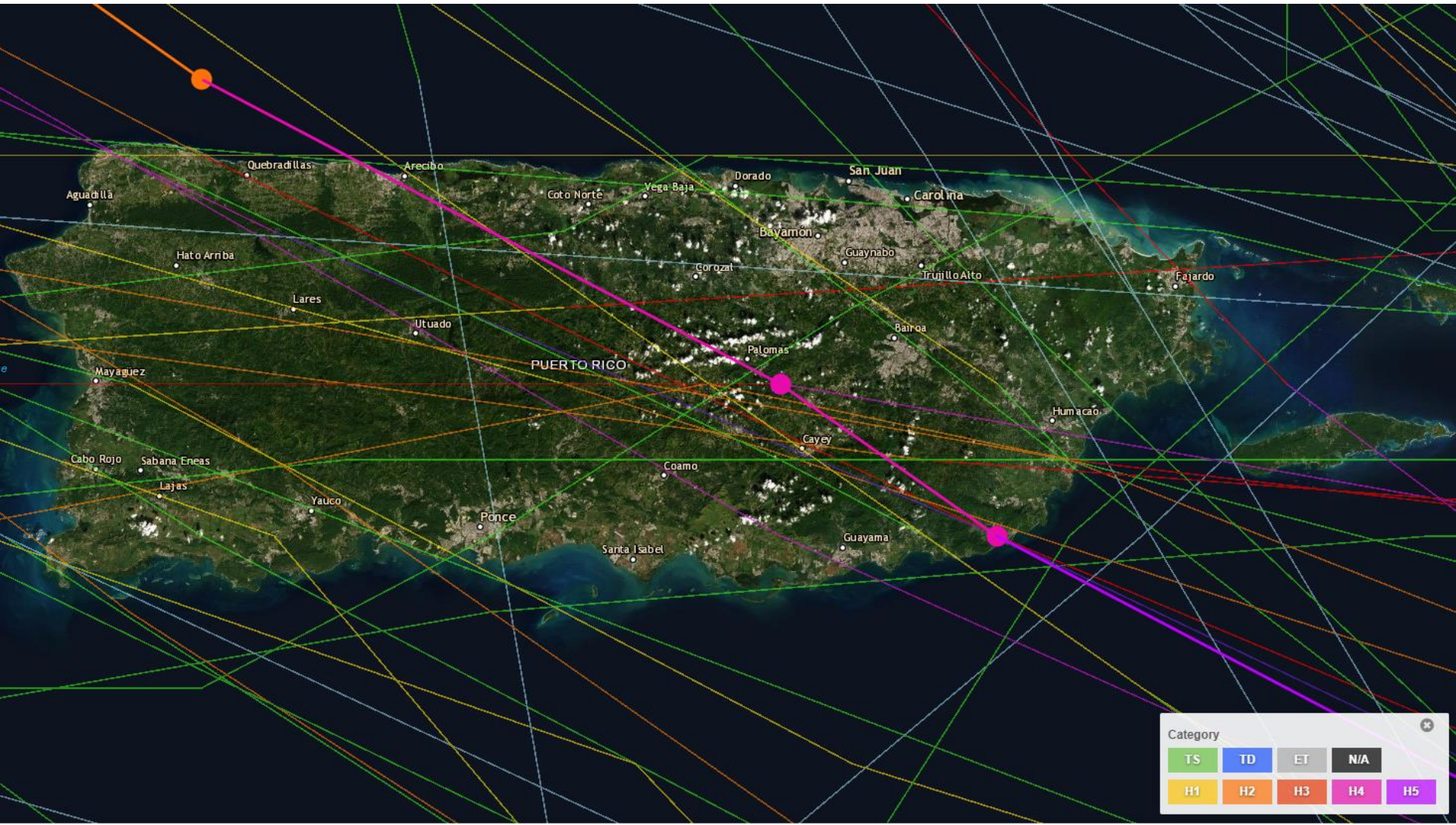


Beyond Recovery to Energy Democracy

Ruth Santiago, JD,LLM

El Puente-Latino Climate Action Network,
Comité Dialogo Ambiental, Inc.



