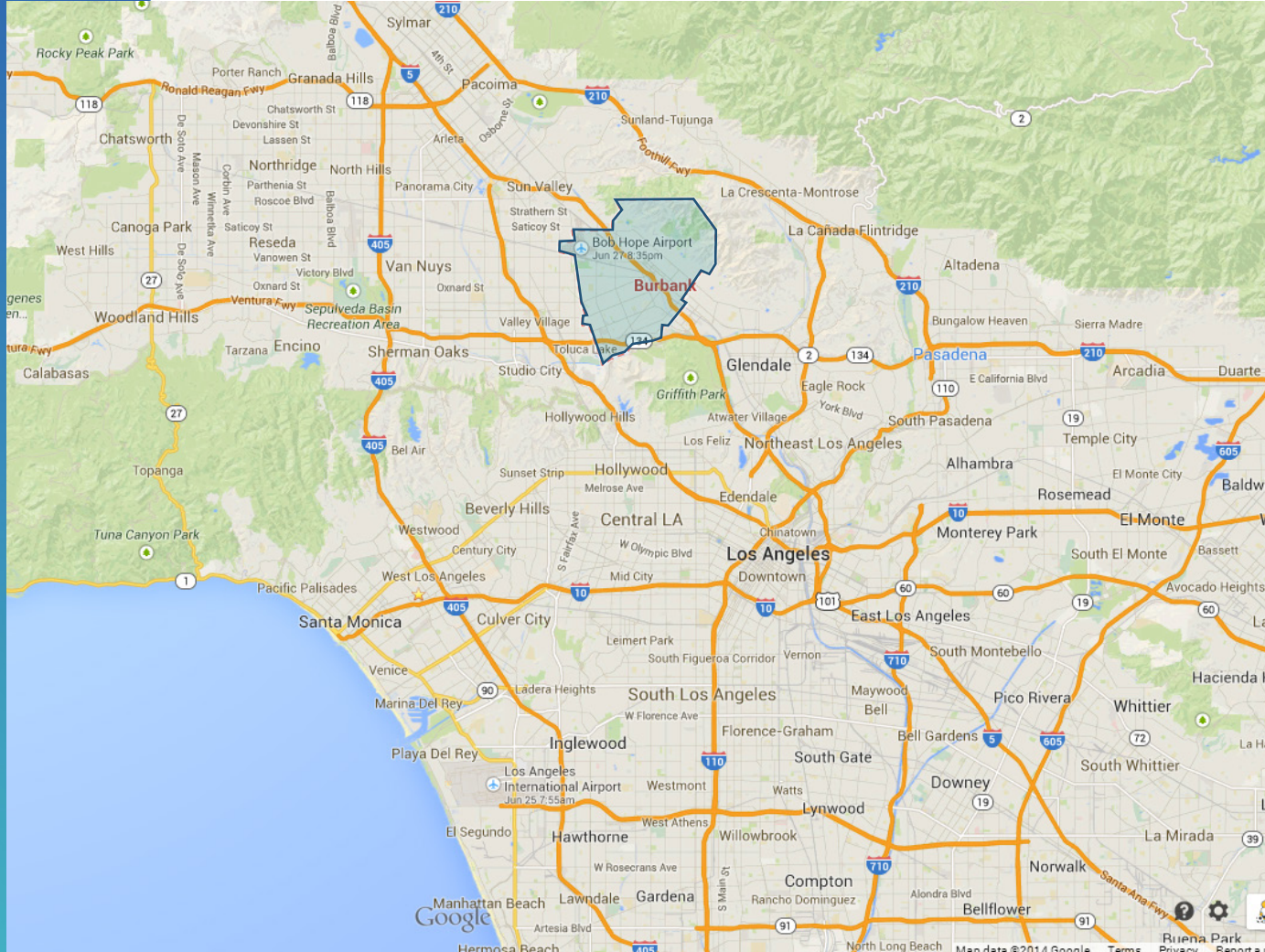


Utility Resilience Plans and Projects for Extreme Heat

Grid Resilience Planning for Extreme Heat
Training for PUC and State Energy Offices
October 22, 2025



City of Burbank



- **Service Area:** 17 square miles
 - Located in the San Fernando Valley
 - 12 Miles NW of DTLA
- **Incorporated:** 1911
- **Population:** 105,833

