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

<table>
<thead>
<tr>
<th>Topic</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan for Electrification</td>
<td>How will building and transportation decarbonization goals affect CleanPowerSF demand and what programs and investments can be made to support Citywide decarbonization goals?</td>
</tr>
<tr>
<td>Delivering Affordable Service</td>
<td>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?</td>
</tr>
<tr>
<td>Ensuring Reliability</td>
<td>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?</td>
</tr>
</tbody>
</table>
# CleanPowerSF IRP Modeling Portfolios

<table>
<thead>
<tr>
<th>Portfolio Name</th>
<th>Criteria</th>
</tr>
</thead>
</table>
| 1. Current CleanPowerSF Supply Portfolio Goals (“CleanPowerSF Goals”) | ✓ 100% renewable by 2025  
 ✓ Local resource prioritization |
| 2. CleanPowerSF Goals & No Unspecified Grid Purchases Between 5-10 pm | ✓ 100% renewable by 2025  
 ✓ Local resource prioritization  
 ✓ Resource generation meets customer usage during peak periods |
| 3. CleanPowerSF Goals & 100% Time Coincidence by 2035 | ✓ 100% renewable by 2025  
 ✓ Local resource prioritization  
 ✓ Resource generation meets customer usage in real time |
## CleanPowerSF IRP Modeling Portfolios Continued

<table>
<thead>
<tr>
<th>Portfolio Name</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4. CleanPowerSF Goals &amp; Mayor’s EV and Building Electrification Targets Met</td>
<td>✓ 100% renewable by 2025&lt;br&gt;✓ Local resource prioritization&lt;br&gt;✓ Emission-free trips originating in, ending in, or passing through San Francisco by 2040&lt;br&gt;✓ Decarbonization of existing buildings by 2040</td>
</tr>
<tr>
<td>5. CleanPowerSF Goals &amp; 50% of Mayor’s EV and Building Electrification Targets</td>
<td>✓ Same as above, but slower pace of electrification</td>
</tr>
<tr>
<td>6. CPUC’s 30 million metric tons (MMT) of Carbon Dioxide Equivalents (CO2e) Case</td>
<td>✓ Portfolio that meets the CPUC’s assigned emissions benchmark (Required)</td>
</tr>
</tbody>
</table>
CleanPowerSF IRP Modeling: Sensitivities

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

- CleanPowerSF Goals
- Building and Transportation Decarbonization Analysis
- IRP Preferred Portfolio
- Scenario/Sensitivity Development
- Local Renewable Resource Analysis
- Statewide Resource Cost and Availability
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@sfwater.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

**June 2022 – August 2022**
- ✔ Modeling of CleanPowerSF’s IRP portfolios

**August 2022 – September 2022**
- ✔ Solicit comments from public on results and recommendations
- ✔ Prepare report with staff recommendation identifying preferred portfolio

**October 2022 – November 2022**
- ✔ Commission approval of a preferred portfolio and plan on October 25
- ✔ Submission to CPUC by November 1

**Future Work**
- ✔ Continued analysis of Local Renewables potential beyond the November 1 IRP submission to CPUC
Thank you!