



# Update on Electric System Improvements on Treasure Island

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San Francisco  
**Water Power Sewer**  
Services of the San Francisco Public Utilities Commission



## I. Background: Treasure Island's Electrical System

- SFPUC's Role

## II. Recently Completed Improvements

## III. Next Steps



# Treasure Island's Electricity System

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- The U.S. Navy transferred the electric system to TIDA in 1997.
- Existing electrical infrastructure is old and has exceeded normal life expectancy.
- Age of the system and condition of the equipment make the island more vulnerable to power outages.



# SFPUC's Role on Treasure Island

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- TIDA owns the electrical system on Treasure Island and Yerba Buena Island.
- TIDA contracted with SFPUC to operate and maintain the electric system. SFPUC:
  - Oversees operations of the electricity system
  - Performs ongoing maintenance, including repairs
  - Responds to and tracks power outages
  - Recommends system improvements subject to TIDA authorization and funding
- SFPUC supplies the electricity used by residents and businesses on both islands.

# Recent Electric System Improvements

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TIDA authorized a series of improvements to the Treasure Island electricity system.

## **Goal(s) of improvements:**

- Increase system reliability
- Reduce the frequency and duration of outages
- Isolate outages to only part of the island to reduce the extent of impact.
- Reduce the number of outages caused by temporary events like bird strikes or fallen tree limbs.
- Reduce time it takes to find the source of an outage, improving response time for power restoration.



# Completed Improvements

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## **New Switchyard and Switchgear**

Constructed a new switchyard and installed a new switchgear to isolate certain fault events and prevent an island wide outage.





# Completed Improvements

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## **New Fault Indicators and Reclosers**

Installed numerous fault indicators and reclosers throughout the island, which assist crews in determining the location of a fault and limiting outages to just a portion of the system.

## **New Overhead Line**

Installed and constructed a new overhead line from the switchyard, increasing the reliability of the main line serving both islands.

## **New Transformers**

Replaced five old distribution transformers with new ones equipped with bird guards to prevent avian-related outages. Bird guards will be a standard component on all new transformers.



# Completed Improvements

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## **Residential Reliability**

Connected the residential neighborhood to its own circuit to mitigate the impact of faults from other parts of the island.

## **Bird Guards**

Installed bird guards along Avenue I to prevent faults from birds.

## **Relay Settings Updated**

Adjusted the relays at the Port of Oakland Substation to allow the circuits and reclosers to isolate a fault before it results in a system-wide outage.





# Completed Improvements

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## **Vegetation Management**

Removed palm trees to prevent palm fronds from falling on overhead lines.

## **System-Wide Inspection**

Completed inspection of the entire distribution system and identified components to be replaced.

## Next Steps (Near-term)

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### **Replacement of Damaged Crossarms and Transformers**

A contract has been signed with an electrical contractor to replace the damaged crossarms and transformers identified during the system-wide inspection.

### **Security Fencing**

Install security fencing to protect the underground cables from Treasure Island to Yerba Buena Island from vandalism.

# Ongoing SFPUC Actions

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## **Monitoring Protective Devices**

Monitor the protective device response and performance to further mitigate system-wide outages.

## **Continuous Inspections**

Perform continuous inspections to mitigate potential system failures, including regular tree trimming or removal.

## **Review and Recommend**

Identify additional system improvements and make recommendations to TIDA.



# Questions?

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