



# Existing Microgrid Overview



## Project Goals

- 1) Energy Security (Back-up Power)
- 2) Renewable Integration
- 3) Revenue/Grid Support

## Project Description

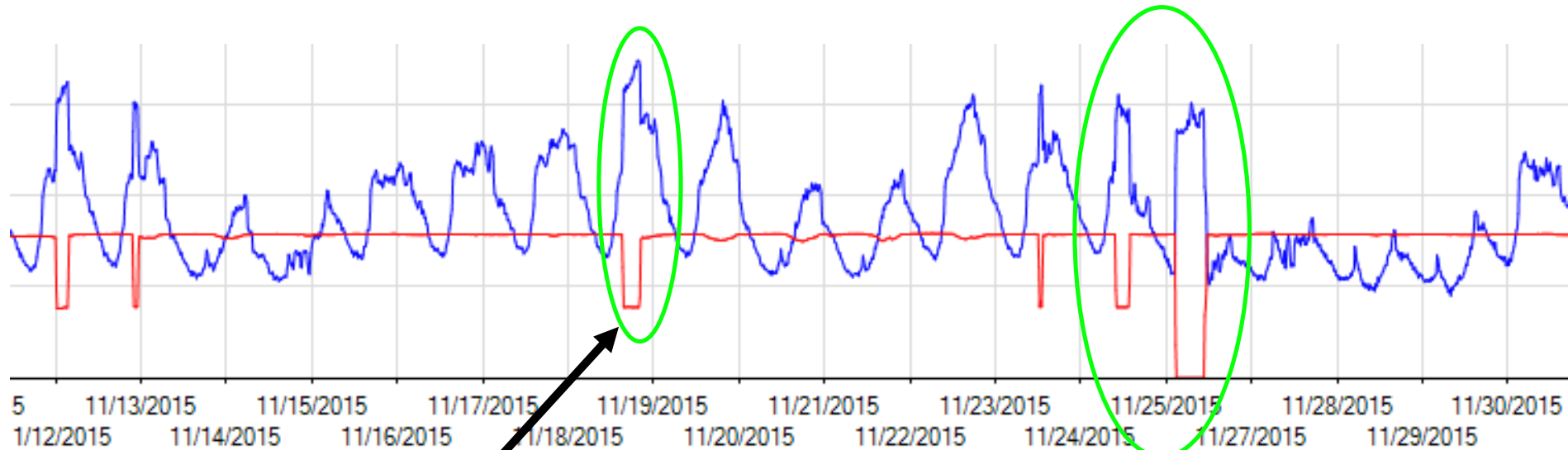
- Install 7 MW fossil fuel generation with the ability to power 100% of the flight line and support facilities (100+ facilities = 4 – 7 MW)
- Incorporate existing onsite landfill power generation (3.2 MW) and existing PV generation (1.3 MW) into microgrid islanding as much as feasible.
- Enable generation to participate in demand response during grid connection.
- Build Energy Operations Center
- Cyber Security accreditation through Risk Management Framework



