

DOCKETED

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Item 9: Diablo Canyon Power Plant Extension – CEC Analysis of Need to Support Reliability

February 28, 2023 Business Meeting

David Erne, Deputy Director
Energy Assessments Division



Benefit to Californians

SB 846 Requirements

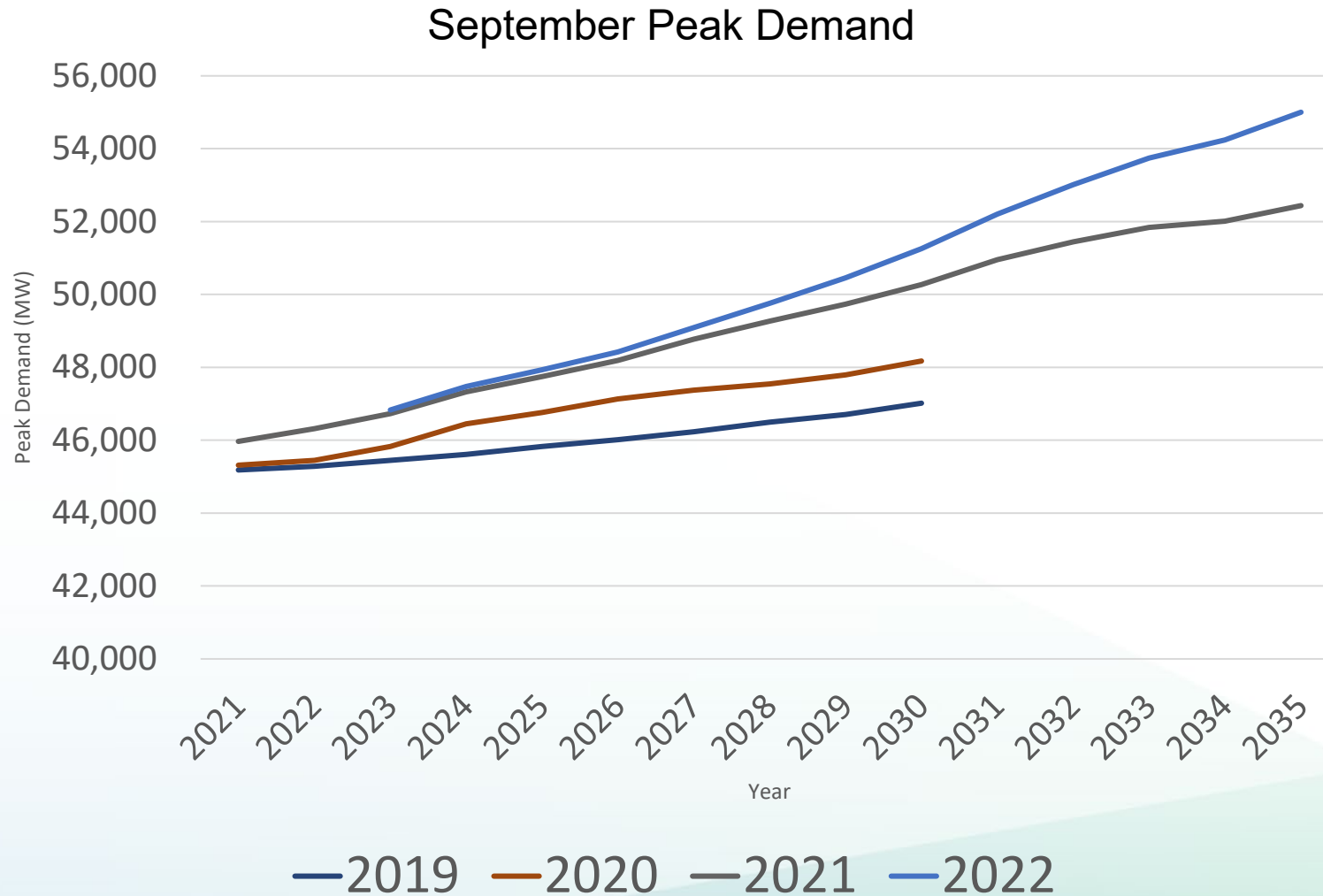
- By March 2
 - Evaluate 2024 – 2030 forecasts for potential reliability deficiencies if Diablo Canyon Power Plant (DCPP) is not extended
 - Make a determination of whether extending operations is prudent to ensure reliability
- By September 30
 - Compare costs of extending DCPP to a portfolio of other resources



