


# INTEGRATED RESOURCE PLAN

March 3, 2020



**SAN JOSE**   
**CLEAN ENERGY**  
A Program of the City of San José

# BACKGROUND

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- Every other year, load serving entities (LSEs) must develop and submit to CPUC a resource procurement plan: Integrated Resource Plan (IRP)
  - Forecast of the loads and potential resources, and a robust plan to meet state and local electric needs and goals
  - CPUC requires discussion of:
    - impacts on disadvantaged communities
    - local air quality impacts
- First SJCE IRP filed August 2018
  - Prior to launch
  - Council approved 2018 IRP Criteria based on Climate Smart San José
  - Highly speculative
  - Available at <https://www.sanjoseca.gov/home/showdocument?id=43877>

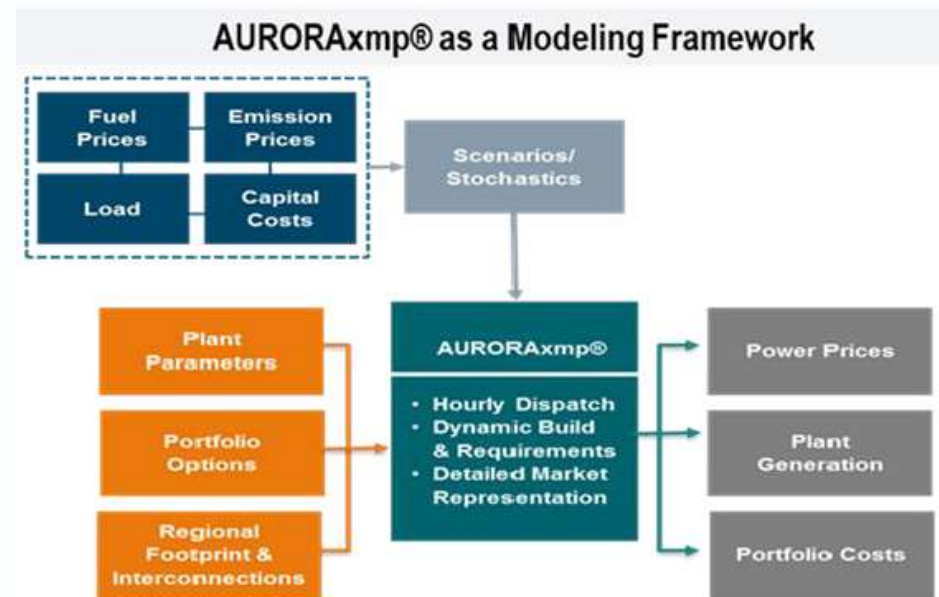
# 2018 IRP PROCESS

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- CPUC expressed concern that when aggregated, LSE plans might not work:
  - E.g. all LSEs assumed they would be buying resources from the market, but market resources could be insufficient to meet collective need.
- Since 2018, CPUC ordered further procurement (outside 2020 IRP process); incremental RA costing SJCE ~\$6-7M per year
- Additional requirements are possible/likely

# 2020 IRP AND MODELING

- Joint IRP by SJCE, EBCE, PCE, CPA
- Additional CCAs may provide inputs
- Siemens undertaking modeling considering requirements and goals for:
  - GHG reduction
  - Renewable buildout
  - Reliability
- Joint analysis will be disaggregated into individual CCA plans



# MODELING PARAMETER REQUIREMENTS

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- Electric sector-wide carbon budget assigned to individual LSEs; all LSEs must meet their individual carbon budget.
  - Compliance tested through modeling that deducts from renewables low carbon credit when joint modeling indicates renewables curtailed.
- SJCE goal: 100% carbon-neutral by 2021
  - State mandate 100% carbon-neutral by 2045
- SJCE goal: 60% renewable by 2030
  - State mandate 100% renewable/GHG-free by 2050
- 65% of state mandated RPS must come from long-term contracts (10+ years)

# KEY INPUTS

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- Load forecast
  - Additional achievable energy efficiency
  - Electrification and electric vehicle adoption
  - Demand response growth
- Cost and feasibility of different resources and fuels:
  - Solar
  - Wind (land and offshore)
  - Geothermal
  - Biomass
  - Storage (Lithium-ion, Flow batteries, Pumped storage)
  - Natural gas prices
  - Carbon costs

