineering studies and microgrid developers to manage the development and deployment of the generation, storage, backup generation and grid infrastructure.	Potential proven candidates are CH4, Alten Energy, Gruppo AB, AZ Engineering, Eaton and EnelX. Competitive quotes will be provided to the project
DEPARTMENT OF ENERGY · UNITED STATES OF AMERICA · CDBG	Department of Energy and Community Development Block Grant. The DOE and CDBG currently have $1.5B in funds allocated for the development of resilient renewable energy microgrids in Puerto Rico with a potential 40% of project CapEx for distribution per project.	This project fits perfectly within their mandate and is applicable for funding. FE representatives, in conjunction with DexGrid, will be working closely with Puerto Rico's DOE and CBDG representatives to complete all tasks related to the Community Microgrid projects.

PRE-LAUNCH | LAUNCH | SCALE



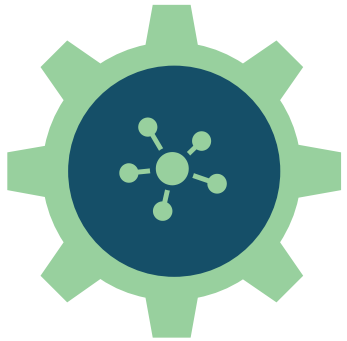
First Touch Campaign

Onboarding neighbors & tenants

Energy Credits incentives

WeAlign gamification

EARN program



WeAlign & EARN

Reliable operations

More energy credits

Optimal uptime

GRIDLAUNCHER → GRIDLAUNCHER & GRIDUSER → GRIDUSER → GRIDUSER → GRIDUSER

GridLauncher app

Project feasibility

Project funding & development

Marketplace

Wholesale bids

Competitive framework

Regulator interface

Potential for REC marketplace

Onboard & deploy

Neighbors waiting-list

Increasing generation capacity

Scaling in phases

Project Development Timeline

Phase 1 (Year 1)
- 1.5 MWh total distributed power
- 10 total freight farm containers
  - 60 tons of total produce sold
- Estimated total annual revenue $1,700,000

Phase 2 (Year 2-4)
- 10 MWh total distributed power across 5 projects
- 50 total freight farm containers
  - 300 tons of total produce sold
- Estimated total annual revenue $9,000,000

Year 4
- Operational execution of pre-defined areas of expansion beyond Puerto Rico

Phase 3 (Year 5-8)
- 35 MWh total distributed power
- Forbes Energy supplied distillery
- Forbes Energy waste products (sugar juice) converted into rum in Puerto Rico

Phase 4 (Year 8-10)
- 59 MWh total distributed power
- Expansion into other anchor businesses to support community microgrids

Project Development: Month 1-3

1. Lease executed with landowner
2. Onboard electricity customers through DexGrid's First Touch Campaign
3. Execute FITC delivery contract
4. Start capital raising process through the GridLauncher

Engineering and Permitting: Month 3 - 9

1. Vetting project by technical consultants through the GridLauncher
2. Process engineering and permitting
3. Implement community training agricultural program
4. Complete capital raise

Construction: Month 9-15

1. Project construction
2. Onboard additional customers to the community microgrid
3. Registration as Energy Service Company with the PR Regulator

Project Operations: Month 15+

1. Launch project operations
2. Start selling food produce
3. Start distributing electricity to consumers
4. Cash flow generation

Forbes Energy Project Structure

Management	Operators, Regulators and Intermediaries	Products	Customers
Forbes Energy LLC Parent company		**DIESEL** Backup fuel	
Energy Services Company Grid & Food Manager	**GRID** EPC and/or operator	**ENERGY GENERATION & STORAGE** Solar PV + Batteries storage + Backup generator	**CONSUMERS** Households & businesses
	DEXGRID Software operations	**OFFGRID DISTRIBUTION**	**WAITING LIST** Households & businesses
	PREB Regulator		
	FITC Food		**FOOD BUYERS** Supermarkets & community