



CUSTOMER ADVISORY COMMITTEE

December 18, 2020

GROUND RULES

- Please keep your microphone muted unless you are speaking to reduce background noise
- Be sure to say your name before you speak so everyone knows who is speaking
- To be respectful of everyone's time, please keep remarks brief and to the point so we can end on time
- Members of the public are able to submit comments via the Q&A feature

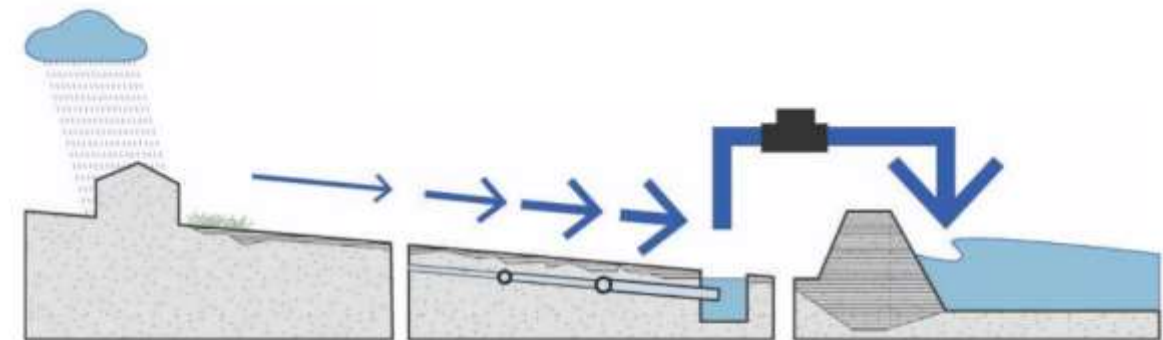
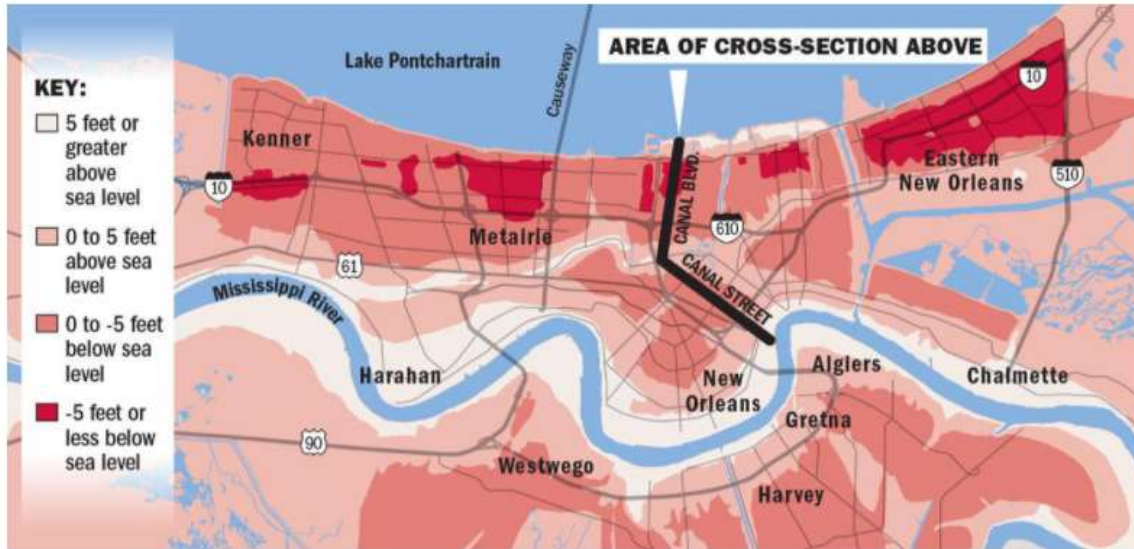


AGENDA

- Roll Call
- Power Overview
 - Existing System
 - Future Vision
- Next Steps



WHY PUMP?