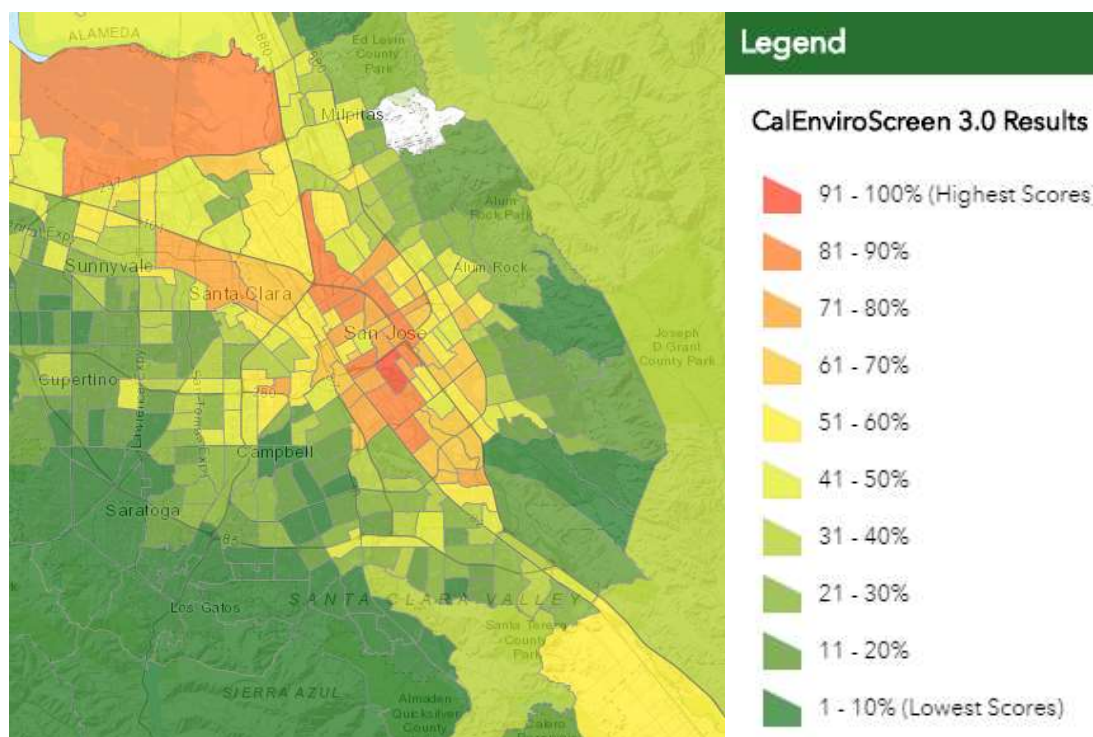
# MODELING PARAMETER REQUIREMENTS

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- CPUC mandates use of CPUC assumptions for conforming IRP plans
- All LSEs must use the Reference System Plan (RSP), which includes targets such as:
  - 46 MMT GHG by 2030 for the electric sector
  - 1 GW new pumped hydro or long-duration storage by 2026
- Joint CCAs working with Siemens to test additional assumptions and cases, and will provide relevant information

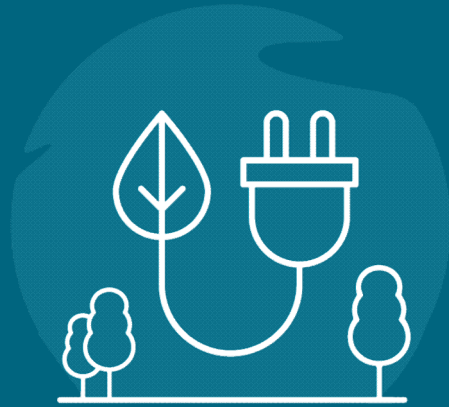
# DISADVANTAGED COMMUNITIES (“DAC”)

- In the IRP, LSEs must specify what current and planned activities and programs for “disadvantaged communities” as defined by CalEnviroScreen 3.0
- Programs:
  - Heat pump water heater installations
  - Partnering with Grid Alternatives to promote DAC-SASH
  - DAC-Green Tariff program as part of the CPUC Solar in Disadvantaged Communities programs
  - CALeVIP: minimum 25% new charging stations in DAC communities



<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>





**QUESTIONS?**