Category

TS	TD	ET	N/A		
H1	H2	H3	H4	H5	



— 230 kV

— 115 kV

— 38 kV

Impacts of Hurricane Maria

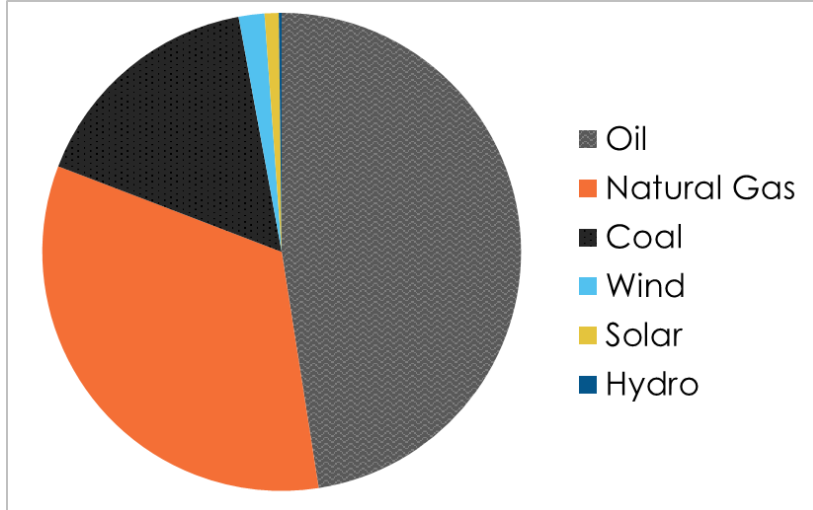
- Estimated 80% of the transmission and distribution systems seriously damaged. Prof. Efrain O’Neill, PhD, UPRM
- Estimated 50,000 poles, 500 transmission towers down. USACE
- Knocked out 100% power
- Communications failure
- “Generator Island” diesel fumes, high noise levels
- Immense human suffering and deaths.



Central Station Fossil Fueled Generation Vulnerable to Earthquakes, Floods, Sea Level Rise, etc



Puerto Rico Current Energy Mix



- ~33% Bunker C Residual Oil/Diesel
- ~43% “Natural” Methane Gas
- ~20% Coal
- ~2% Renewables





PREPA'S INTEGRATED RESOURCE PLAN





REBUILD THE EXISTING SYSTEM?



www.QueremosSolpr.com

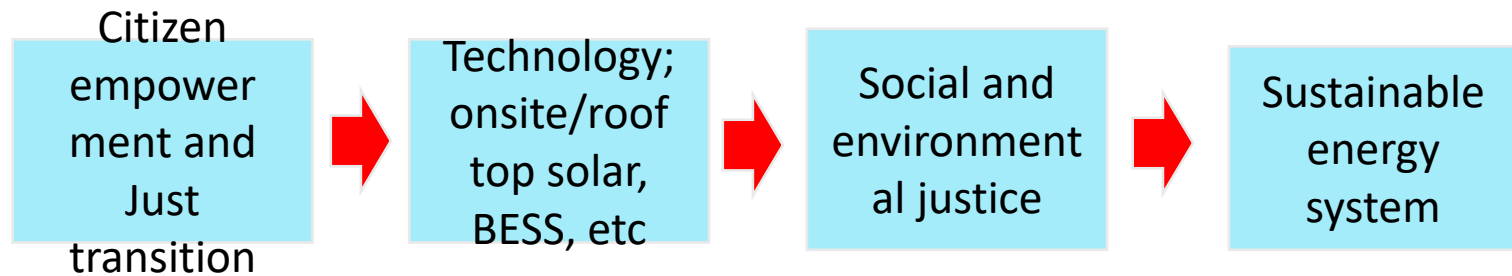
A beach scene at sunset. The sun is low on the horizon, casting a golden glow over the ocean and sand. A person is walking on the beach carrying a surfboard. The text 'Queremos SOL' is overlaid on the image. 'Queremos' is in white, 'SOL' is in yellow, and there is a white underline under 'SOL'.

Queremos
SOL

SOSTENIBLE. LOCAL. LIMPIO

Beyond technology: sustainable energy through community mutual aid and PREPA transformation

- Community shared solar: A system that provides electric power and socio-economic benefits to a community.
- Solar communities: Potential for local socio-economic development through technology, citizen empowerment, environmental and social justice, aligned with sustainable energy principles.



