



San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

CleanPowerSF 2022 Integrated Resource Plan

June 14, 2022



Integrated Resource Planning



CleanPowerSF is required under state law to develop an **Integrated Resource Plan (IRP)** every two years.

- Evaluates energy demand and supply scenarios over 20 years.
- Examines portfolio options to provide reliable energy at the lowest cost while meeting policy objectives.

CleanPowerSF's next IRP is due November 1, 2022.



Key Terms

- **Portfolio**: collection of generation resources used to serve electricity demand.
- **Scenario**: variations on a future state or objective that may influence the resources included in a portfolio.
- **Sensitivity Analysis**: an analysis that involves changing one assumption to understand its influence on the portfolio.



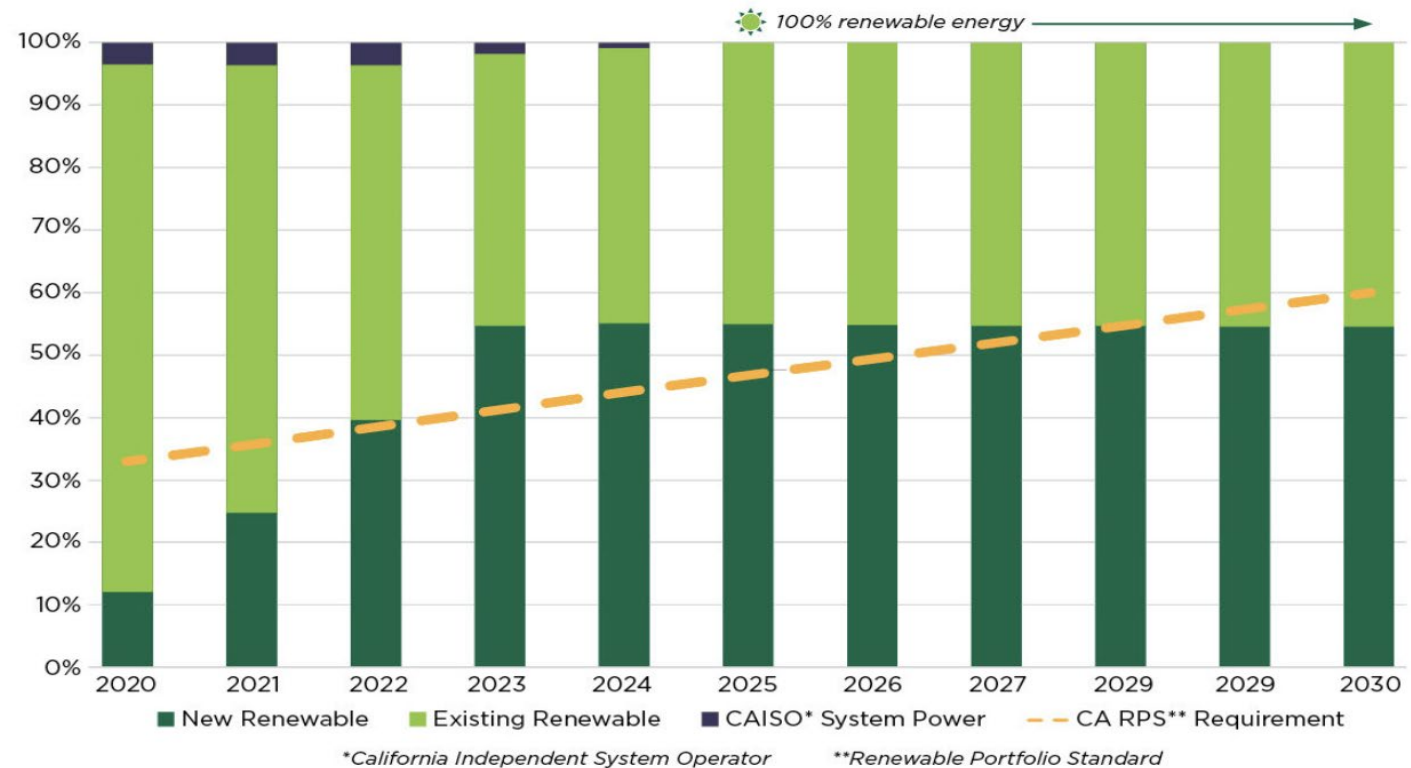
2020 Integrated Resource Plan Recap

CleanPowerSF IRP

- Accelerated CleanPowerSF renewable energy goals by 5 years
 - 100% renewable by 2025
- Identified solar + paired storage as most cost effective investments to meet energy and reliability goals
- Portfolios with ~80 MW of local solar still affordable

CPUC IRP Proceeding

- Systemwide reliability concerns resulted in significant procurement orders
- Increased interest in resource diversity (Long-duration storage, Geothermal, Offshore Wind)





Priorities for the 2022 IRP

Identify a Realistic Path to Achieving 100% Renewable Energy Goal

2020 IRP identified an aggressive plan for new resource development. What has changed in market and new “on-the-ground” realities that the 2022 Plan must reflect?

