INTEGRATED RESOURCES PLAN RESULTS

October 13, 2020

SAN JOSE CLEAN ENERGY

A Program of the City of San José

INTEGRATED RESOURCES PLAN (IRP)

- Long-term utility plan to:
  - Forecast load and energy needs
  - Achieve state and local climate goals
  - Model renewable energy integration
- Load Serving Entities (LSEs) must develop and submit these plans to California Public Utilities Commission (CPUC) every other year
  - Due September 1, 2020
  - Delayed due to changing CPUC requirements
- Modeling shows the most cost-effective way to meet load and climate goals

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IRP DEVELOPMENT PROCESS

Engaged Siemens to perform modeling and partnered with 3 other CCAs

- The electric system currently emits 60 million metric tons (MMT) of carbon

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CPUC requirements:

1. 46 MMT of carbon emissions from the electric system by 2030
2. 38 MMT of carbon emissions from the electric system by 2030

Environmental advocates:

3. 30 MMT of carbon emissions from the electric system by 2030

100% carbon neutral portfolio:

4. Carbon neutral on an annual basis by developing new resources

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MODELING RESULTS

Submitted to CPUC

Portfolios resulting in…	New solar by 2030 (MW)	New wind by 2030 (MW)	New battery storage by 2030 (MW)	SJCE's Carbon Emissions in 2030 (Metric tons)
46 MMT	100	90	150	640,000
38 MMT – *Preferred*	320	100	200	435,000
30 MMT	475	100	350	327,000
Annual carbon neutrality	700	100	400	238,000

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IRP SUBMISSION

- Submitted 46 and 38 MMT portfolios to CPUC consistent with CPUC requirements
  - Required deleting the requirement to be carbon neutral by 2021 from 2018 IRP criteria
  - Avoids potential CPUC penalties if SJCE files a more aggressive plan and can not meet it due to risks and financial constraints
- Use the modeling results of the 30 MMT and carbon neutrality portfolios as guides to develop further recommendations
- SJCE will take further recommendations on SJCE's 2021 power mix and rates to Council in November, including policy alternatives and financial impacts of meeting the 100% carbon-free Climate Smart goal in 2021 by purchasing from existing resources

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IRP KEY FINDINGS

- Lowest cost approach to meeting aggressive emissions targets:
  - Significantly overbuild renewables (primarily solar)
  - Add adequate battery storage
- Considerations for next 2-3 years:
  - SJCE has procured a significant amount of renewables already (467 MW)
  - SJCE should continue to procure at a more moderate pace to balance risks and benefit from technological advancements