# Issue: Landfill Gas Power Reliability



— Landfill Power      — Installation Load from SDG&E



Demand Charge Event

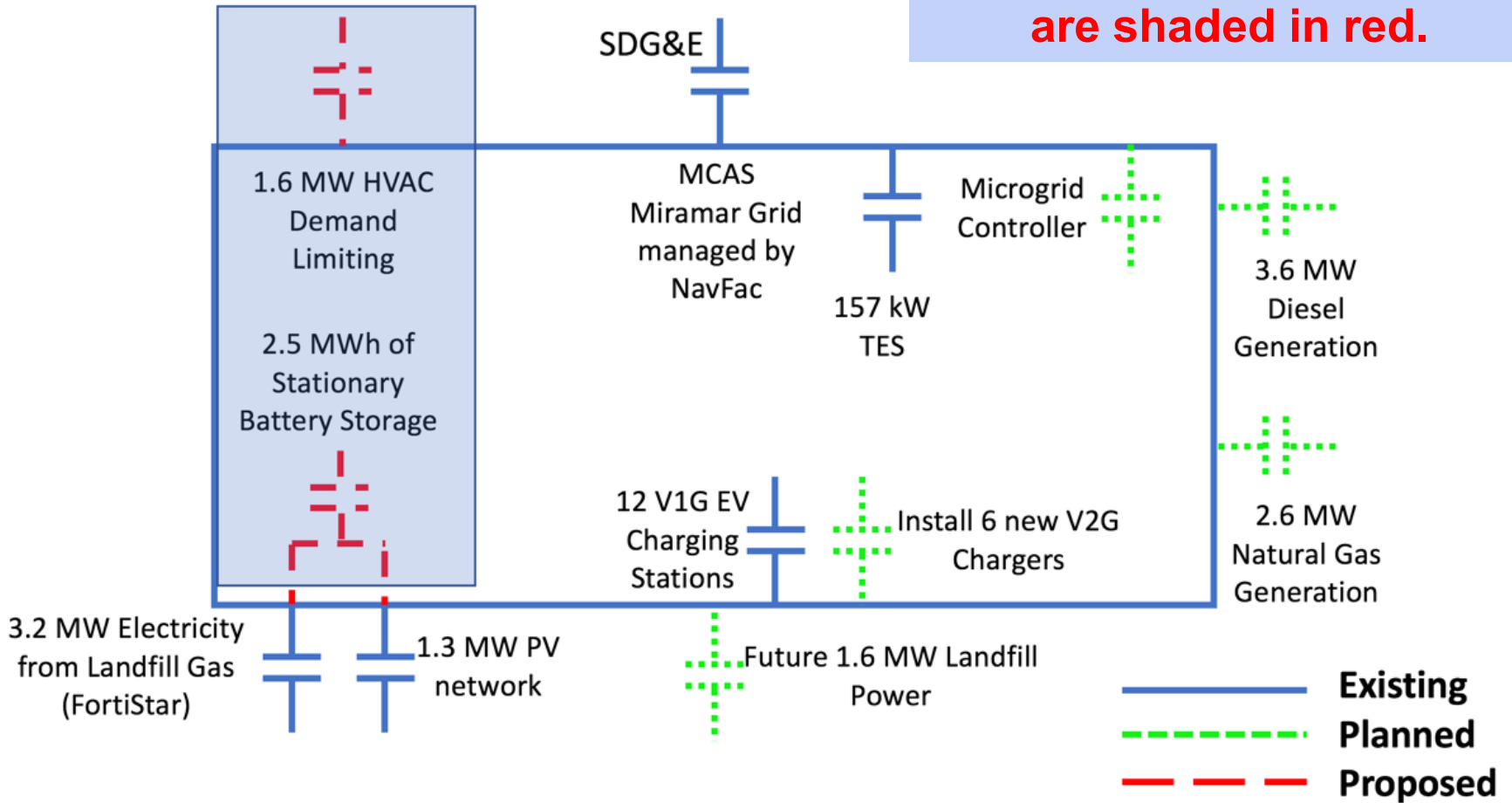
Prolonged Outage



# Existing, Planned, and Proposed Electrical Components of the Microgrid



The new CEC components are shaded in red.





# ***Operational & Environmental Benefits of Battery Project***



- Displacing diesel generators as the primary source of backup power for the LFG
- Reducing demand charges when SDG&E is utilized as backup power for the LFG
- Allowing for increased renewable penetration as MCAS Miramar seeks to expand its onsite portfolio to 75% renewables by 2020
- Providing ride-through capabilities in the event of a SDG&E outage
  - Allows 3.2 MW of LFG to be integrated into the DoD-funded microgrid when operating in islanded mode
- Eliminating black-start of the microgrid after SDG&E outages using diesel generators