The *WALT DISNEY* Company



NETFLIX

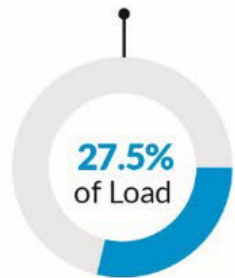
nickelodeon™



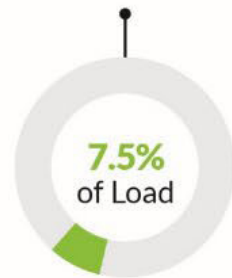
Approx. 54,000 meters total



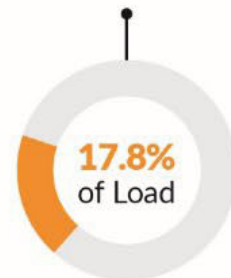
46,148
Residential



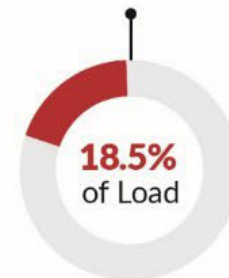
5,495
Small Commercial



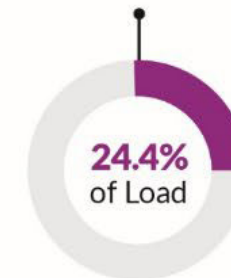
1,269
Medium Commercial



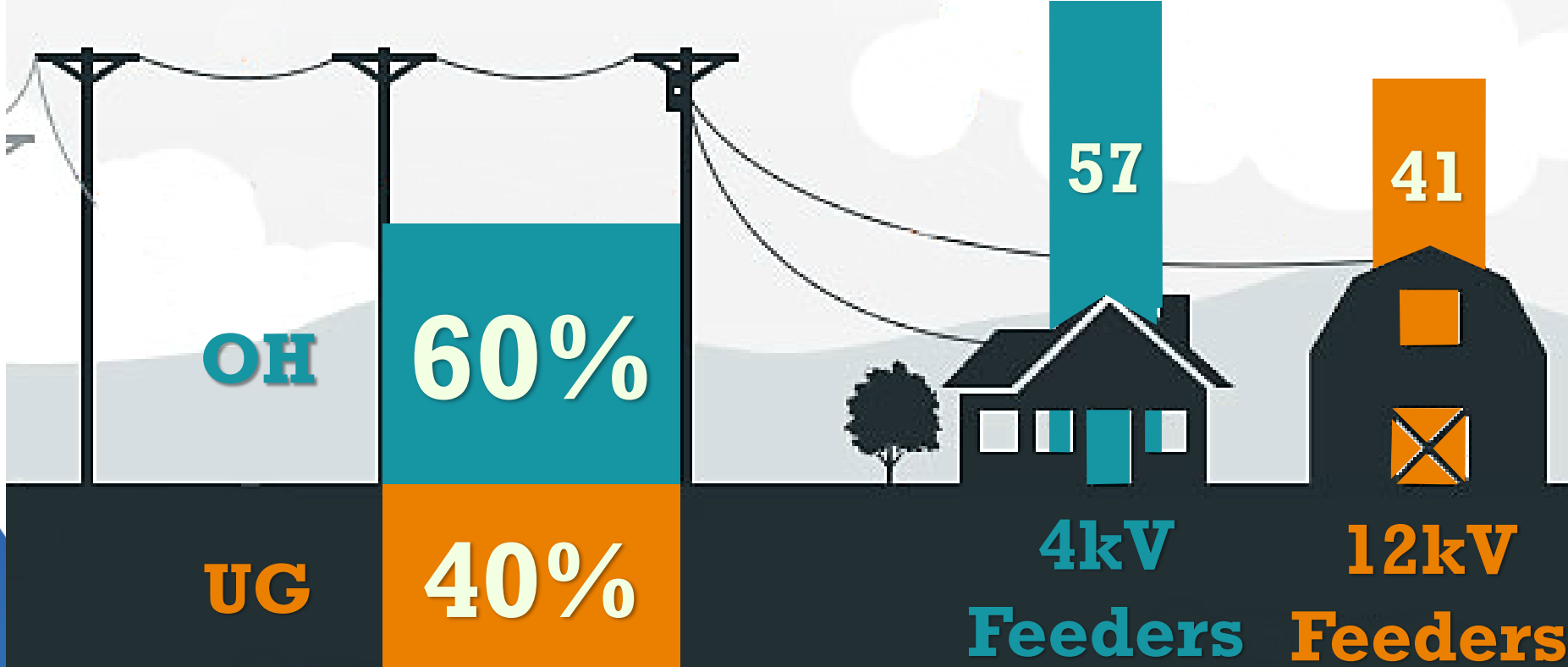
161
Large Commercial



82
Extra Large Commercial



SYSTEM OVERVIEW



18 Substations
69 and 34.5 kV subtransmission

SYSTEM LOAD AND TEMP



Summer



280 MW

Peak



322 MW

**MAX. AMBIENT. TEMP.
(5-YEAR AVG)**



**41.3 °C
(106.4 °F)**

Short Term Resilience Planning – Engineering Analysis



- ❑ Contingency Planning
- ❑ Asset Loading
 - Phase Balancing
 - Circuit Loading
 - Transformer Loading