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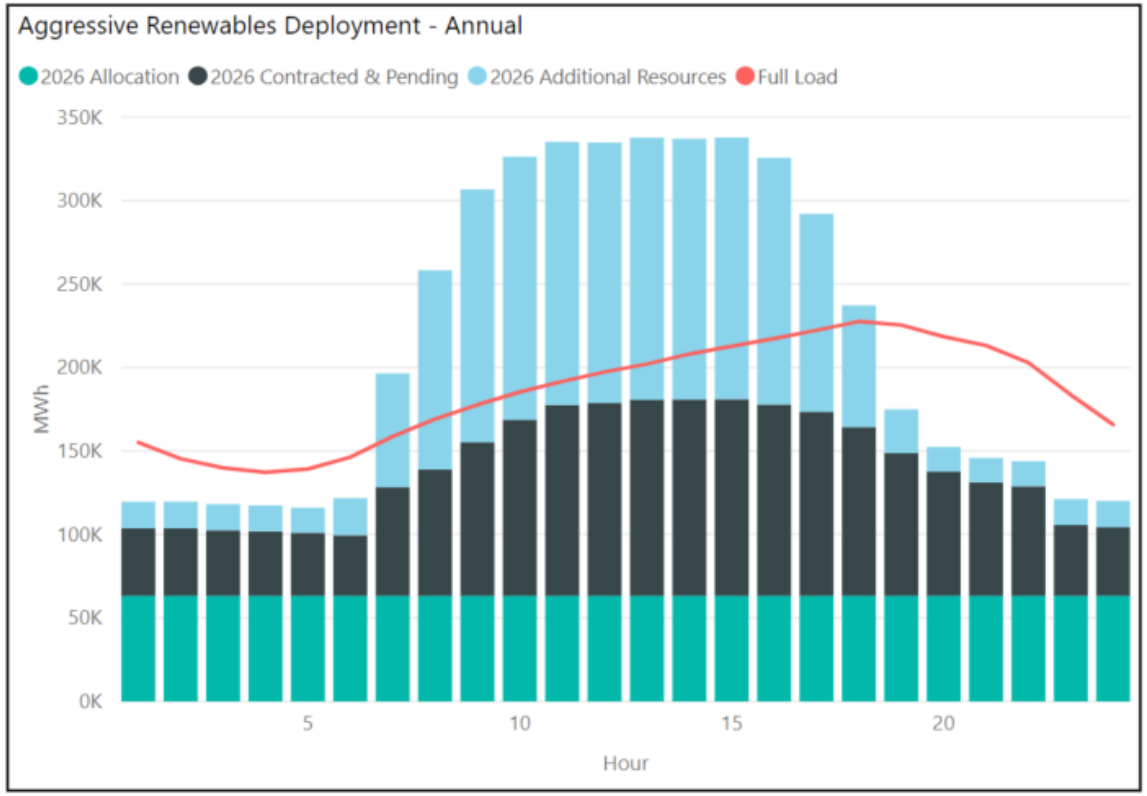

