



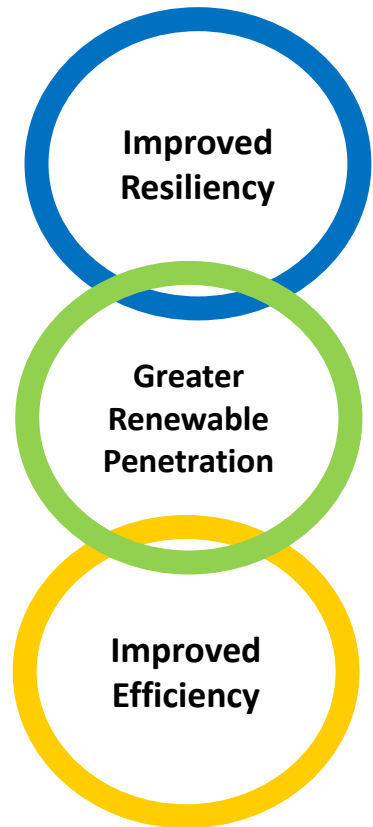
WAPA... Working for You!

VIWAPA TRANSFORMATION PLAN

JUNE 2, 2020

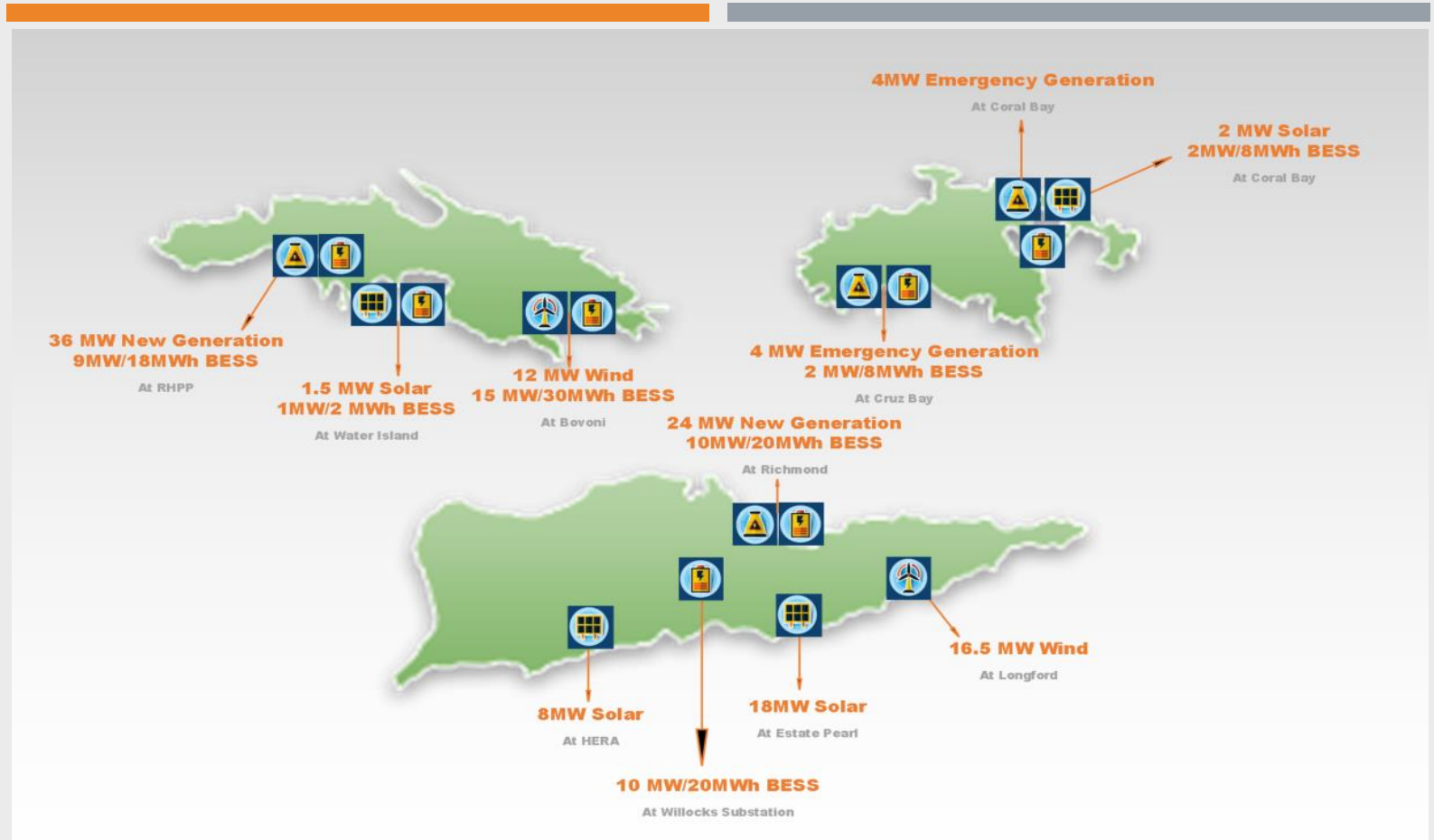


Transformation Plan (FY2020 – FY2024)



- Mitigation Projects (FEMA/HUD Funded)
 - Underground projects – 50% of customers will have underground power.
 - Composite pole projects in STX, STJ, STT and Water Island.
 - Substation Upgrades, undersea cables, AMI Network Hardening.
 - St. John Emergency Generators.
- Maximize Renewables with Battery Storage (HUD Funded)
 - Currently 4 MW Utility Scale (STX) (Renewable Penetration: 1.4%)
 - Target 25% Renewable Penetration by FY2024
 - 84% of Peak Demanded Generating Capacity (Per ACT 7075, >30% by Jan. 1, 2025).
- Efficient Generation (HUD Funded)
 - All generation will be upgraded to smaller, more efficient and renewable compatible generators using clean burning propane as primary fuel.
 - Currently 21 MW in STT (50% of current avg. load) / 20 MW in STX (65% of current avg. load)

- Installation of wind generation at Bovoni with Battery Storage (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)
- 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)
- Installation of new generation at Richmond Power Plant with Battery Storage (HUD)
- Installation of solar generation at Estate Pearl in St. Croix with Battery Storage (404)
- Installation of solar generation at HERA on St. Croix (HUD)
- Installation of wind generation at Longford with Battery Storage (HUD)



GENERATION PROJECTS OVERVIEW



- 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)
 - 2,334 on St. Thomas
 - 4,276 on St. Croix
 - 1,960 on St. John
 - 202 on Water Island
- Gas Insulated Switchgear and emergency generator installations at substations on St. Thomas and St. John (406):
 - Donald Francois
 - East End
 - St. John
 - Tutu
- 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)