Short Term Resilience Planning



- System Operators and Field Crew Work
 - Restricted maintenance notices
 - If possible, restore out of service equip.
 - Additional or standby crews

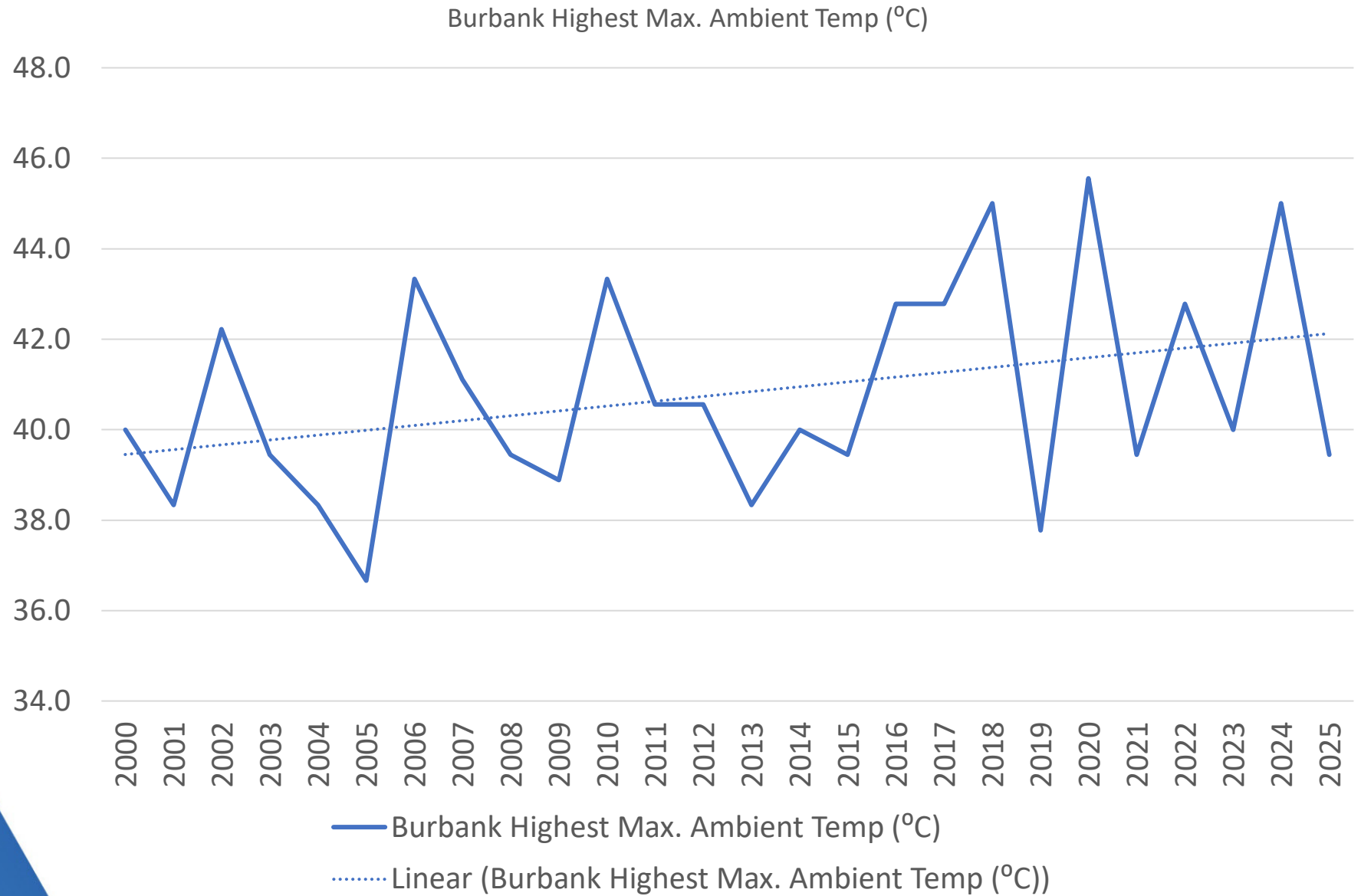
Long Term Resilience Planning



- 4 kV to 12 kV Circuit Conversions
- Substation transformers
 - ☐ Temperature specifications