Pave

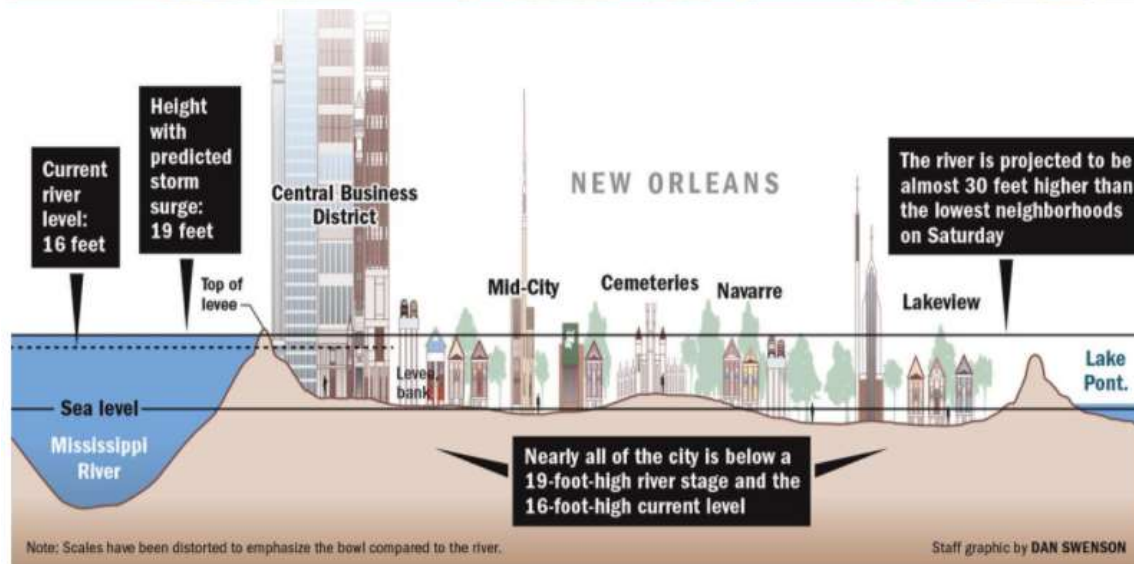
Urban surfaces, including streets and parking lots, are paved with impervious materials that shed stormwater directly into storm drains and prevent that water from soaking into the ground.

Pipe

Underground pipes and culverts are often overwhelmed by stormwater, causing backed-up storm drains to overflow into streets. These pipes do not allow stormwater flowing through them to infiltrate into surrounding soils.

Pump

Fed by drainage pipes and canals, powerful pumps at the perimeter of each basin lift stormwater over the levees into Lake Pontchartrain, the Inner Harbor, and the Central Wetlands Unit.



WHY SELF-GENERATE POWER?

- 2 Power Standards
- 25hz (old standard):
 - Many stormwater drainage pumps
 - Raw and drinking water (Eastbank)
 - Some sewer pumps
- 60hz (current standard)
 - Newer drainage pumps
 - Drinking Water (Westbank)
 - Most sewer pumps
- Entergy provides 60hz power, we self-generate 25hz and some 60hz
- Base power load daily approximately 4-6 megawatts
- During a drainage event, powering all pumps can require up to 52 megawatts
- Entergy is not set up to provide peak load currently

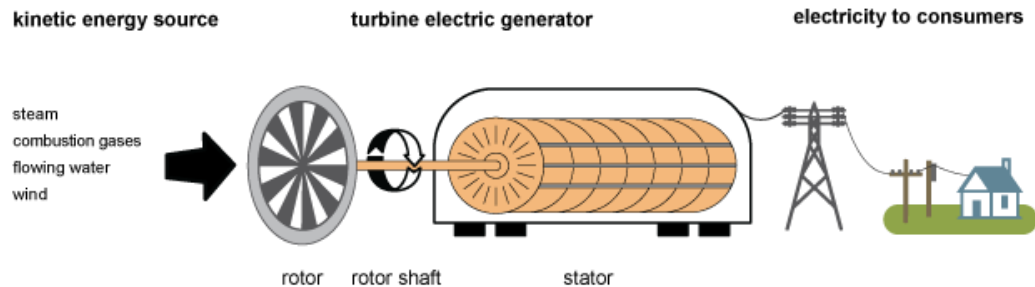


HOW IS POWER MADE?

