

### **DISASTER RECOVERY STATUS**



	<b>O</b>								
PW#	Island		Project Cost	- 1	Federal Share	An	nount Disbursed	Av	ailable Federal Amount
193	STX	\$	27,127.52	\$	24,414.77		-	\$	24,414.77
211	STJ	\$	3,347.57	\$	3,012.81		-	\$	3,012.81
227	STX	\$	115,932.94	\$	104,339.65		-	\$	104,339.65
240	STT	\$	96,494.93	\$	86,845.44		-	\$	86,845.44
1054	STX	\$	43,333.41	\$	39,000.07		-	\$	39,000.07
162	STX	\$	8,800.00	\$	7,920.00		-	\$	7,920.00
182	STT	\$	75,756.27	\$	68,180.64		-	\$	68,180.64
183	STT	\$	24,007.36	\$	21,606.62		-	\$	21,606.62
60	STJ	\$	181,634,211.78	\$	163,634,211.78	\$	58,741,063.07	\$	104,893,175.71
85	WI	\$	16,405,211.81	\$	14,764,693.63	\$	11,142,218.99	\$	3,622,471.64
126	STX	\$	317,883,610.18	\$	286,095,249.16	\$	198,258,043.16	\$	87,837,206.00
226	STT	\$	247,638.75	\$	222,875.88		-	\$	2,228,774.88
307	STT	\$	143,096,692.82	\$	143,096,692.82	\$	143,096,630.27	\$	62.55
1034	STT	\$	11,153,166.00	\$	10,037,849.40	\$	4,931,726.98	\$	5,106,122.42
86	STT	\$	100,000.00	\$	90,000.00		-	\$	90,000.00
158	STT	\$	20,629,452.44	\$	18,566,507.20	\$	5,832,037.72	\$	12,734,469.48
522	STT	\$	243,725.63	\$	219,353.07		-	\$	219,353.07
548	STT	\$	4,074,396.49	\$	3,666,956.84	\$	6,480.00	\$	3,660,476.84
1048	STX	\$	553,852.04	\$	498,466.84		-	\$	498,466.84
1053	STT	\$	118,617.86	\$	106,756.07		-	\$	106,756.07
1121	STX	\$	1,037,622.43	\$	933,860.19		-	\$	933,860.19
Totals					642,288,792.88	\$	422,008,200.19	\$	222,286,515.69

<sup>\*</sup> On April 22, 2021 PW 307 was obligated for an additional \$184M

### FEMA 404 Funding

		ESTIMATED	OBLIGATED	FEDERAL FUNDS	AVAILABLE FEDERAL	
PROJECTS NAME	PF	ROJECT COSTS	AMOUNT	DISBURSED	SHARE	STATUS
STT Microgrid						Submitted to FEMA
(Est. Bovoni)	\$	125,611,021.00	-	-	-	404 Obligated
STX Microgrid						Submitted to FEMA
(Adventure)	\$	129,688,384.00	-	-	-	404 Obligated
TOTAL	\$	255,299,405.00				
(Adventure)	\$			- · · · · · · · · · · · ·	Mi	404 Obligated

\*On April 5, 2021 FEMA approved \$4,486,000 for phase 1 of the Western St. Croix Microgrid Project

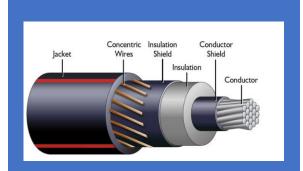
### **CDBG-DR Funding**

CDBG-DKT ROJECTS										
		AVAILABLE								
			FEDERAL FUNDS	FEDERAL						
PROJECTS NAME	PR	OJECT COSTS	OE	BLIGATED AMOUNT		DISBURSED	SHARE			
Randolph Harley Power Plant Expansion Project	\$	95,903,330.00	\$	9,590,330.00	\$	7,514,298.60	\$ 88,389,031.00			
STX Microgrid (Adventure)	\$	129,688,384.00		-		-	=			
TOTAL	\$	225,591,714.00								
*On April 5, 2021 FEMA approved \$4,486,000 for phase I of the Western St. Croix Microgrid Project										
LOCAL COST MATCH										
	COST SHARE			ORIGINAL DATE		FEDERAL FUNDS	DATE OF			
PROJECTS NAME	AMOUNT			SUBMITTED		DISBURSED	RECEIPT			
PW 60 (STJ)	\$	5,393,053.31		5/11/2020		-	-			
PW 85 (WI)	\$	265,870.27		6/3/2020			-			
PW 307 (STT)	\$	13,495,388.17		10/26/2020			-			
PW 126 (STX)	\$	20,877,377.04		3/29/2021			-			