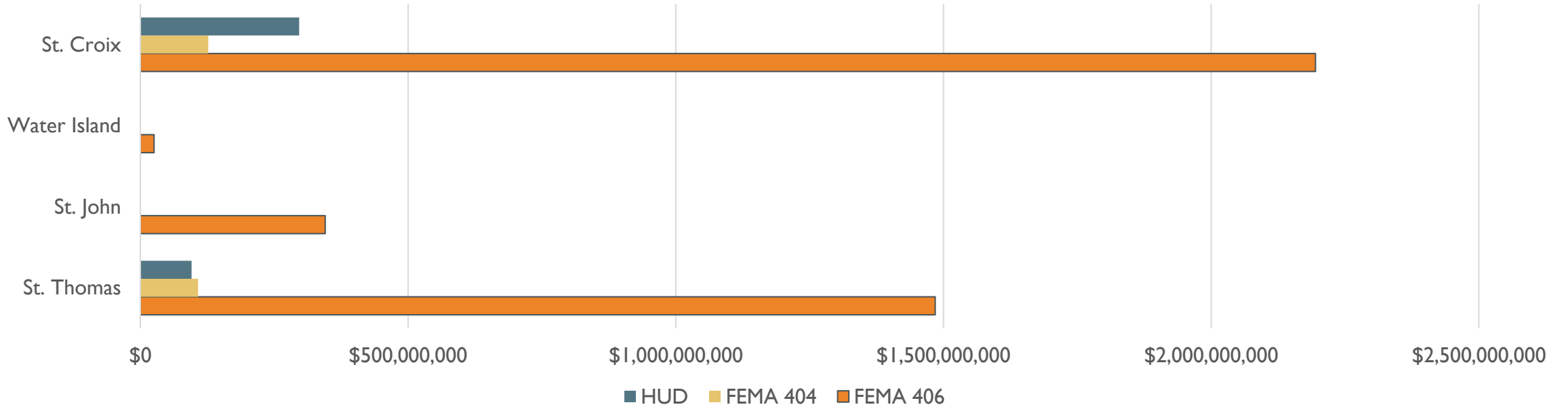
T&D PROJECTS OVERVIEW



Territory Cost Overview

| # | Project Name | PW # | Mitigation Cost | FEMA Cost Share (90%) | WAPA Cost Share (10%) |
|-------------------------------------|---|---------|----------------------------|----------------------------|--------------------------|
| FEMA 406 Mitigation Projects | | | | | |
| 1 | St. Thomas Mitigation Projects - Underground, Composite Poles, Submarine Cables, AMI | 307 | \$ 1,403,249,137.14 | \$ 1,262,924,223.43 | \$ 140,324,913.71 |
| 2 | St. John Mitigation Projects - Underground, Emergency Generation, Microgrid, Composite Poles, AMI | 60 | \$ 320,837,916.13 | \$ 288,754,124.52 | \$ 32,083,791.61 |
| 3 | St. Croix Mitigation Projects - Underground, Composite Poles, AMI | 126 | \$ 2,167,803,732.57 | \$ 1,951,023,359.31 | \$ 216,780,373.26 |
| 4 | Water Island Mitigation Projects - Composite Poles | 85 | \$ 17,635,256.58 | \$ 15,871,730.92 | \$ 1,763,525.66 |
| 5 | Substation Mitigation Projects - GIS Switchgears, Emergency Generators | 548 | \$ 43,130,610.00 | \$ 38,817,549.00 | \$ 4,313,061.00 |
| 6 | Territory AMI Mitigation | 158 | \$ 15,964,989.46 | \$ 14,368,490.51 | \$ 1,596,498.95 |
| 7 | GIS Mapping - Post Storm | Pending | \$ 2,356,000.00 | \$ 2,120,400.00 | \$ 235,600.00 |
| 8 | Control Centers - STT & STX | Pending | \$ 40,000,000.00 | \$ 36,000,000.00 | \$ 4,000,000.00 |
| 9 | Water Island Microgrid Project | Pending | \$ 8,000,000.00 | \$ 7,200,000.00 | \$ 800,000.00 |
| 10 | Richmond - Unit 11 Load Center Project | Pending | \$ 952,146.00 | \$ 856,931.40 | \$ 95,214.60 |
| 11 | Richmond- IDE #3 15 kV Switchgear Relocation | Pending | \$ 641,707.00 | \$ 577,536.30 | \$ 64,170.70 |
| 12 | Randolph Harley Station Service Project | Pending | \$ 1,305,982.00 | \$ 1,175,383.80 | \$ 130,598.20 |
| | Total | | \$ 4,021,877,476.88 | \$ 3,609,879,877.69 | \$ 401,097,764.19 |
| FEMA 404 Mitigation Projects | | | | | |
| 1 | St. Thomas Eastern Renewable Energy Project | | \$ 114,858,423.00 | | |
| 2 | St. Croix Western Microgrid - Estate Pearl | | \$ 126,635,386.00 | | |
| | Total | | \$ 241,493,809.00 | | |
| HUD Mitigation Projects | | | | | |
| 1 | Randolph Harley Generation Expansion Project | | \$ 95,678,330.00 | | |
| | Richmond Generation Expansion Project | | \$ 85,000,000.00 | | |
| 2 | St. Croix Renewable Energy Project - HERA | | \$ 126,635,386.00 | | |
| 3 | St. Croix Longford Wind Project | | \$ 85,000,000.00 | | |
| | Total | | \$ 392,313,716.00 | | |
| Overall Mitigation Total | | | \$ 4,655,685,001.88 | | |