Image – PG&E



Peak Demand is Growing





Extreme Events Increasing

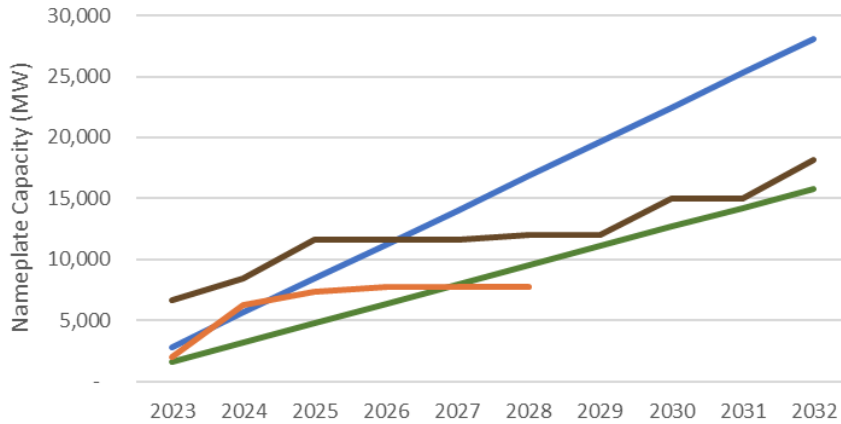
- Recent years
 - Generally higher temperatures
- Truncate historical record
 - Not much change to normal peaks
 - Extreme peaks are becoming hotter
 - Heat waves are becoming longer
- September 6, 2023
 - 1-in-14 event based on 20-year weather history
 - 1-in-27 based on 30-year weather history