\*Awaiting approval of PW 126 application to submit payment request

# Hazard Mitigation Project Methodology





### **Underground Infrastructure**

- ✓ Primary Backbones
- ✓ Critical Facilities
- ✓ Densely Populated Areas

### **Composite Poles**

- ✓ Harden Remaining Overhead System
- ✓ Lightly Populated Areas
- ✓ Terrain Prohibitive Areas



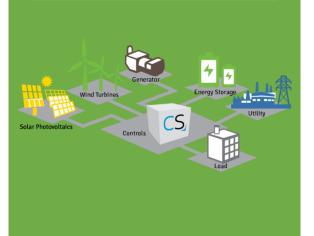


### **New Generation**

- Replace aging units with smaller more efficient generators per IRP
- ✓ Install Battery storage at Generation Site

### **Renewable Energy**

- ✓ Integrate solar & wind
- ✓ Install smart controls
- ✓ Install Battery Storage





TERRITORIAL
MITIGATION
PROJECTS - ELECTRIC



#### St.Thomas

Underground (406)

New Generation (HUD)

Composite Poles (406)

- Microgrid Project (404)
- Substation GIS Projects (406)
- Control Centers (406)

AMI Projects (406)

- Submarine Transmission Cable (406)
- Asset GIS/GPS Mapping (Cat F)



#### St. Croix

Underground (406)

New Generation (HUD)

Composite Poles (406)

Microgrid Project (404)

Control Centers (406)

Renewable Energy Project (HUD)

- AMI Projects (406)
- Asset GIS/GPS Mapping (Cat F)



### St. John

Underground (406)

Emergency Generation (406)

Composite Poles (406)

- Microgrid Project (406)
- Substation GIS Projects (406)
- AMI Projects (406)
- Asset GIS/GPS Mapping (Cat F)



### Water Island

Composite Poles (406)

- Microgrid Project (406)
- Asset GIS/GPS Mapping (Cat F)





- > Installation of solar generation at Adventure in St. Croix with Battery Storage (404)
- > Installation of solar generation at HERA in St. **Croix with Battery Storage (HUD)**
- > Installation of wind generation at Longford with Battery Storage (HUD)
- > Underground Installations on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers (406)
- > Composite Pole installations on all remaining primary and secondary circuits (406)
  - 4,003 on St. Croix
- **AMI** Project (406):
  - · Install concrete bunkers for AMI base stations Underground Fiber Backhaul to **Towers**
  - Connect more FAPs & AMI collectors
- **Construction of Control Centers for Production & T&D operations (406)**



at Adventure

10 MW/20MWh BESS

at Willocks Substation

8 MW Solar

at HERA

**16.5 MW Wind** 

at Longford



Undergrounding

Across St. Croix

PROJECT OVERVIEW – ST. CROIX

- Installation of two emergency generators in St. John with Battery Storage (406)
- Installation of solar generation in Coral Bay,
   St. John with Battery Storage (406)
- Gas Insulated Switchgear and emergency generator installations at substation on St. John (406)
- ➤ Underground Installations on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers (406)
- Composite Pole installations on all remaining primary and secondary circuits (406)
  - 1,960 on St. John
- > AMI Project (406):
  - Install concrete bunkers for AMI base stations Underground Fiber Backhaul to Towers
  - Connect more FAPs & AMI collectors