TERRITORY COST OVERVIEW



8%

HUD

5%

FEMA 404

86%

FEMA 406



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections



| | |
|--|----------------------|
| 2020 - 2021 TOTAL Projected Expenditures | \$733,715,903 |
|--|----------------------|

WAPA

| Funding Source | Sum of Funds to be Expended | Sum of 2020 - Expenditure Projection | Sum of 2021 - Expenditure Projection |
|--------------------|-----------------------------|--------------------------------------|--------------------------------------|
| CDBG-DR | \$90,000,000 | \$40,000,000 | \$40,000,000 |
| PA | \$1,426,705,318 | \$256,915,057 | \$396,800,846 |
| Grand Total | \$1,516,705,318 | \$296,915,057 | \$436,800,846 |

20%

29%

| Island | Sum of Funds to be Expended | Sum of 2020 - Expenditure Projection | Sum of 2021 - Expenditure Projection |
|--------------------|-----------------------------|--------------------------------------|--------------------------------------|
| STJ | \$252,081,807 | \$50,546,001 | \$102,233,559 |
| STT | \$1,081,078,423 | \$165,352,061 | \$258,034,616 |
| STX | \$183,412,153 | \$81,003,701 | \$76,506,084 |
| Territory | \$132,935 | \$13,294 | \$26,587 |
| Grand Total | \$1,516,705,318 | \$296,915,057 | \$436,800,846 |

As of April 24, 2020



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|------|--------------------------------|---|----------------------|-------------------------------|-------------------------------|--------|
| PA | 307 | V.I. WATER AND POWER AUTHORITY | TMUR802- St.Thomas Electrical Distribution Perm Repair | \$20,997,800 | \$20,997,800 | | STT |
| PA | 341 | V.I. WATER AND POWER AUTHORITY | TMUR804- Power Debris Removal STT, STJ and Water Island | \$28,553,463 | \$20,000,000 | | STT |
| PA | 10 | V.I. WATER AND POWER AUTHORITY | Emergency Protective Measures -- Power Restoration | \$6,325,618 | \$6,325,618 | | STT |
| PA | 846 | V.I. WATER AND POWER AUTHORITY | 117631 - UR814T1-4340- VIWAPA-STT-Management Costs | \$19,436,375 | \$1,943,637 | \$3,887,275 | STT |
| PA | 1 | V.I. WATER AND POWER AUTHORITY | Emergency Protective Measures--Power Restoration | \$299,274 | \$299,274 | | STT |
| PA | 226 | V.I. WATER AND POWER AUTHORITY | 90657 - TMWPF01 - St. Thomas WAPA Water Tanks | \$222,875 | \$222,875 | | STT |
| PA | 522 | V.I. WATER AND POWER AUTHORITY | 70355 - TMUR810 - St. Thomas WAPA Vehicle Repairs | \$219,353 | \$219,353 | | STT |
| PA | 197 | V.I. WATER AND POWER AUTHORITY | TMWBP01 EPM Drinking Water WAPA STT | \$69,084 | \$69,084 | | STT |