- Generators/Turbines convert energy into electricity
- Can use many fuel sources that power the turbine and produces electricity

- SWBNO uses:
 - Steam for older Turbines (1,3,4)
 - Boiler powered by NG
 - Natural Gas for newer Turbines (5,6)
 - Diesel for EMDs

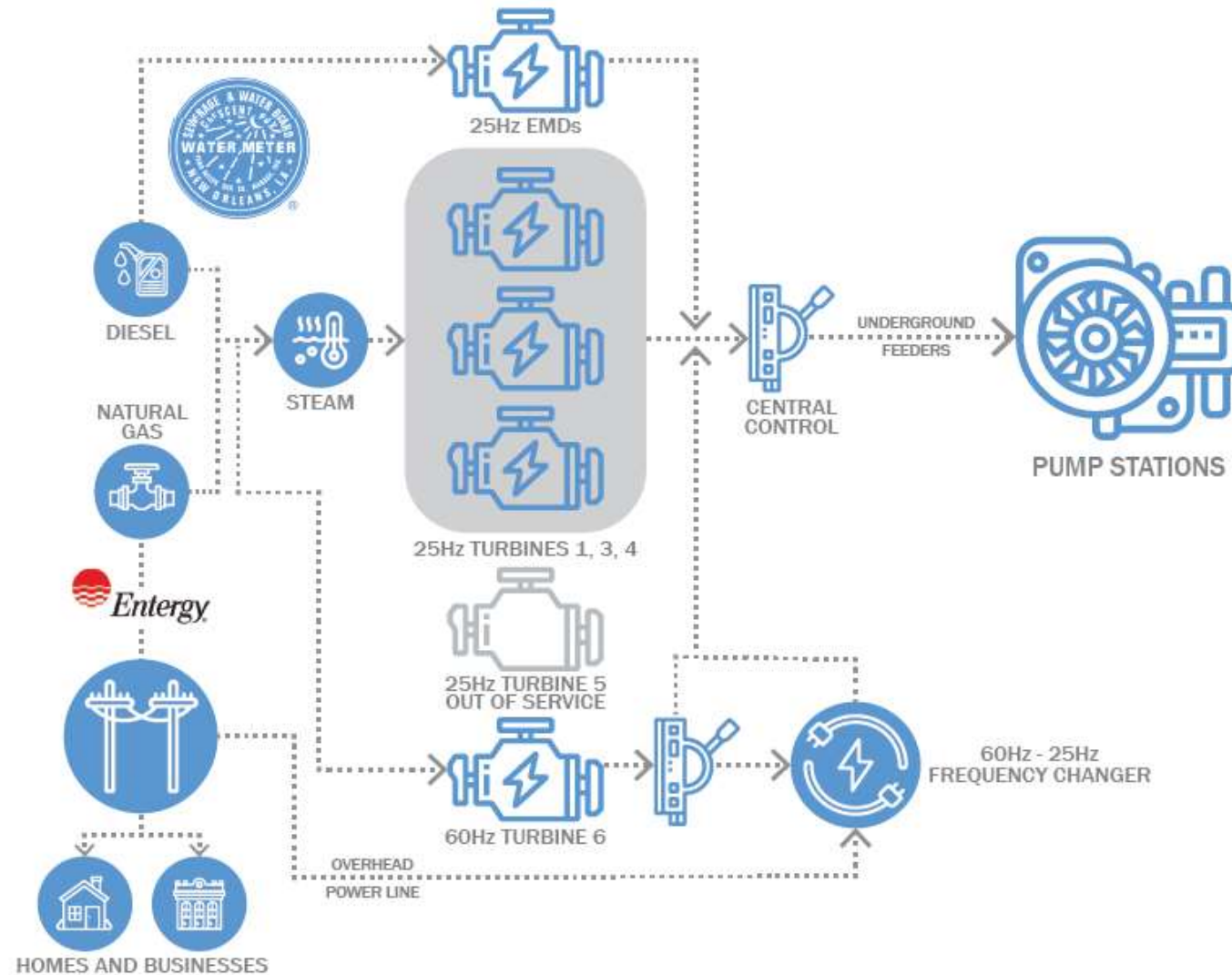
Electricity generation from an electric turbine