VIABILITY OF ON-SITE SOLAR, BESS

- The draft Integrated Resource Plan (IRP) prepared by Siemens Industry, Inc for the Puerto Rico Electric Power Authority (PREPA) indicates that the unit costs for all customer alternatives considered are lower than the final all-in (ESM and S4S2) generation portfolio rates. (Pages 8-30 and 8-46 of the 6/2019 IRP draft). The cost of customer owned generation is significantly lower than the total rate of PREPA's preferred plans.
- Expert consensus on economic and technical viability of roof-top, on-site solar generation and battery energy storage systems (BESS) in Puerto Rico at the technical hearings for PREPA's IRP held Feb. 3-7, 2020.

Transition? New Fortress Energy- NFEnergia Conversion SJ 5&6 Methane

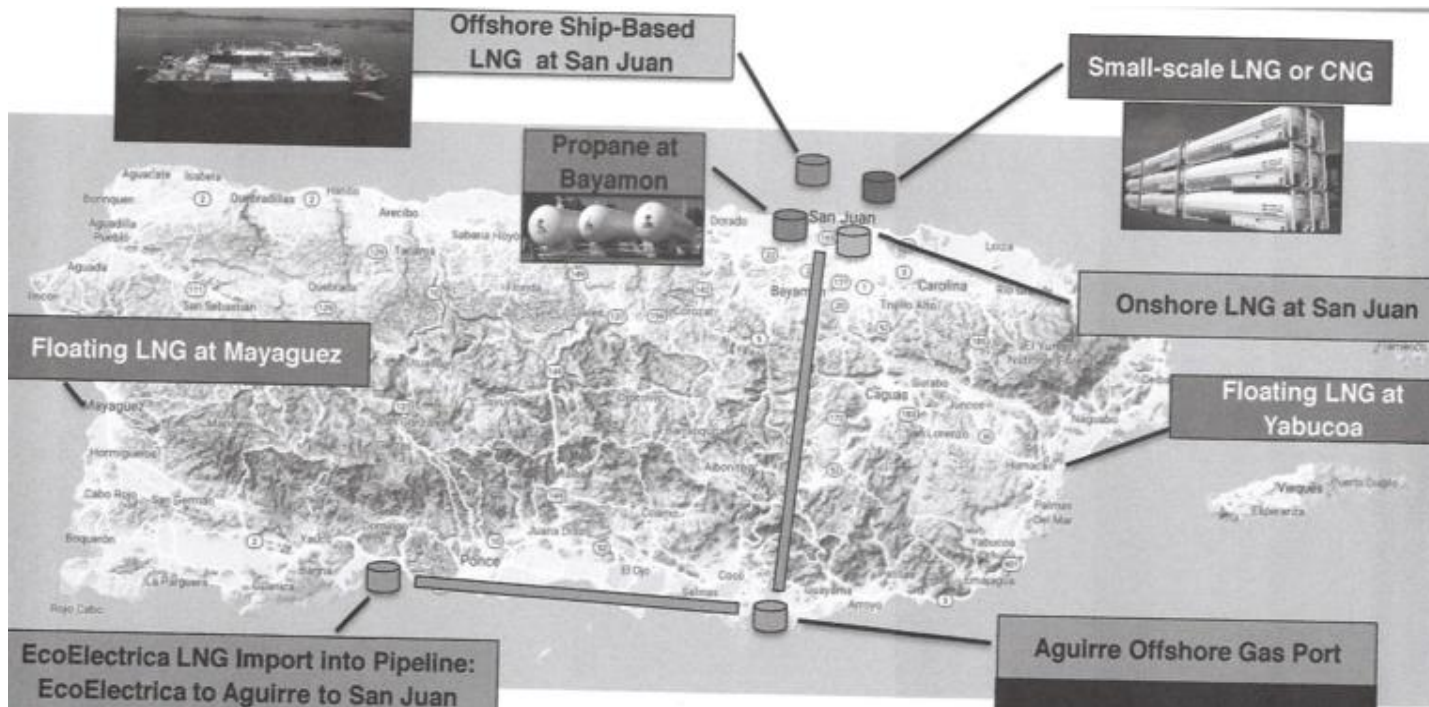
- LNG ports



- Central station power plants



New Methane Gas Infrastructure, T&D FEMA funding?



Source: Siemens