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|-------|---|--|----------------------|-------------------------------|-------------------------------|--------|
| PA | 182 | V.I. WATER AND POWER AUTHORITY | TMWPE02 - Sarah Hill Complex | \$68,181 | \$68,181 | | STT |
| PA | 207 | V.I. WATER AND POWER AUTHORITY | TMWPF02 - PS Repairs | \$51,209 | \$51,209 | | STT |
| PA | 183 | V.I. WATER AND POWER AUTHORITY | TMWPE01 Damaged Vehicles, Water Distribution STT | \$21,607 | \$21,607 | | STT |
| PA | 338 | V.I. WATER AND POWER AUTHORITY | 117044 - TIUR81Z | \$101,902 | \$10,190 | \$20,380 | STT |
| PA | 158 | V.I. WATER AND POWER AUTHORITY | TMUR805 - WAPA Advanced Metering Infrastructure System | \$12,734,469 | | \$12,734,469 | STT |
| PA | 307 | V.I. WATER AND POWER AUTHORITY | TMUR802- St. Thomas Electrical Distribution Perm Repair | \$ 900,000,000 | \$75,000,000 | \$ 200,000,000 | STT |
| PA | 79087 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | TMUR808 - St. Thomas WAPA Off-site Leased Facilities | \$584,240 | \$123,233 | \$285,673 | STT |
| PA | 79601 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | TMUR809 - St. Thomas Harley Power Plant Generation Repairs | \$600,000 | \$0 | \$452,000 | STT |



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|--------|---|---|----------------------|-------------------------------|-------------------------------|--------|
| PA | 113074 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | TMUR813 - Line Department Transmission & Distribution Crew Building | \$300,000 | \$0 | \$235,878 | STT |
| PA | 129261 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | GM#129261 – TMUR815 - Temporary Facilities | \$160,000 | \$0 | \$160,000 | STT |
| PA | 70357 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | TMUR811 - VIWAPA - Power Substations Temporary Repairs (13) | \$169,033 | \$0 | \$95,000 | STT |
| PA | 70789 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | TIUR801 - Randolph Harley Plant Repairs | \$88,940 | \$0 | \$88,940 | STT |
| PA | 129268 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | GM#129268 – TMUR816 - Substation and Meter Building | \$50,000 | \$0 | \$50,000 | STT |
| PA | 135319 | V.I. WATER AND POWER AUTHORITY / ST THOMAS (000-UR814-00) | Leased Four Winds Facility | \$25,000 | \$0 | \$25,000 | STT |
| CDBG-DR | 2 | V.I. WATER AND POWER AUTHORITY | Randolph Harley Power Plant Expansion | \$ 90,000,000 | \$ 40,000,000 | \$ 40,000,000 | STT |



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|--------|--|--|----------------------|-------------------------------|-------------------------------|--------|
| PA | 60 | V.I. WATER AND POWER AUTHORITY | JMUR801- St. John Electrical Distribution Perm Repairs | \$7,667,973 | \$7,667,973 | | STJ |
| PA | 11 | V.I. WATER AND POWER AUTHORITY | Emergency Protective Measures -- Power Restoration | \$2,961,818 | \$2,961,818 | | STJ |
| PA | 978 | V.I. WATER AND POWER AUTHORITY | 81932 - JMUR802 - St. John Force Account Labor and Equi | \$263,636 | \$263,636 | | STJ |
| PA | 211 | V.I. WATER AND POWER AUTHORITY | JMWPF01 St John Water System Facilities | \$3,013 | \$3,013 | | STJ |
| PA | 339 | V.I. WATER AND POWER AUTHORITY | 117040 - JIUR8Z1 - Management Costs | \$457 | \$46 | \$91 | STJ |
| PA | 60 | V.I. WATER AND POWER AUTHORITY | JMUR801- St. John Electrical Distribution Perm Repairs | \$200,000,000 | \$37,500,000 | \$100,000,000 | STJ |
| PA | 86452 | V.I. WATER AND POWER AUTHORITY / St. John (000-UR814-02) | JMUR804 - St. John WAPA Warehouse/Office Building | \$68,634 | \$10,000 | \$58,634 | STJ |
| PA | 70150 | WATER AND POWER AUTHORITY | JMUR801 - St. John Electrical Distribution Permanent Repairs | \$39,442,233 | \$1,972,112 | \$1,873,506 | STJ |
| PA | 117635 | WATER AND POWER AUTHORITY | 117635- UR814J2 - 4340-VIWAPA-STJ-Management Costs | \$1,674,043 | \$167,404 | \$301,328 | STJ |