Source: U.S. Energy Information Administration



CURRENT SYSTEM



POWER VS PUMPING

- Turbines generate power
- Sent to Central Control for distribution

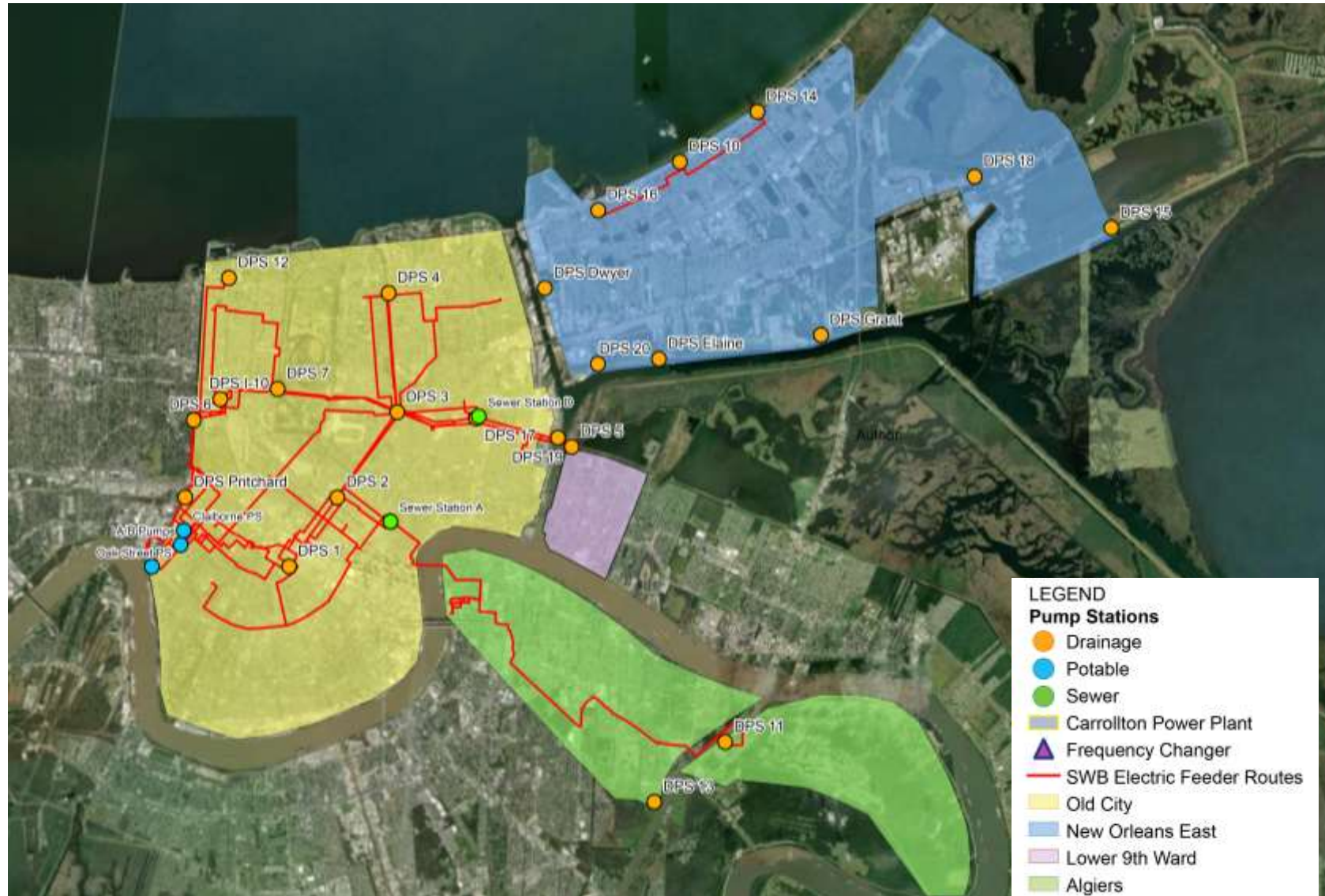


- Power arrives at pump stations via underground powerlines
- Used to power pumps





DISTRIBUTION SYSTEM

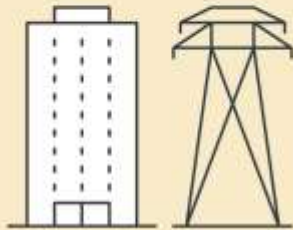


DISTRIBUTION TYPES

Transmission vs. Distribution: What Makes Them Different?