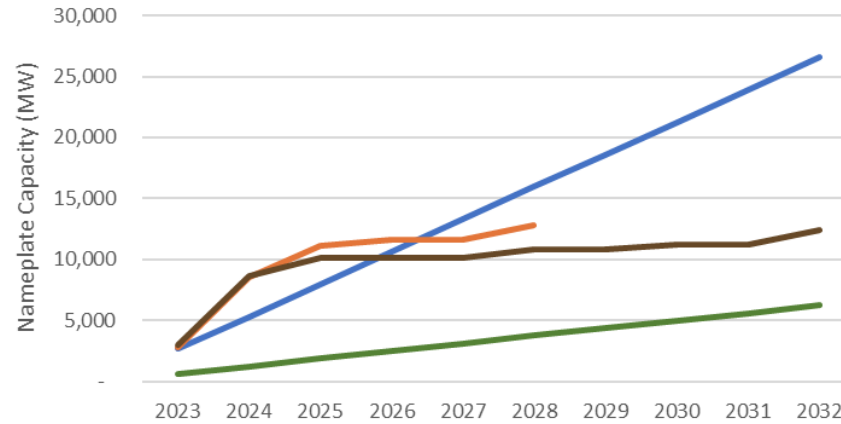


Unprecedented Resource Build Rates

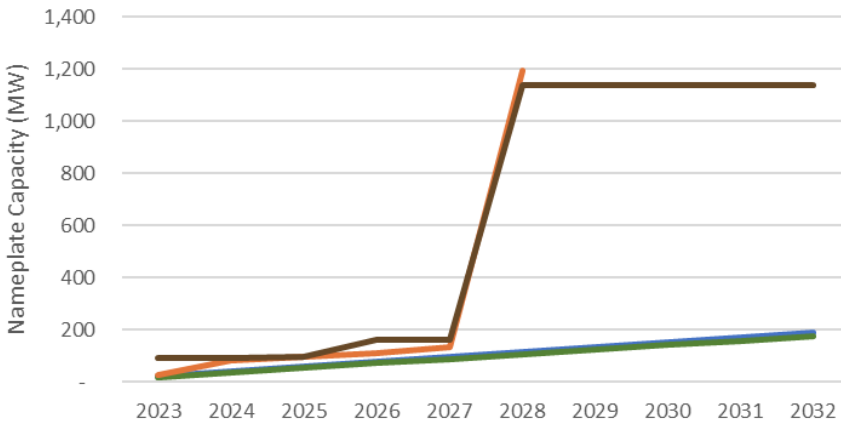
Solar Build Rates



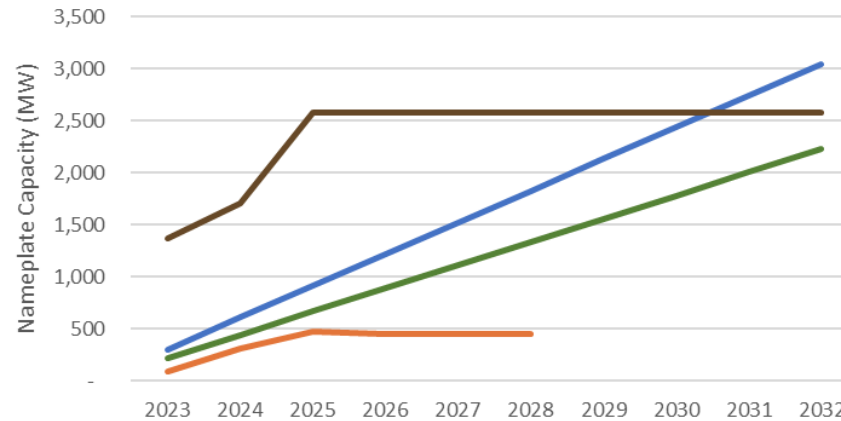
Battery Build Rates



Geothermal Build Rates



Wind Build Rates

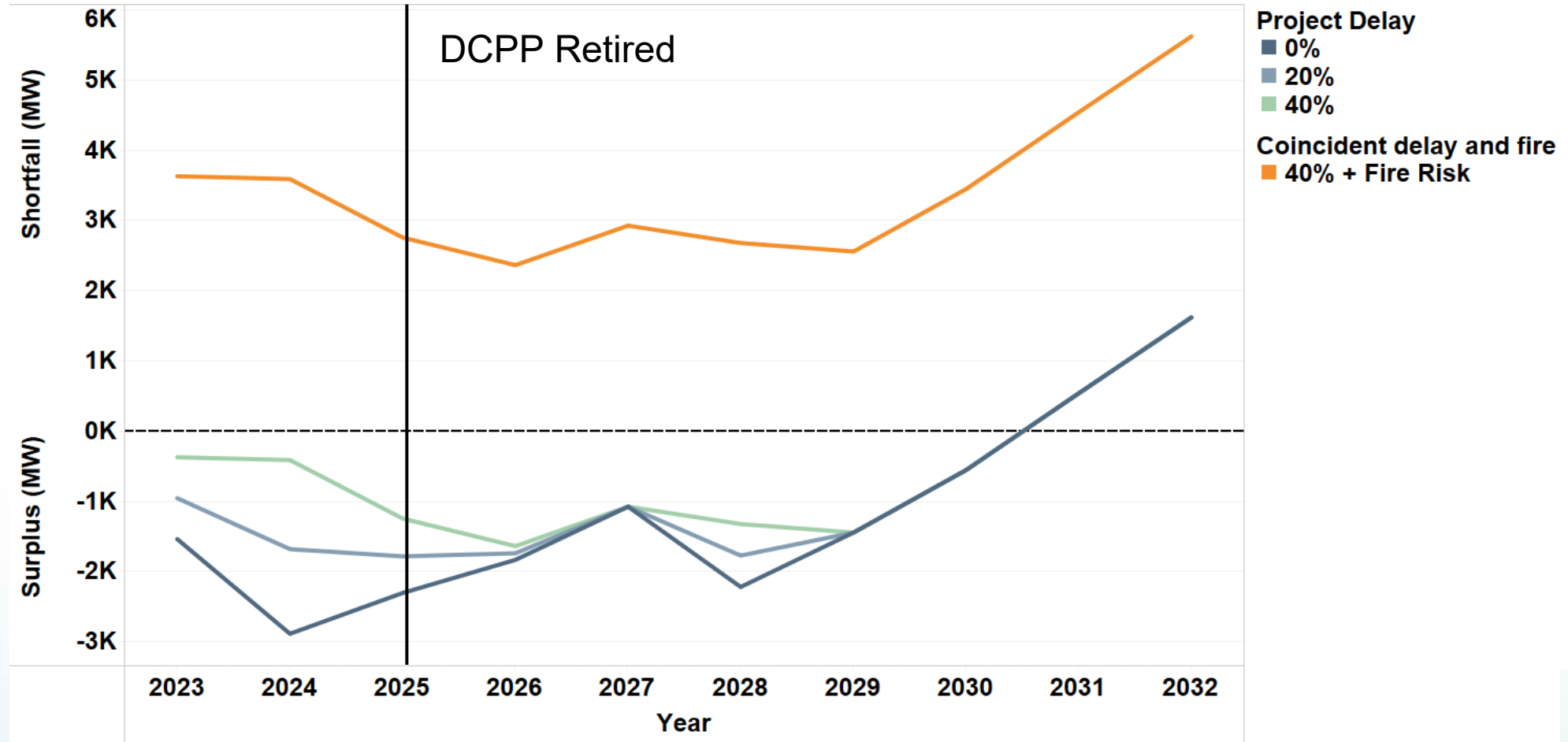


- Average build rates are generally insufficient to reach:
 - Procurement order before the end of the order
 - Preferred System Plan before 2032
- Maximum build will not exceed all builds by 2027, except geothermal

- 10 Year California Maximum
- 10 Year California Average
- CPUC Procurement Order
- CPUC Preferred System Plan

