Who is Elisa Sanchez?
The US Virgin Islands

St. Croix – 84 sq. mi.
St. Thomas – 31 sq. mi.
St. John – 20 sq. mi.
Water Island – 492 acres
Population – a little over 100,000 people
Average temperature -85 F

Point Udall – Easternmost Point of the USA
Known for spectacular views and beautiful beaches
1,235 miles south east of Florida, 111 miles from Puerto Rico
Virgin Islands Water & Power Authority
WAPA

- Semi-autonomous Agency created in 1964
- Provide water and power to the US Virgin Islands
- 13,000 water customers and 50,000 electric customers
- Only public provider of electricity and potable water
- Maintain two isolated generation plants (St. Croix & St. Thomas)
- Fuel Storage capacity (diesel & propane)
WAPA Generation System

St. Croix
• 21,236 customers
• Peak usage – 38 Megawatts

St. Thomas/St. John/Water Island
• 28,474 customers
• Peak usage – 54 Megawatts

Rate per Kilowatt hour:
Residential - $0.32/kwh (first 250 kwh) $0.35 cents/kwh (above 250 kwh)
Commercial – $0.39 cents/kwh
(reduction from residential $0.48 and commercial $0.51) [2015]
Increased Efficiency and Reliability

- Using propane vs Diesel:
  - Reduce greenhouse gas emissions
  - Reduces ground pollution
  - Reduce the cost of burning fuel by 30%
- Moving to smaller generation units. 10MW vs 20+MW
- Installation of more underground transmission and distribution power lines
Alternative Energy

- Solar Farm (PPAs)
  - St. Croix – 4 MW system
  - St. Thomas – 4.2 MW system

- Net Metering (Customers)
  - St. Croix – 5 MW
  - St. Thomas – 10 MW

- Off Grid Businesses and Homes

Goal to reduce fossil fuel energy production by 60% by 2025
Alternative Energy – Lessons Learned

• Wind Technology
• Waste-to-Energy Technology
• Biomass Technology

Reasons for failure:
- Financing
- No government or community buy-in
- Not enough supply for the demand
After Two Category 5 Hurricanes: Irma (Sept. 6\textsuperscript{th}) & Maria (Sept. 19\textsuperscript{th})
Restoration/Mitigation

• Transition from wooden poles to composite poles
• Additional underground distribution lines
• Relocation of primary distribution lines