# Request for Proposals from Independent Power Producers for Solar Photovoltaic Generation

## PR-18-11

### First PRE-BID Conference (Webinar)

**Hugo Hodge, Jr.**
**Executive Director (CEO)**
**Virgin Islands Water and Power Authority**
**June 13, 2011**

# Request for Proposals (RFP)

- **The objective of the RFP is to procure electrical energy and other products generated from commercially proven photovoltaic (PV) generation facilities.**

- **VIWAPA is seeking responses from technically and financially qualified independent power producers or other firms to negotiate Power Purchase Agreements (PPAs) for the electrical energy and other Products produced by PV Generating Facilities.**

- **PV generating facility is to be installed, owned and operated by the Respondent's) that best fit the Authority's needs.**

# Request for Proposals (RFP)

- **VIWAPA is seeking a maximum of 10 MW DC nominal electrical capacity from all Generating Facilities.**
- **VIWAPA is seeking to allocate approximately 5 MW DC to each of its two generation and distribution districts (St. Thomas-St. John and the District of St. Croix)**
- **VIWAPA is willing to consider a different allocation of the 10 MW DC capacity between these Districts.**

# Power Purchase Agreement (PPA)

- The Authority seeks to sign a 20-year PPA for the purchase of Product with one or more selected Respondents. Shall be renewable for an additional 5 years at the option of the Authority.

- The Authority anticipates that a separate PPA would be executed for each selected Project in each of the Authority's two Districts.

- Projects comprised of multiple Generating Facilities in the same District would be covered by a single PPA.

# Identified Site St. Croix

- Midland Proposed Site

# St. Thomas Site

- Bidders are expected to travel to St. Thomas on their own to identify possible sites.

# Overview of St. Croix Electrical Production

**Brief Description Electrical Production System (STX)**

- St. Croix's Electrical System is not interconnected with any other U.S. Virgin Islands systems
- Electrical Generation on this island is comprised of:
  - 1-10 MW and 1-16 Mw Boiler/Steam Turbine/Generators (Residual No.6)
  - 4-Frame 5 Gas Turbines (Distillate No.2)
  - 2- Heat Recovery Steam Generator (HRSG)