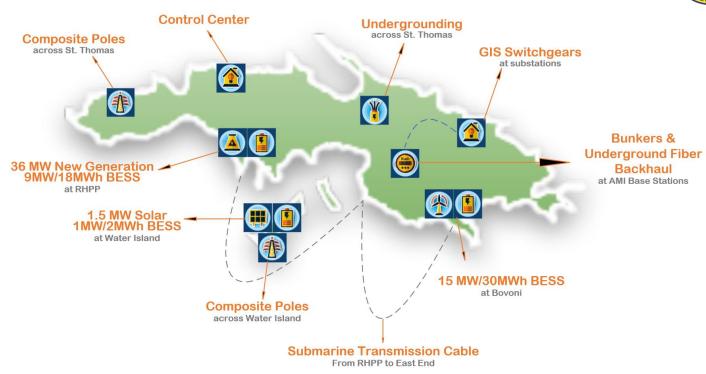






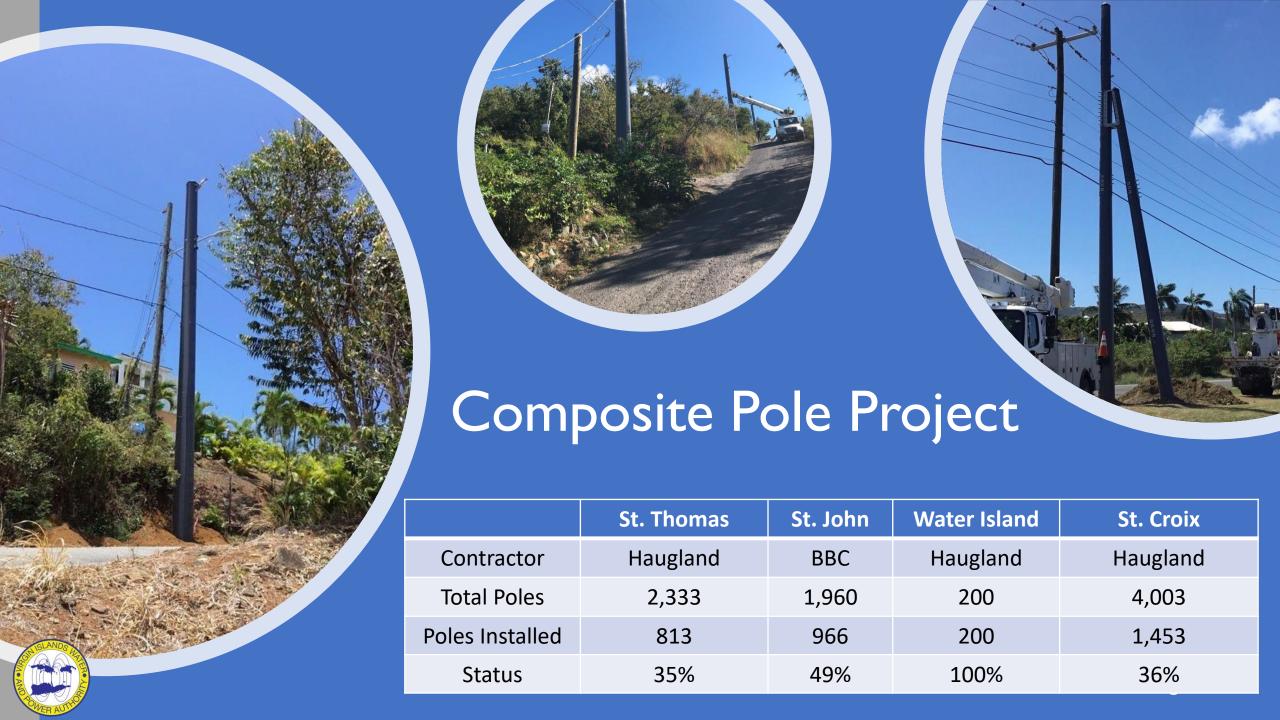
PROJECT OVERVIEW - ST.JOHN

- ➤ Installation of substation, microgrid controls and Battery Storage at Bovoni (404)
- Installation of new generation at the Randolph Harley Power Plant with Battery Storage (HUD)
- Installation of solar generation on Water Island with Battery Storage (406)
- Underground Installations on all primary transmission & distribution feeders to include critical facilities & underground to over 50% of customers (406)
- > Composite Pole installations on all remaining primary and secondary circuits (406)
  - 2,333 poles on St. Thomas
  - · 200 on Water Island
- Gas Insulated Switchgear and emergency generator installations at substations on St. Thomas and St. John (406)
  - Tutu, DCF, East End & St. John Substations
- > AMI Project (406):
  - Install concrete bunkers for AMI base stations Underground Fiber Backhaul to Towers
  - Connect more FAPs & AMI collectors
- Construction of Control Centers for Production & T&D operations (406)





# PROJECT OVERVIEW – ST.THOMAS & WATER ISLAND





### Phase I:

ABB - \$4,336,673.00

• 34.5 kV GIS

Haugland Energy - \$3,463,100.54

- Concrete Buildings
- Control Room
- **Emergency Generator**

### Phase 2:

Haugland Energy - \$1,164,565.67

• 13.8 kV GIS







# St. John Power Transformer Replacement Project

RG Engineering - \$2,334,900.00

• Replacement of E-T2 Power Transformer

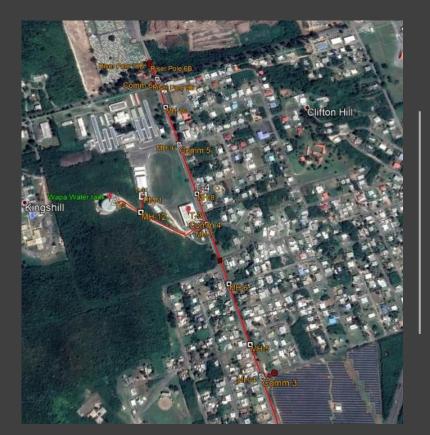






# AMI Project

- Underground Fiber Concrete Bunkers Installation of additional Collectors and Antennas