Update Local Supply-Side Investment

2020 IRP identified supply-side local investments. What additional demand-side opportunities exist?

Priorities for the 2022 IRP Continued

Plan for Electrification

How will building and transportation decarbonization goals affect CleanPowerSF demand and what programs and investments can be made to support Citywide decarbonization goals?

Delivering Affordable Service

Costs are increasing across our economy putting pressure on lower income members of our community. How can we ensure that these customers are not disproportionately burdened by our energy transformation?

Ensuring Reliability

What resources will most effectively reduce reliance on grid-supplied natural gas generation between 5-10pm and which resource portfolio will be the most resilient under extreme weather scenarios?



CleanPowerSF IRP Modeling Portfolios

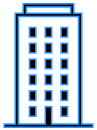
Portfolio Name	Criteria
1. Current CleanPowerSF Supply Portfolio Goals ("CleanPowerSF Goals")	<ul style="list-style-type: none">✓ 100% renewable by 2025✓ Local resource prioritization
2. CleanPowerSF Goals & No Unspecified Grid Purchases Between 5-10 pm	<ul style="list-style-type: none">✓ 100% renewable by 2025✓ Local resource prioritization✓ Resource generation meets customer usage during peak periods
3. CleanPowerSF Goals & 100% Time Coincidence by 2035	<ul style="list-style-type: none">✓ 100% renewable by 2025✓ Local resource prioritization✓ Resource generation meets customer usage in real time

Portfolio Name	Criteria
4. CleanPowerSF Goals & Mayor's EV and Building Electrification Targets Met	<ul style="list-style-type: none"> ✓ 100% renewable by 2025 ✓ Local resource prioritization ✓ Emission-free trips originating in, ending in, or passing through San Francisco by 2040 ✓ Decarbonization of existing buildings by 2040
5. CleanPowerSF Goals & 50% of Mayor's EV and Building Electrification Targets	<ul style="list-style-type: none"> ✓ Same as above, but slower pace of electrification
6. CPUC's 30 million metric tons (MMT) of Carbon Dioxide Equivalents (CO ₂ e) Case	<ul style="list-style-type: none"> ✓ Portfolio that meets the CPUC's assigned emissions benchmark (Required)



Electric Vehicle Adoption

- ✓ Accelerated electric vehicle purchases
- ✓ Increased share of electricity-supplied travel in San Francisco



Building Decarbonization

- ✓ Electrification growth
- ✓ Adoption rates



Future Climate Scenarios

- ✓ Extreme weather
- ✓ Resiliency





CleanPowerSF's Preferred Portfolio



Community Engagement

- Community input is a critical component in the IRP development process to align resource planning with community priorities
- Upcoming engagement opportunities:
 1. Online survey open until July 1st
 2. Community Workshops:
 - Tuesday, June 21, 10am-12pm
 - Thursday, June 23, 5pm-7pm
 3. Stay updated!
 - Visit: www.cleanpowersf.org/resourceplan
 - Email: cleanpowersf@sfgwater.org

June-July Input on Energy Planning

- Digital Survey
- Virtual Workshops
- Presentations



Aug-Oct IRP Scenario Feedback

- Public Comment Period
- Virtual Feedback Sessions
- Presentations



November Final 2022 IRP

- Approved by SFPUC Commission
- Submitted to the CPUC

Schedule

August 2022 – September 2022

- ✓ Solicit comments from public on results and recommendations
- ✓ Prepare report with staff recommendation identifying preferred portfolio



Future Work

- ✓ Continued analysis of Local Renewables potential beyond the November 1 IRP submission to CPUC



June 2022 – August 2022

- ✓ Modeling of CleanPowerSF's IRP portfolios

October 2022 – November 2022

- ✓ Commission approval of a preferred portfolio and plan on October 25
- ✓ Submission to CPUC by November 1



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Thank you!