Customers will see different utility poles around their community – but different poles support our system in different ways. A distribution pole, seen near your house and around your neighborhood, carries electricity directly to your home or business. Transmission structures are larger, carry high-voltage electricity quickly and efficiently over long distances, and are often seen along highways, interstates or crossing water.

An average 500kV transmission structure is 150 feet tall or about the same size as a 10 story office building.



An average 13kV distribution structure is 34 feet tall or about the size of a two-story house.

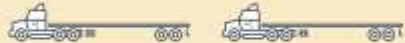


An average 500kV transmission tower weighs about 40,000 pounds.



An average 13kV distribution pole weighs about 2,000 pounds.

Three 18-wheelers are needed to transport one 500kV transmission tower.



50 to 100 distribution poles can be transported by one 18-wheeler.



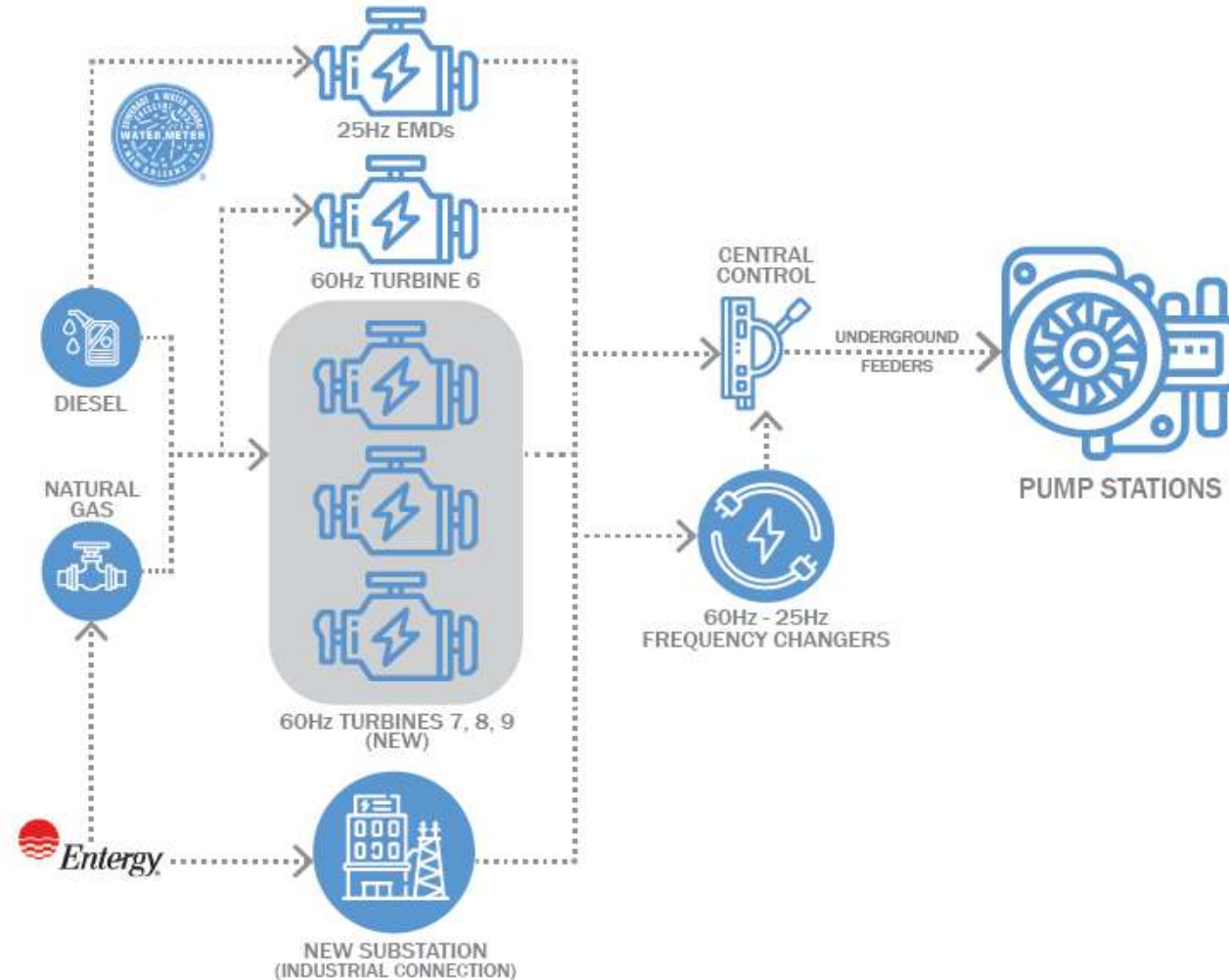
Multiple crews need a full workday to assemble a 500kV structure.