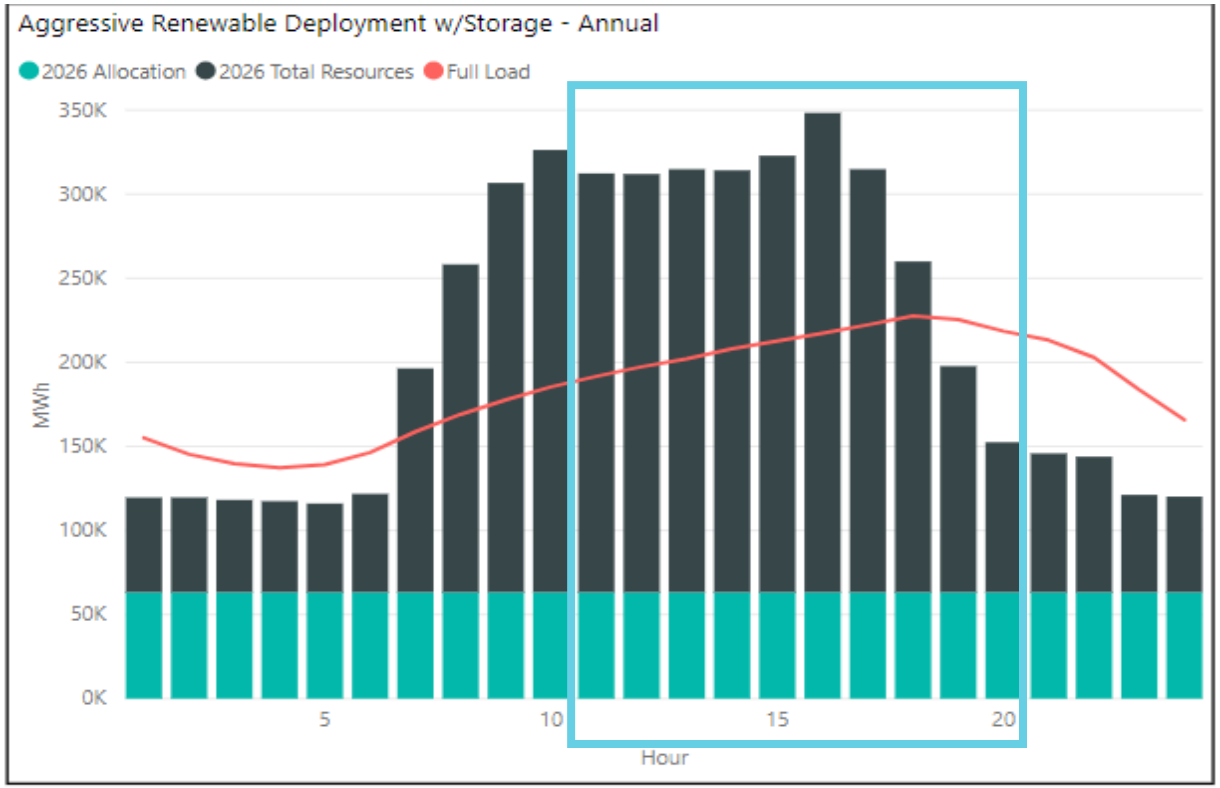

IRP PROCUREMENT CONSIDERATIONS

- Investment in new renewable and battery storage projects lowers statewide carbon emissions
- Early aggressive carbon-free portfolios results in:
  - Buying attributes from existing plants because new renewable resources cannot be built fast enough
  - Redundancy & higher costs – customers pay for some of these resources through Power Charge Indifference Adjustment (PCIA) fee, but CCAs don't get credit on their Power Content Labels
  - No additional statewide carbon reductions as it doesn't support new renewable projects

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IRP LONG-TERM RENEWABLE CONTRACTS

- Authority plus existing results in **~600 MW of new renewables**
- SJCE's power content in 2023 would be ~55% renewable
  - State law requires 60% renewable by 2030 and 100% carbon-free by 2045
- Places SJCE on track to achieve 38 MMT portfolio by 2030
- The 30 MMT or carbon-neutrality goals will continue to be evaluated and may be possible if risks are mitigated

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SJCE LOAD RISKS

- Exit fee (PCIA) cost increases
  - Significant increases likely in 2021
  - Cost reduction strategy and advocacy plan underway
- Load reduction due to pandemic
  - ~5% decrease in consumption since mid-March
  - ~5% decrease in 2009 recession
  - Mitigated by maintaining small open position
- Direct Access expansion to commercial customers
  - If fully re-opened, 2-10% estimated load loss
  - CPUC issued draft report 9/28/20 recommending no expansion till 2025; DA customers pay the same PCIA
  - SJCE working on new products to retain commercial customers

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RELIABILITY IS A KEY CONCERN

- SJCE already has a diverse portfolio of long-term contracts including:
  - out of state wind: complements solar and delivers in evening and overnight
  - first ever CCA fixed delivery solar agreement: solar that delivers in the evening (due to batteries)

- SJCE has entered into a seven-year 150 MW agreement Resource Adequacy (“RA”) from its existing natural gas fleet, and several other three-year RA agreements with natural gas plants to give time to transition to cleaner capacity

- SJCE was in negotiations with battery storage providers over the summer; procurement was deferred because of regulatory uncertainty

- SJCE is actively exploring long duration storage with other CCAs

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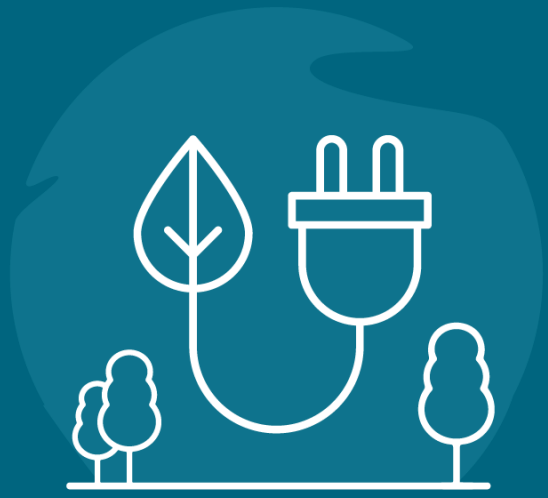

QUESTIONS?