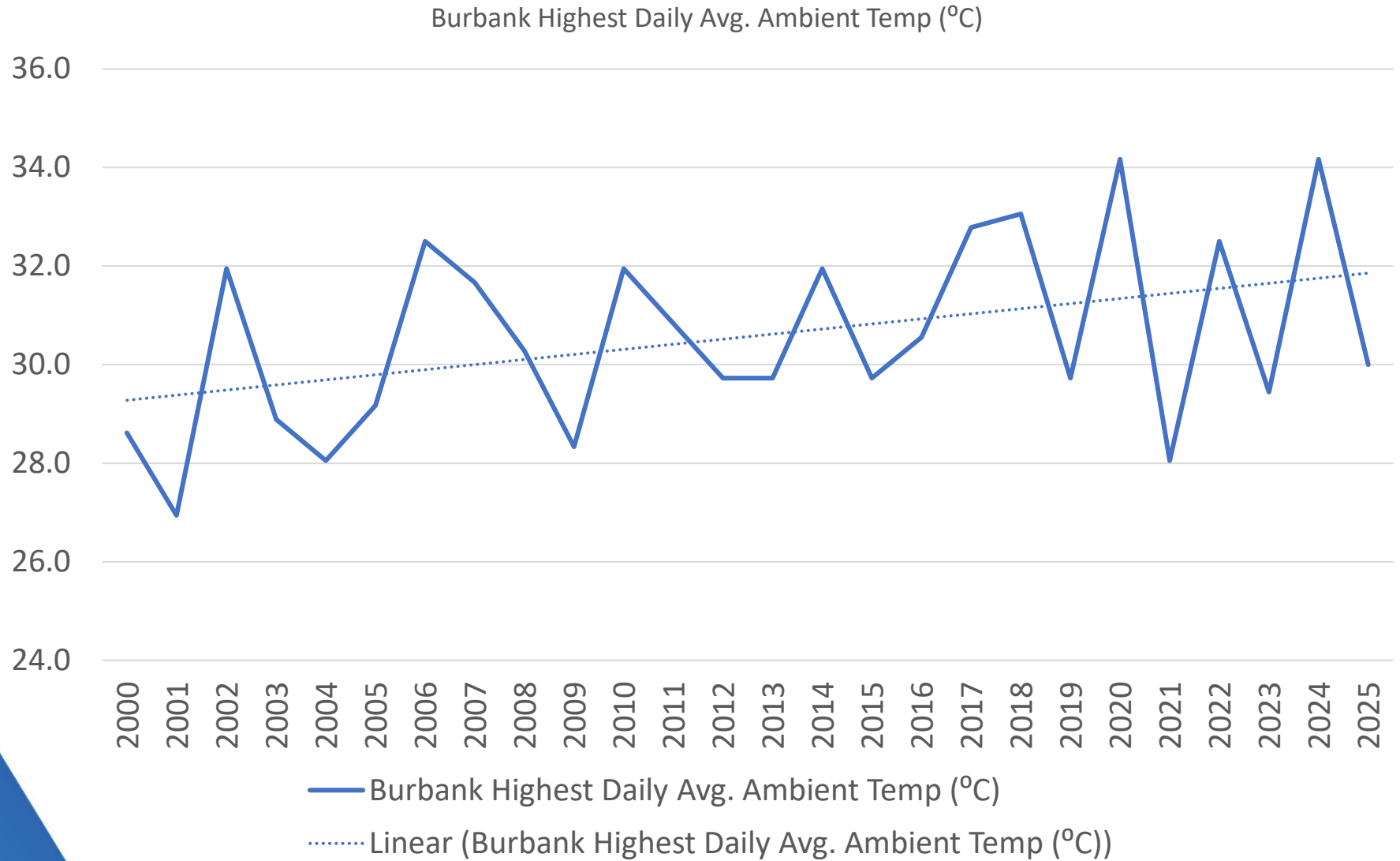
Max. Ambient Temps



* Data from NOAA website at <https://www.weather.gov/wrh/Climate?wfo=lox>, Burbank-Glendale, CA => BURBANK VALLEY PUMP PLANT



Daily Average Temps



* Data from NOAA website at <https://www.weather.gov/wrh/Climate?wfo=lox>, Burbank-Glendale, CA => BURBANK VALLEY PUMP PLANT

Long Term Resilience Planning – Substation Transformers



- ❑ Changed temp. ratings
 - Max. ambient rating: 40 °C to 50 °C
 - Avg. rating: 30 °C to 35 °C
- ❑ Pros
 - Increased thermal margin => longer life
 - Enhanced system reliability
- ❑ Cons
 - 4% cost increase
 - 3% larger transformer
- ❑ 2 transformers installed, 5 ordered

CONTACT

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Distribution Engineering

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**WATER AND
POWER**