# Overview of St. Thomas Production

**Brief Description Electrical Production System**

- St. Thomas Electrical System is interconnected with St. John

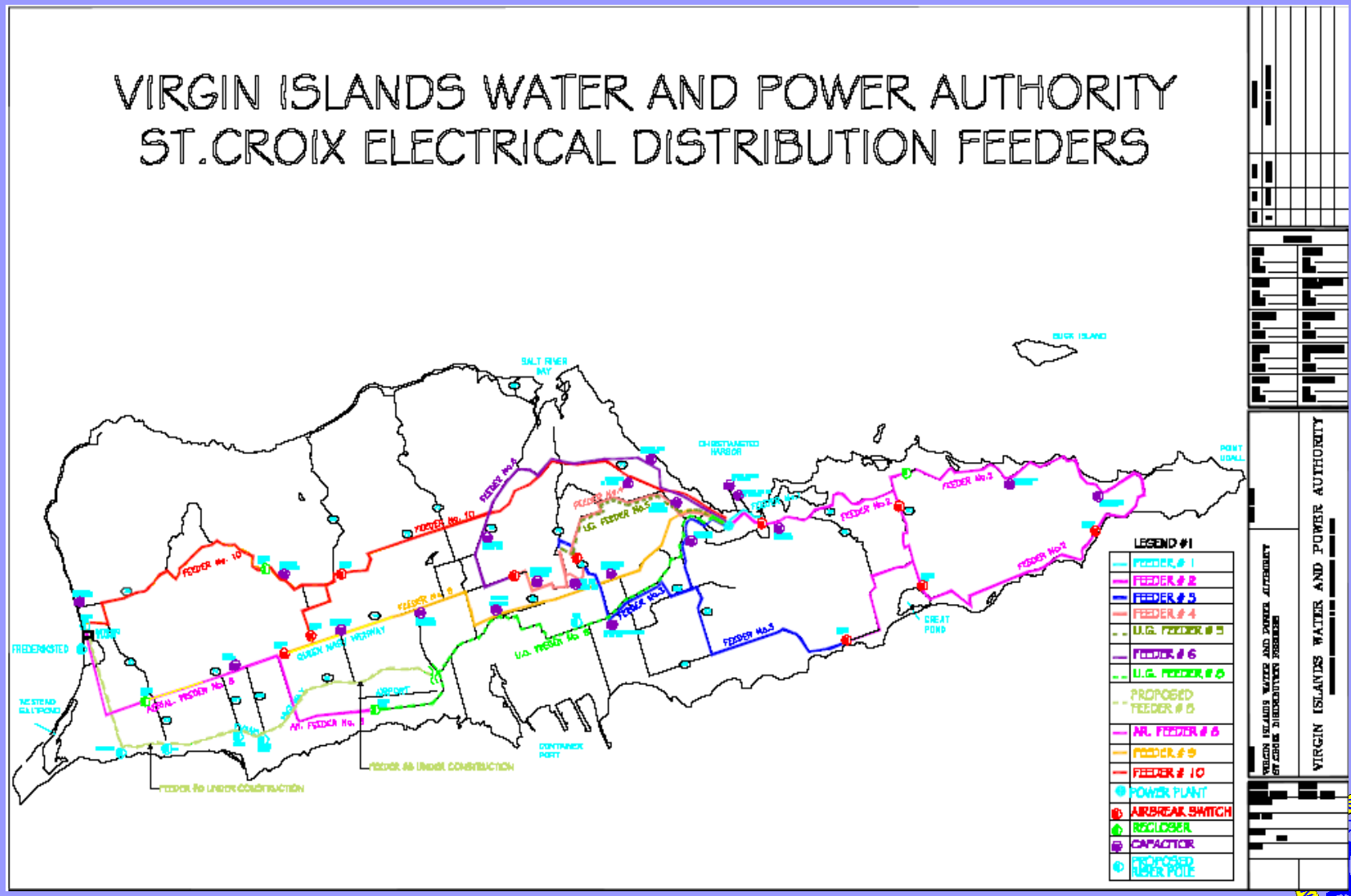
- Power Production for St. Thomas/St. John grid is Produced on St. Thomas
- Electrical Generation comprised of:
  - 1-20 MW and 1-36 Mw Boiler/Steam Turbine/Generators (Residual No.6)
  - 2-Frame 5 LA, 2 Frame 5 PA, 1 Frame 6, and 1 FT-8 Pratt Whitney Gas Turbines (Distillate No.2)
  - 1- Existing Heat Recovery Steam Generator (HRSG)

# Request for Proposals (RFP)

St. Croix

- Radial Electrical Distribution System at 13.2 and 24.9 KV
- Principally Overhead with two Underground Feeders:
  - 24.9 KV to the Airport and 13.2 KV to the Hospital

# ELECTRICAL DISTRIBUTION



# Feeder Loads St. Croix

| St. Croix | | | | |
|---|---|---|---|---|
| FEEDER NAME | Voltage (kV) | MIN LOAD (MW) | PEAK LOAD (MW) | 10% Screen PV Capacity (MW)* |
| RICHMOND SUBSTATION | | | | |
| FEEDER 1 | 13.8 | 1.4 | 2.7 | 0.27 |
| FEEDER 2 | 13.8 | 4.5 | 5.5 | 0.55 |
| FEEDER 3 | 13.8 | 2.6 | 4.8 | 0.48 |
| FEEDER 4 | 13.8 | 3.2 | 5.2 | 0.52 |
| FEEDER 5 | 13.8 | 0.6 | 1.8 | 0.18 |
| FEEDER 6 | 13.8 | 3 | 6 | 0.60 |
| FEEDER 9A | 24.9 | 2.3 | 4.5 | 0.45 |
| FEEDER 10A | 24.9 | 1.3 | 2 | 0.20 |
| | Subtotal | 18.9 | 32.5 | 3.3 |
| NEW SPANISH TOWN SUBSTATION | | | | |
| FEEDER 8 | 24.9 | 6.5 | 10 | 1.00 |
| FEEDER 9B | 24.9 | 2.3 | 4.5 | 0.45 |
| FEEDER 10B | 24.9 | 1.3 | 2 | 0.20 |
| | Subtotal | 10.1 | 16.5 | 1.7 |
| | STX Total | 29.0 | 49.0 | 4.9 |
| | | | | |

# Request for Proposals (RFP)

St. Thomas

- Radial Electrical Distribution System at 13.2 (operated @ 13.8kV), consisting of 21 primarily overhead circuits
- Looped Electrical Sub-Transmission System operated at 34.5 kV, consisting of three circuits
- Four 34.5 kV/13.2 kV substations.

