INTEGRATED RESOURCES PLAN

August 25, 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 & partnered with 3 other CCAs

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

cleaner

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 AND RECOMMENDATIONS

Portfolios resulting in…	New solar by 2030 (Megawatts, 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	320	100	200	435,000
30 MMT	475	100	350	327,000
Annual carbon neutrality	700	100	400	238,000

Recommend submitting these to CPUC

preferred

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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 bought significant renewables already (262 MW), with another 225 MW under negotiation
  - 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 power content label
  - No additional statewide carbon reductions as it doesn't support new renewable projects

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IRP RECOMMENDATIONS

- Submit 46 and 38 MMT portfolios to CPUC consistent with CPUC requirements
  - Requires 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 bring forward further recommendations on SJCE's 2021 power mix and rates in the fall**
  - 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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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
  - ~7% 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 will review in fall 2020; DA customers pay the same PCIA
  - SJCE working on new products to retain commercial customers

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IRP LONG-TERM RENEWABLE CONTRACTS

- Increase long-term renewable authority by $500M for a total amount in 2024-2043 not to exceed $1.5B
  - Additional procurement would add 100 MW renewables & 50 MW storage
- Recommended 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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SHORT AND MEDIUM TERM POWER SUPPLY RECOMMENDATIONS

- Take advantage of energy prices that have been depressed by the economic slowdown
- Increase authority for short- and medium-term power supply products, by $212M for a total amount in 2024-2032 not to exceed $275M
  - Consistent with SJCE's Risk Management Policy and prudent industry practice to layer in a moderate amount of short and medium-term contracts
- Use $130M previously authorized for long-term power supply contracts for 2021-2023 for either long-term or short-term power supply products, other than Resource Adequacy
  - Provides flexibility to accommodate different project start dates

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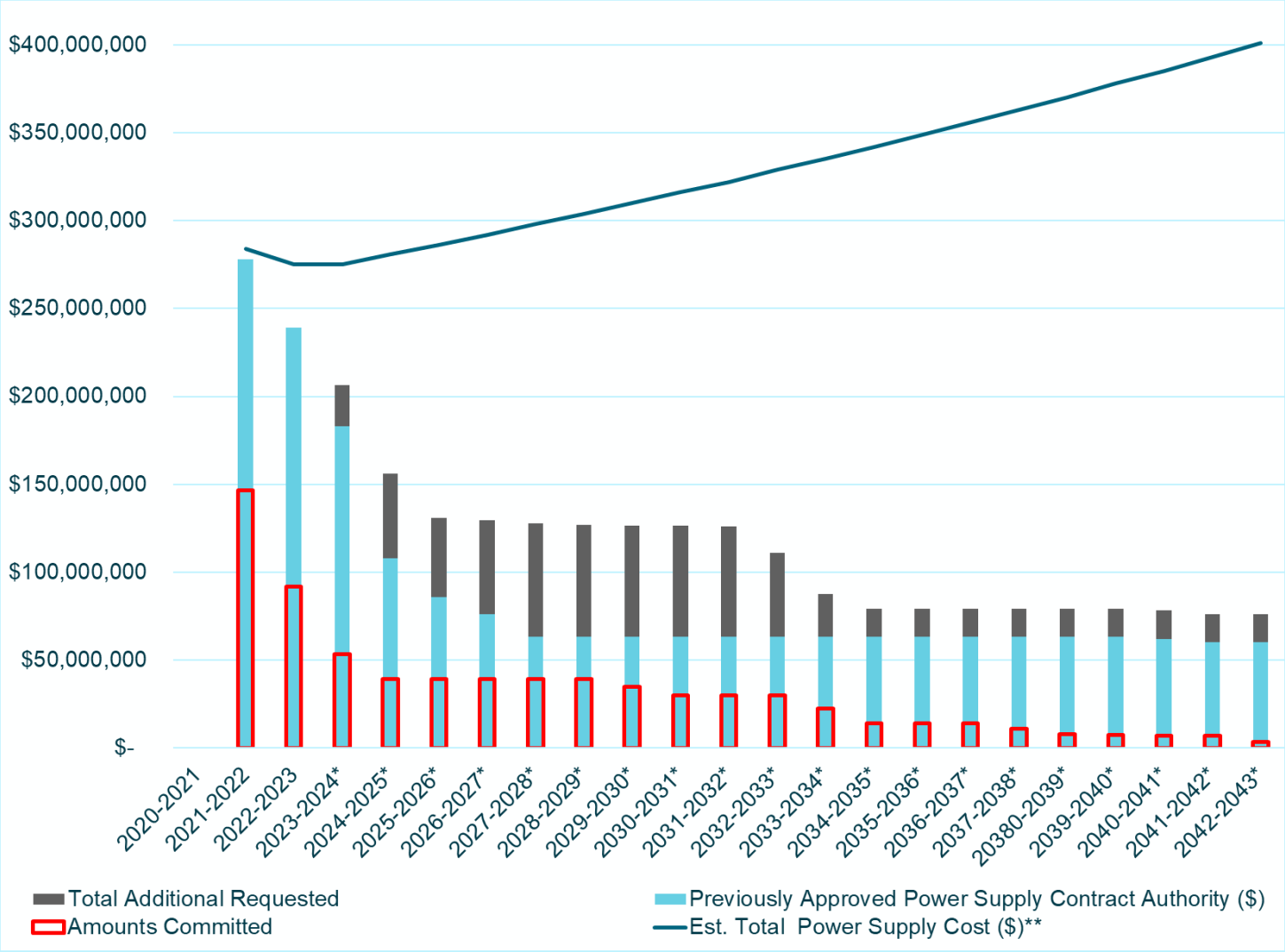
ESTIMATED COSTS VS AUTHORITY



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QUESTIONS?

- Recommendations
  - IRP
    - Approve 46 MMT and 38 MMT of carbon emissions Integrated Resource Planning portfolios,
    - Change 2018 IRP Criteria to delete requirement for carbon neutral in 2021, and
    - Authorize Director to finalize and submit IRP to CPUC
  - Increase procurement authority for long-term renewables by $500M and short- and medium-term power products by $212M
  - Use $130M previously authorized for long-term power supply contracts for 2021-2023 for either long-term or short-term power products

- We will return in fall with recommendations on 2021 power mix and rates
- SJCE Staff: Lori Mitchell

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