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|-------|--|---|----------------------|-------------------------------|-------------------------------|--------|
| PA | 126 | V.I. WATER AND POWER AUTHORITY | XMUR801- St. Croix Electrical Distribution Perm Repairs | \$147,885,956 | \$75,000,000 | \$72,885,956 | STX |
| PA | 55 | V.I. WATER AND POWER AUTHORITY | 70359 - XMUR803- Mutual Aid Agreements for Power Restor | \$4,097,962 | \$4,097,962 | | STX |
| PA | 836 | V.I. WATER AND POWER AUTHORITY | UR814X2-4340-VIWAPA-STX- Management Cost | \$30,085,836 | \$1,504,292 | \$3,008,584 | STX |
| PA | 109 | V.I. WATER AND POWER AUTHORITY | XMWPB01 EPM Drinking Water Distribution STX | \$94,344 | \$94,344 | | STX |
| PA | 84 | V.I. WATER AND POWER AUTHORITY | 70360 - XMUR802-70360-WAPA Richmond Power Plant Emer | \$31,584 | \$31,584 | | STX |
| PA | 193 | V.I. WATER AND POWER AUTHORITY | XMWPF01 - Tank Repairs | \$24,415 | \$24,415 | | STX |
| PA | 162 | V.I. WATER AND POWER AUTHORITY | XMWPE01 Vehicle Repairs Drinking Water STX | \$7,920 | \$7,920 | | STX |
| PA | 288 | V.I. WATER AND POWER AUTHORITY | 90017 XMWPC01-GM-90017- Mon Bijou Road | \$2,933 | \$2,933 | | STX |
| PA | 78908 | V.I. WATER AND POWER AUTHORITY / ST CROIX (000-UR814-01) | XMUR805 - St. Croix WAPA Buildings and Equipment | \$627,352 | \$124,352 | \$345,000 | STX |
| PA | 80940 | V.I. WATER AND POWER AUTHORITY / ST CROIX (000-UR814-01) | XMUR804 - Richmond Power Plant Historic Warehouse | \$553,852 | \$115,899 | \$266,545 | STX |



V.I. Office of Disaster Recovery

Recovery Projects 2020-2021 Expenditure Projections

| Funding Source | PW # | Applicant Name | Application Title | Funds to be Expended | 2020 - Expenditure Projection | 2021 - Expenditure Projection | Island |
|----------------|------|--------------------------------|---|----------------------|-------------------------------|-------------------------------|-----------|
| PA | 854 | V.I. WATER AND POWER AUTHORITY | 117639 - UR814WI2 - 4340-VIWAPA-WI-Management Costs | \$132,935 | \$13,294 | \$26,587 | Territory |

EPA Drinking Water Capital Improvement Grant Projects

- Christiansted Waterline Rehabilitation PH. 2: \$2,781,695
 - Funding Source: 100% EPA Drinking Water Capital Improvement Grant Program (DWCIP)
 - Projected Expenditures: FY 2020 - \$2,493,695; FY2021 - \$288,000
- Frederiksted Waterline Rehabilitation PH. 2: \$3,786,000
 - Funding Source: 100% EPA DWCIP
 - Projected Expenditures: FY 2020 - \$2,186,000; FY2021 - \$1,600,000
- Clifton Hill Waterline Rehabilitation: \$2,572,150
 - Funding Source: 100% EPA DWCIP
 - Projected Expenditures: FY2020 - \$650,000; FY2021 - \$1,922,150
- Advance Metering Infrastructure: \$1,529,483
 - Funding Source: 75% EPA DWCIP, 25% Internal Funds
 - Projected Expenditures: FY2020 - \$1,169,483; FY2021 - \$360,000
- Backup Generators for Pumping Stations: \$1,069,700
 - Funding Source: 70% EPA DWCIP, 30% Internal Funds
 - Projected Expenditures: FY 2020 - \$769,700; FY2021 - \$300,000