Midland Underground

- VI Paving \$2,956,046.00
- 8,577 Customers



Golden Grove Underground

- VIVOT \$1,704,862.00
- 33 Customers



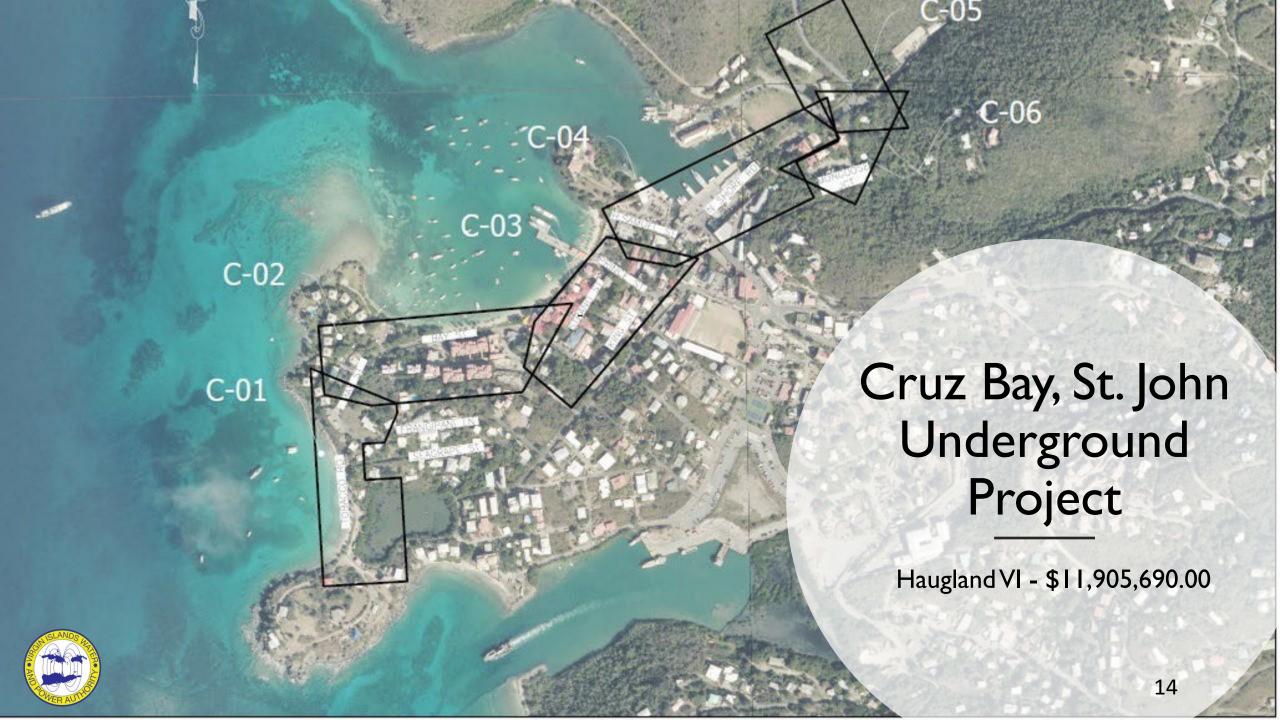
Container Port Underground

- J. Benton \$2,528,500.00
- 10 Customers



# Underground Projects St. Croix









# STX Western Microgrid Project

- Adventure Hill PV Array 18 MW
- Gregory Willocks Battery Storage 20 MWH
- Overall Cost \$126,635,382
- Phase I Award- \$4,486,720.23

