

ELECTRIC TRANSMISSION AND DISTRIBUTION IN SAN JOSÉ MUNICIPAL CODE TITLE 28

June 1, 2023



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THE GRID OF THE FUTURE

- Electrification will roughly double electricity consumption in 20 years
- Grid infrastructure needs depend on peak load, not energy consumption
- \$100B new transmission and distribution needed statewide if peak load doubles
 - Load management, optimal use of distributed generation and refurbishment of existing infrastructure to mitigate peak load is key to reasonable rates
- CA utilities and regulators face a huge challenge in managing the transition
 - Most are, so far, meeting the challenge
 - PG&E is prioritizing wildfire prevention and shared financial and workforce constraints to addressing grid challenges (source: December 2022 CAISO Transmission Development Forum)
- San José should prepare now to mitigate risks of grid challenges

INTERCONNECTION DELAYS

- PG&E backlog is over 100 projects and further delays have been announced for 25 interconnection projects (source: December 2022 CAISO Transmission Development Forum)
- Affordable housing, critical facilities, hospitals, transit infrastructure, EV charging, and solar are experiencing significant delays
- Downtown West Project delayed due to economic conditions, still a desire to consider City electric service that will allow a more advanced microgrid and more DER



Planning and Development Department
Office of Energy and Sustainable Development

PG&E CHALLENGES

- PG&E’s Independent Safety Monitor Status Update Report dated April 3, 2023, reported “Distribution outage record was in fourth (worst) quartile of US utilities for both frequency and duration of outages.”
 - Basic asset base (wires, poles, transformers) is near the end of expected service life
 - Many critical older passively cooled transformers need cooler nighttime temperatures to withstand climate change and multiple day heat storms
- PG&E filing dated April 10, 2023, in the High Distributed Resources Future proceeding restated that priority was being given to safety related wildfire mitigation projects at the expense of new distribution interconnections
- In the same filing, PG&E stated, “the 2023 GRC* distribution capacity proposal represents only about ~50% of known capacity projects”
 - The next planning cycle is expected to approve several billion dollars of new projects

*General Rate Case

SAN JOSÉ HEAT RELATED OUTAGES

- August 14-15, 2020
 - 573 separate distribution outages impacted 250,000 residents
- August 18, 2020
 - Substation outage near downtown impacted over 10,000 customers for more than one day
- September 2-9, 2022
 - 9/6 – nearly 100,000 customers impacted including 3 hospitals
 - 9/7 – nearly 22,000 residents still out of service



NEW TRANSMISSION LINES IN SAN JOSÉ

LS Power selected as "Participating Transmission Owner" for CAISO approved High Voltage Direct Current (HVDC) project

- Energy equivalent of Diablo Canyon Nuclear Power Plant of new supply to San José/Santa Clara
- 2 new lines approved (Metcalf to downtown and Newark to north SJ)
- Allows new development in the region and improves reliability
- Paid for by all ratepayers through transmission rates
- Opportunity for the City to have direct access to CAISO grid
- Significant construction begins Q1 2026; expected to come online in June 2028

FUTURE POTENTIAL THREATS

- Worsening reliability due to load growth from electrification and more extreme heat storms
- Significant cost increases in delivery charges due to wildfire hardening investments and reliability driven upgrades
 - San José pays its proportional share of entire PG&E system
- Worsening region wide interconnection delays jeopardizing a wide range of critical City initiatives



MITIGATION STEPS IN PROCESS

- Improve emergency response coordination with PG&E (*underway*)
- Jumpstart PG&E distribution planning overhaul with “Case Study” for San José in existing CPUC High DER regulatory proceeding (*underway*)
- Collaborate with CAISO and LS Power on new transmission lines (*underway*)
- Preserve opportunity to connect directly to new CAISO transmission lines
 - Requires becoming a municipal utility to be an “eligible wholesale customer” with direct access rights to CAISO grid
 - Unique opportunity due to the new transmission lines owned by LS Power
- Return to Council in August 2023 with recommendations to allow formation of municipal utility
 - File interconnection application

SUMMARY OF MUNICIPAL CODE REVISIONS

- **New Title 28:** Authorize the formation of a City owned utility called San José Power to provide electric service for selected new load in the City
- **Revisions to Title 2:** Defines duties of Director of Public Works to provide design and construction oversight to San José Power as the City Engineer
- **Revisions to Title 4:** Establishes San José Power Operating Fund to segregate utility funds
- **Revisions to Title 26:** Renames Community Energy Department to Clean Energy Department and establishes San José Power as a Division

NEXT STEPS

- Conduct further analysis of proposed plan of service for City loads at the Airport, Regional Wastewater Facility and at/near Diridon Station (including Downtown West)
- Creating Title 28 does not commit City to serve any load. This would require further Council action
- Approving Title 28 preserves the opportunity to connect directly to the new CAISO transmission lines

DISCUSSION AND QUESTIONS