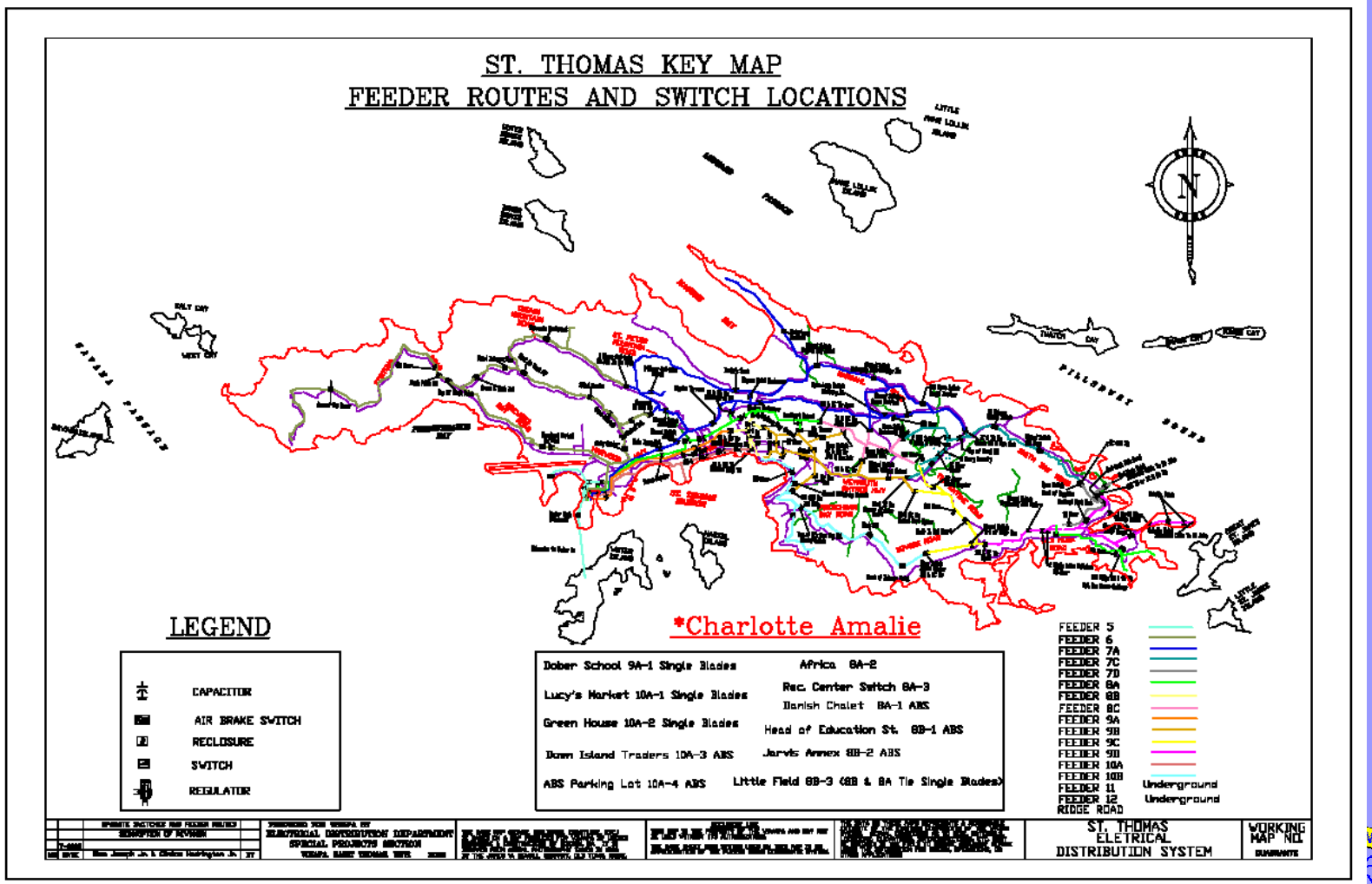
# Feeder Load St. Thomas

| St. Thomas | | | | |
|---|---|---|---|---|
| FEEDER NAME | Voltage (kV) | MIN DAYTIME LOAD (MW) | PEAK LOAD (MW) | 10% Screen PV Capacity (MW)* |
| RANDOLPH HARLEY SUBSTATION | | | | |
| FEEDER 5A | 13.8 | 3.5 | 6 | 0.60 |
| FEEDER 6A | 13.8 | 1.2 | 2 | 0.20 |
| FEEDER 7A | 13.8 | 1.7 | 2.9 | 0.29 |
| FEEDER 8A | 13.8 | 2.3 | 4.2 | 0.42 |
| FEEDER 9A | 13.8 | 1.8 | 5 | 0.50 |
| FEEDER 10A | 13.8 | 2.2 | 6.4 | 0.64 |
| | Subtotal | 12.7 | 26.5 | 2.7 |
| LONG BAY SUBSTATION | | | | |
| FEEDER 7B | 13.8 | 1.7 | 2.7 | |
| FEEDER 8B | 13.8 | 3.2 | 5.4 | 0.54 |
| FEEDER 9B | 13.8 | 1.4 | 2.8 | 0.28 |
| FEEDER 10B | 13.8 | 2.8 | 5.6 | 0.56 |
| YH2 | 13.8 | 0.6 | 1.1 | 0.11 |
| | Subtotal | 9.7 | 17.6 | 1.5 |

# Feeder Load St. Thomas (cont')

| | | | | |
|---|---|---|---|---|
| **TUTU SUBSTATION** | | | | |
| **FEEDER 7C** | **13.8** | **3.5** | **4.8** | **0.48** |
| **FEEDER 9C** | **13.8** | **2.5** | **4.2** | **0.42** |
| **TUTU PARK MALL** | **13.8** | **1** | **1.7** | **0.17** |
| | **Subtotal** | **7.0** | **10.7** | **1.1** |
| **EAST END SUBSTATION** | | | | |
| **FEEDER 7D** | **13.8** | **2.7** | **4.2** | **0.42** |
| **FEEDER 9D** | **13.8** | **2.6** | **4.2** | **0.42** |
| **RIDGE ROAD FEEDER** | **13.8** | **2** | **4.5** | **0.45** |