A 4-5 person crew can typically restore a standard residential neighborhood pole on the street in 2-3 hours, or 4-6 hours in an alley or rear lot.



LOOKING AHEAD: POWER MASTER PLAN



FUTURE: DEDICATED SUBSTATION

- Lower Cost of Operation
 - Purchased power vs self-generated power
- Reduced Run-time on Engines
 - Reduced Maintenance
 - Extended Useful Service Life
- Sustainability
 - Drastic Reduction in On-Site Air Emissions
 - Access to Off-Site Renewables
- Lifecycle Costs



FUTURE: NEW ASSETS

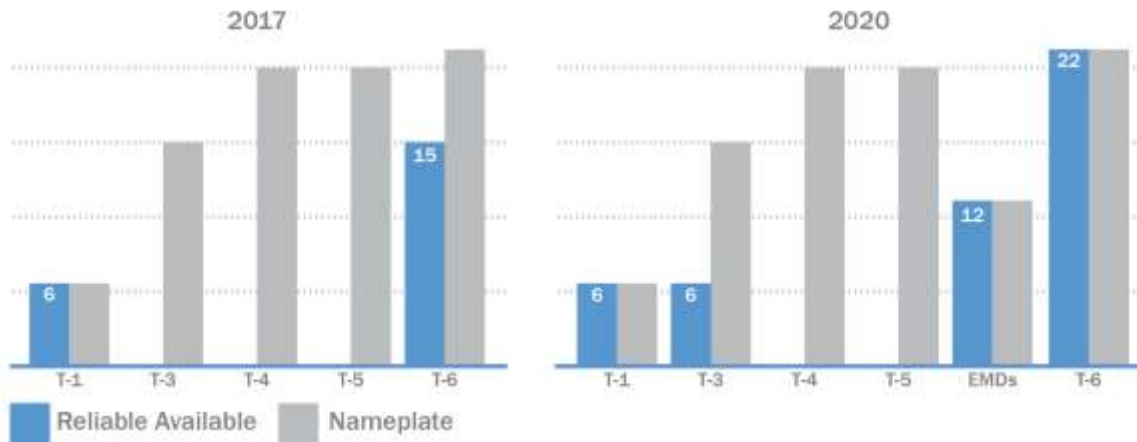
- Near Term – Phase 1
 - Utility Substation
 - New Modern Equipment
 - Frequency Changers
 - Retire Existing Plant
- Longer Term – Phase 2
 - 60 Hz Conversion of Older Drainage Pump Stations
 - Connect More Stations to Carrollton Plant



CURRENT STATUS AND MILESTONES

- Repairing T4 and T5

- Weatherization of T6
- Substation site prep underway
- Designing and procuring T7
- Procuring 1 of 3 new frequency changers



NEXT STEPS

- Next Meeting will be January 15 at Noon
 - Happy New Year!
- Meeting Topics?
 - Drainage System Overview
 - Water System Overview
 - Sewer System Overview
 - Incl consent decree
 - SWB Organizational Structure
 - Review of recent planning efforts and outcomes
 - Boil Water Advisories
 - Flooding, how residents can mitigate?
 - Deeper dive on billing issues





THANK YOU