






Hydroelectric Rate Methodology Update

Roseville Public Utilities Commission- January 24, 2023

Joanna Cucchi, Interim Electric Utility Financial Administrator

CITY OF ROSEVILLE CALIFORNIA

Hydroelectric Overview

- Implemented in 2009 to mitigate the impact of variations in hydroelectric resources on energy supply costs.

- Calculated annually and is effective July 1st through June 30th

- It is calculated using:
  - Expected generation of 222 GWh
  - Precipitation in the 8-station index
  - Energy prices on May 1

Proposal

1. Increase expected generation of hydroelectric energy from 222 GWh to 277 GWh due to the addition of Feather River resource.
2. Update the calculation to use forecasted hydroelectric generation as of May 1 of each year.

Feather River Hydroelectric Project

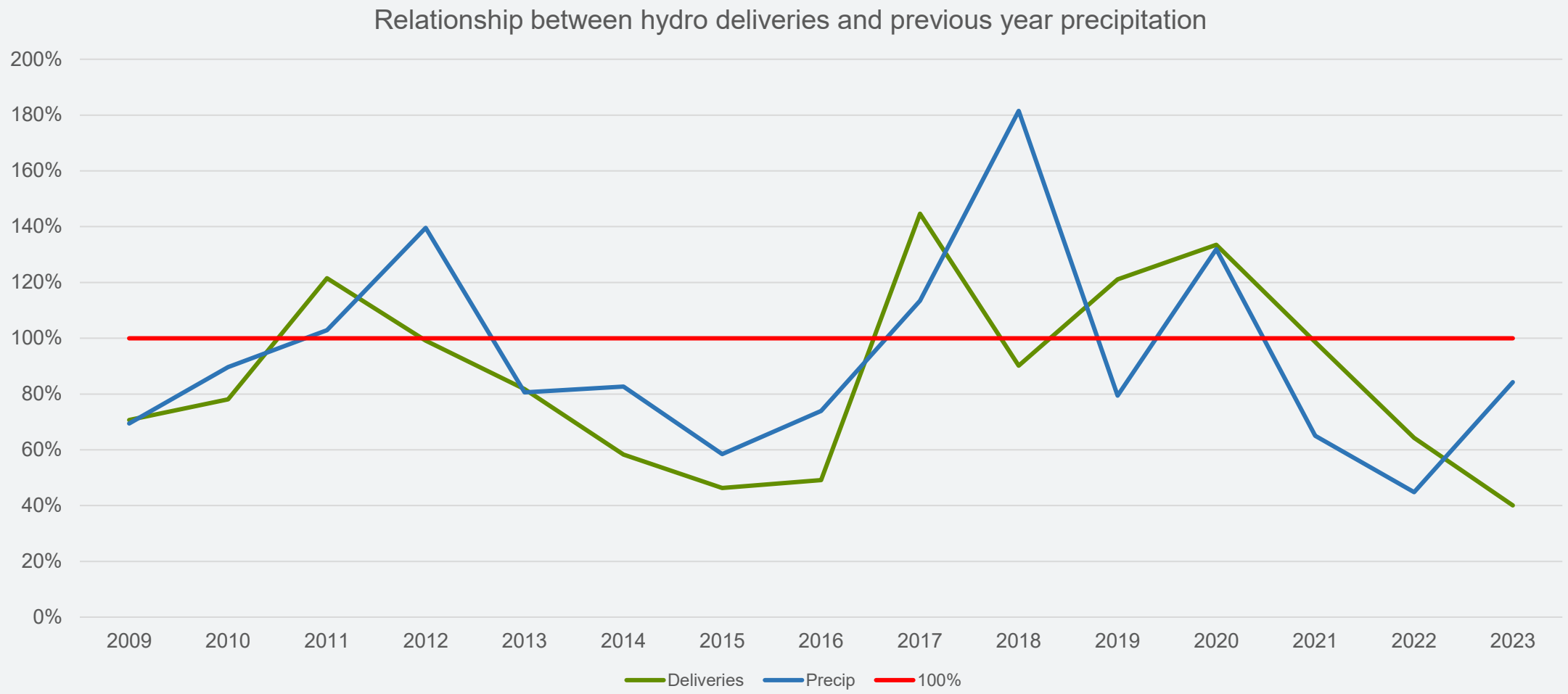
- Roseville recently entered into a power purchase agreement for 55 GWh of annual generation from the Feather River project.

- The municipal code “average expected energy from average precipitation”
  - increased from 222 GWh to 277 GWh

Precipitation vs Energy Deliveries

- Historically, precipitation closely mirrored hydroelectric energy generation for the City. In the past, the existing calculation appropriately mitigated the reduced hydroelectric generation.
- Beginning in 2017, the relationship between a single year precipitation and hydroelectric generation weakened.
- As longer-term droughts occur, a single good year of precipitation does not necessarily improve hydroelectric generation.
- The use of precipitation as a leading indicator to predict hydroelectric generation is no longer reliable.

Precipitation vs Hydroelectric Generation



Hydroelectric Generation Forecast

- The Electric Department receives hydroelectric delivery forecasts monthly from the federal government and NCPA.
- Delivery forecasts based on reservoir levels and other hydroelectric generating constraints.
- Use the hydroelectric delivery forecast as of May 1 of each year to calculate the hydroelectric surcharge replacing precipitation

Recommendation to Council

- Recommend adoption of municipal code changes related to the hydroelectric adjustment including updating the “annual expected energy from average precipitation” and changing the calculation variable from the 8-station index precipitation to forecasted hydroelectric energy generation.

Questions?

CITY OF ROSEVILLE CALIFORNIA