| | **Subtotal** | **7.3** | **12.9** | **1.3** |
| **ST. JOHN SUBSTATION** | | | | |
| **FEEDER 7E** | **13.8** | **2** | **4.2** | **0.42** |
| **FEEDER 9E** | **13.8** | **3** | **6.5** | **0.65** |
| | **Subtotal** | **5.0** | **10.7** | **1.1** |
| | **STT Total** | **41.7** | **78.4** | **7.6** |
| *** See Interconnection Requirements** | | | | |

# ELECTRICAL DISTRIBUTION



# Request for Proposals (RFP)

**Respondents Responsibilities**

- **All costs and activities associated with the development of the Facility, including:**
  - **Community Relations**
  - **Agreements with Local Authorities**
  - **System Impact Studies**
  - **Financing**
  - **Sites**
  - **Construction**
  - **Operation**
  - **Maintenance and repair**
  - **Interconnection with existing infrastructure**
  - **WAPA not responsible in any way whatsoever for any Permits and Approvals**

# Request for Proposals (RFP)

**Mandatory Communication Channel with WAPA**

- **All communications between Respondents and WAPA should be in writing and submitted to Madeline Stevens-Webster, Manager, Contracts, via e-mail at pr-18-11@viwapa.vi**

- **Proposers are prohibited from making any contact whatsoever with WAPA's Board Members, Staff or Members of the Selection Committee, once established**

- **Such contacts may be grounds for disqualification**

Thank you