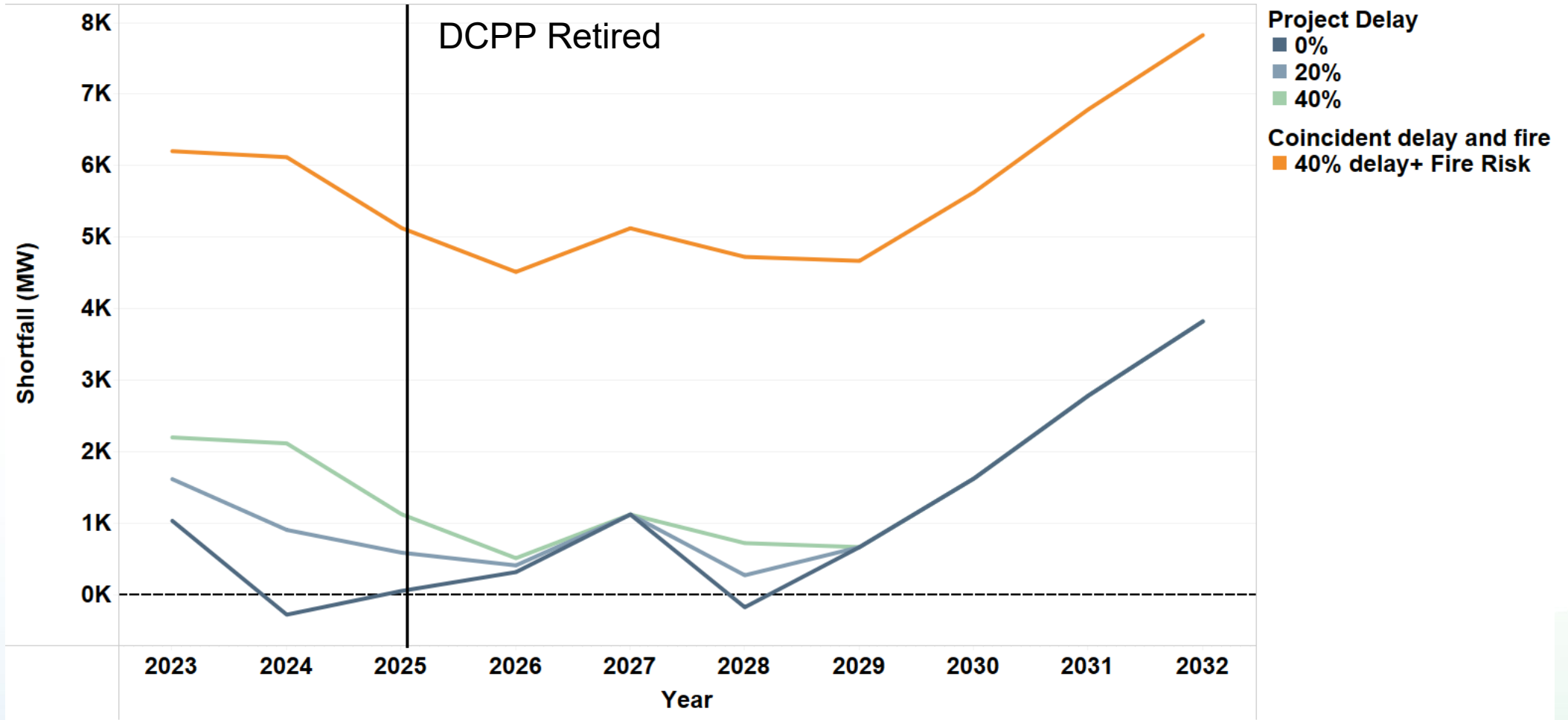


Resource Adequacy Planning Standard



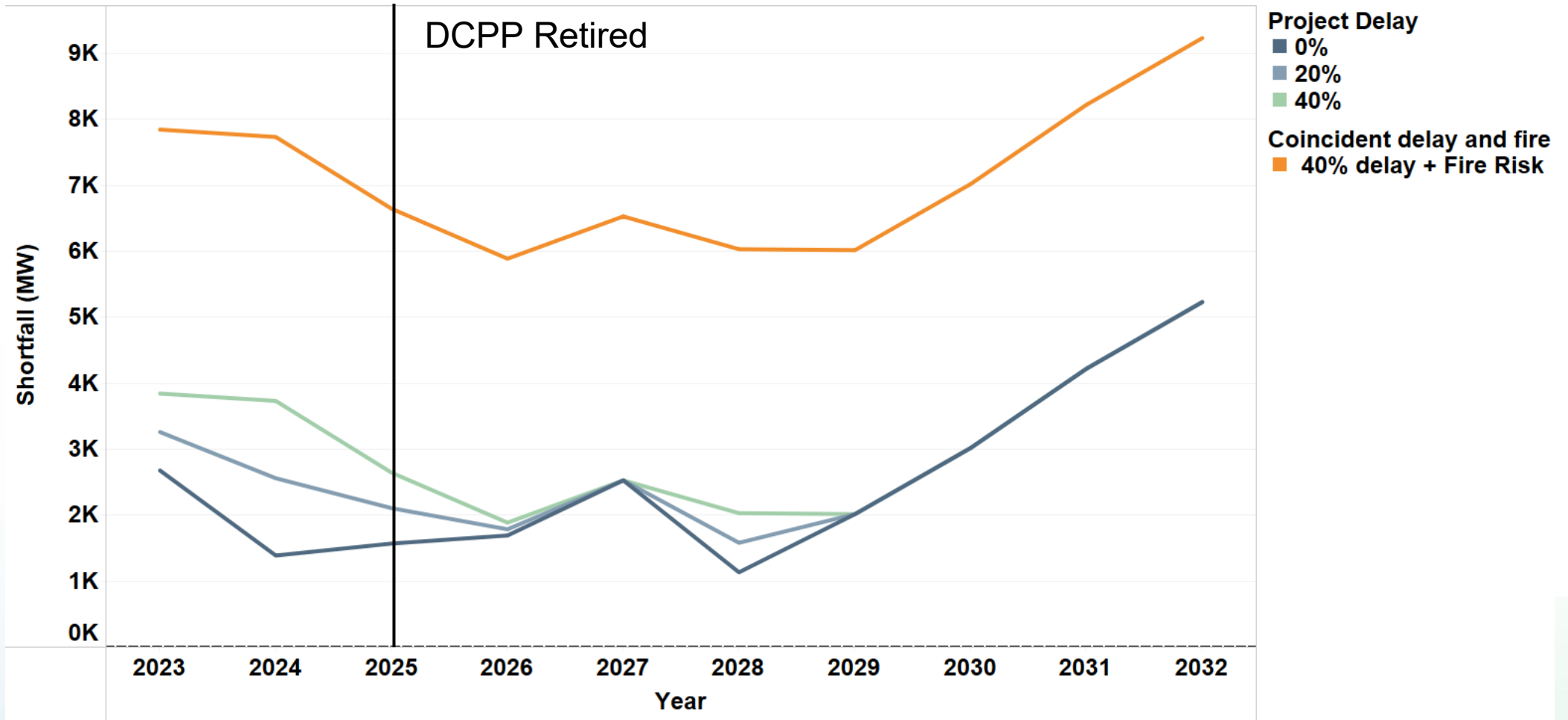


2020 Equivalent Event





2022 Equivalent Event





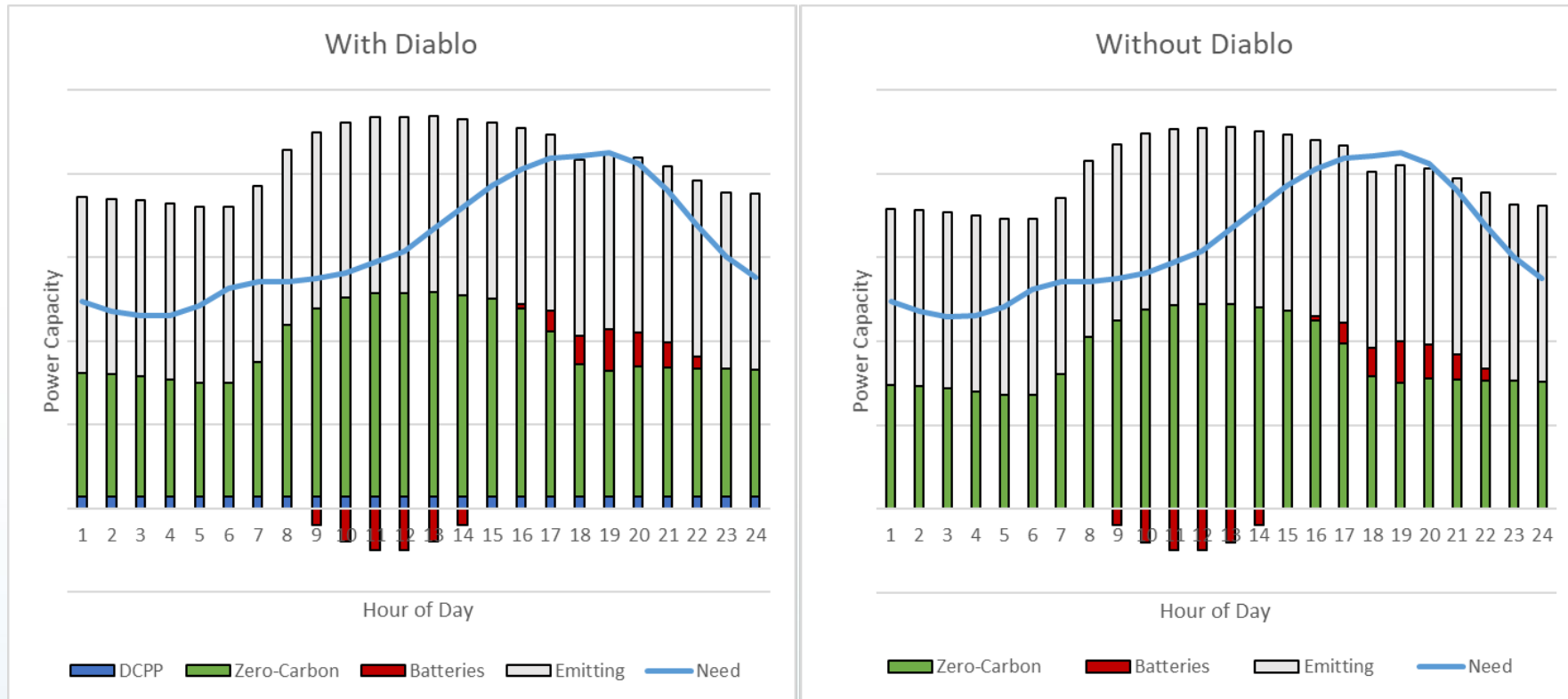
Uncertainties Impact Reliability

- **Current authorized procurement meets planning standards in near term**
- **Uncertainties/Risks**
 - Build rate is unprecedented and with risks
 - Climate change causing greater weather variability – more extreme events



Extending Diablo Canyon

- Maintains availability of a low carbon, firm resource



Note: Figures are for illustrative purposes only. Diablo Canyon Power Plant's power capacity is approximately to scale with the total power capacity of the system.



Staff Recommendation

- Approve the proposed resolution adopting the report and determination that it is prudent to pursue extension of the operation of Diablo Canyon Power Plant



Image – PG&E