Engine 2 (PAAE331451) at PCT –Vaasa, Finland

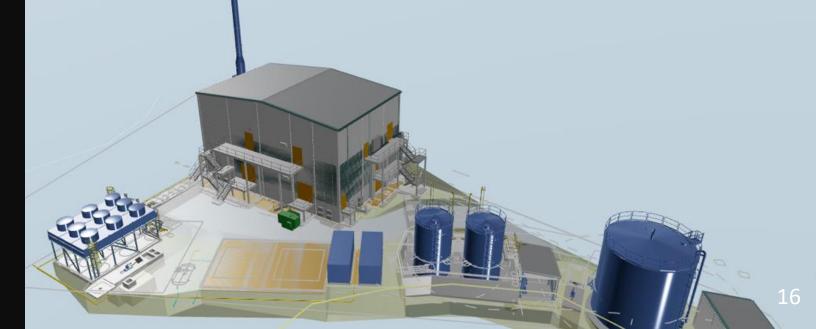
Allocation -\$95,903,330.00

### New Generators

3D Rendering - Frank Bay, St. John

Engineering - \$3,342,350













Station Service Hardening Project for Harley and Richmond Power Plant (480V Switchgear, Battery Storage, 1MW Black Start Generator)

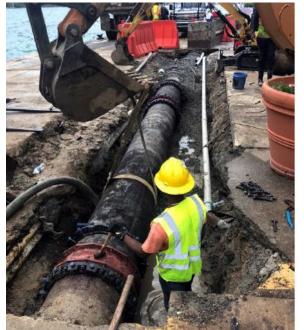


## Project Challenges & Solutions

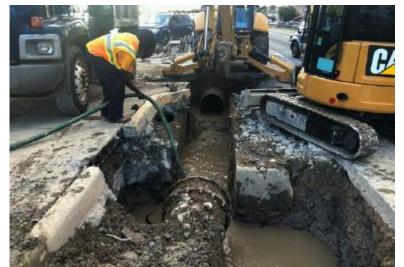
- ✓ Rigorous funding requirements
- ✓ Delays in funding obligations
- ✓ Delays in paying vendors
- ✓ Increasing industry cost for materials
- ✓ Delays in permitting



- √ Capacity Building
- √ Engaging Experts
- √ Collaboration of Efforts
- **✓ Project Planning**
- Expedited permitting process
- **✓** Coordination











### Water Distribution



# TERRITORY MITIGATION & REHABILITATION PROJECTS - WATER



### St.Croix

- Christiansted Rehabilitation Phase II (EPA/DPNR) Completed March 17, 2021
- Frederiksted Rehabilitation Phase II (EPA/DPNR & PFA) In-progress May 31, 2021
- Clifton Hill Rehabilitation Proposed Start 3<sup>rd</sup> Quarter 2021- \$3.5 Mil.
   Drinking Water Capital Improvement Grant EPA/DPNR
- Hannah's Rest Rehabilitation Proposed Start 4<sup>th</sup> Quarter 2021- (Design/Engineering)
   Drinking Water Capital Improvement Grant EPA/DPNR
- Campo Rico Rehabilitation Proposed Start 4<sup>th</sup> Quarter 2021- (Design/Engineering) Drinking Water Capital Improvement Grant – EPA/DPNR
- Strawberry & Baron Stop Waterline Expansion (Pending Tranche 3 funding)

  Department of Housing and Urban Development (HUD)
- System Wide Water Line Replacement (Pending Validation and Approval)
   FEMA Pending Approval

### **Pending System Wide Replacement**

- Concordia to Kingshill Waterline Rehabilitation (FEMA)
- Richmond to Concordia Waterline Rehabilitation (FEMA)
- Contentment to Kingshill Waterline Rehabilitation (FEMA)
- KingshillWestWaterline Rehabilitation (FEMA)
- Kingshill EastWaterline Rehabilitation (FEMA)





# TERRITORY MITIGATION & REHABILITATION PROJECTS - WATER

### St.Thomas





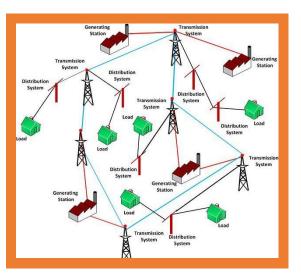
- Slope Stabilization (HUD) (Pending Tranche 3 funding)
  Tanks Donoe, # 3 & 4 Retaining Walls,
- Smith Bay & Frydendahl Waterline Extension (HUD) Application in progress at HFA
- Nazareth Waterline Extension (HUD) (Pending Tranche 3 funding)
- Bolongo Waterline Extension (HUD) (Pending Tranche 3 funding)
- Wintberg Waterline Extension (HUD) (Pending Tranche 3 funding)



# Thank you from our team











**Project Management** 

**Electric Systems** 

**Disaster Recovery** 

Water