

Energy Imbalance Market (EIM)

Public Utilities Board Update



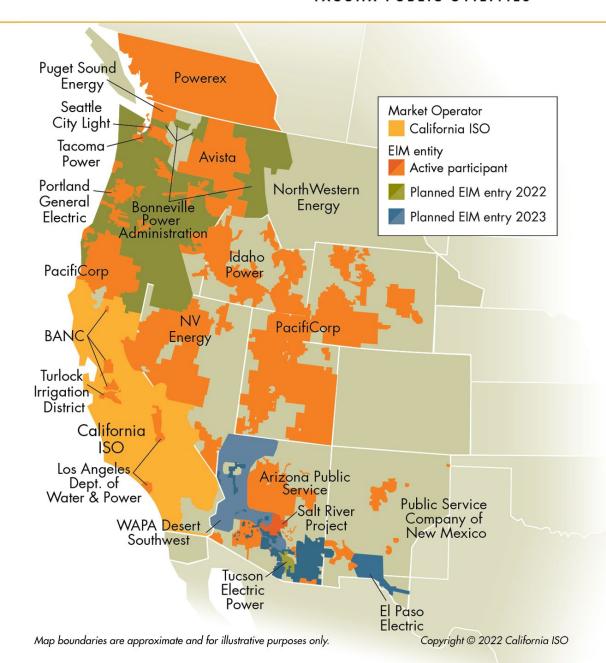


What is EIM?



EIM is a **real-time energy supply market** that:

- Offers electricity generation and transmission services.
- Automatically balances demand every 15 minutes.
- Dispatches power plants to meet demand every five minutes with the lowest cost energy.



Why did we join EIM?

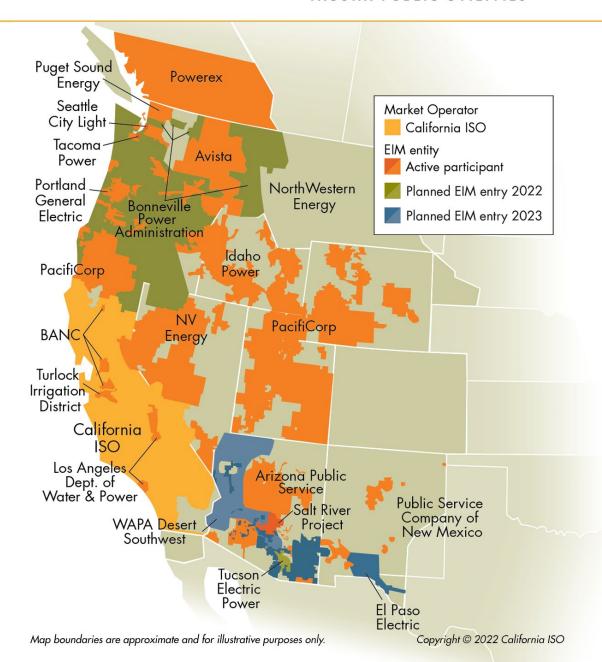


Traditional bi-lateral partners joining the EIM created **risk if we did not join**.

ElM offers an attractive market for our valuable, quick-ramping hydro resources.

Hydro units support renewable resource integration.

Gives us a "seat the table" of Western energy market development.



CAISO EIM Milestones



Milestone 1

EIM Implementation Agreement Approved by the Federal Energy Regulatory Commission (FERC) Feb 27, 2020

Milestone 3

CAISO Promoted Tacoma Network Model June 1, 2021

Go-Live

Mar 2, 2022

Learning and refining procedures Providing more training Implementing EIM management framework

Milestone 4a

Joint Integration Testing Started with CAISO June 1, 2021

Milestone 4c

Start Market Simulation Oct 1, 2021

Year 1 Review

March 2023

2022

Focus 2022

2020

Milestone 2

Validated Integrated Full Network Model (FNM) May 15, 2021

Milestone 5

Start Parallel Operations Dec 1, 2021

2023

Financial Penalty Grace Period Ends

September 1, 2022

Milestone 0 **PUB** Approved Joining the EIM June 26, 2019

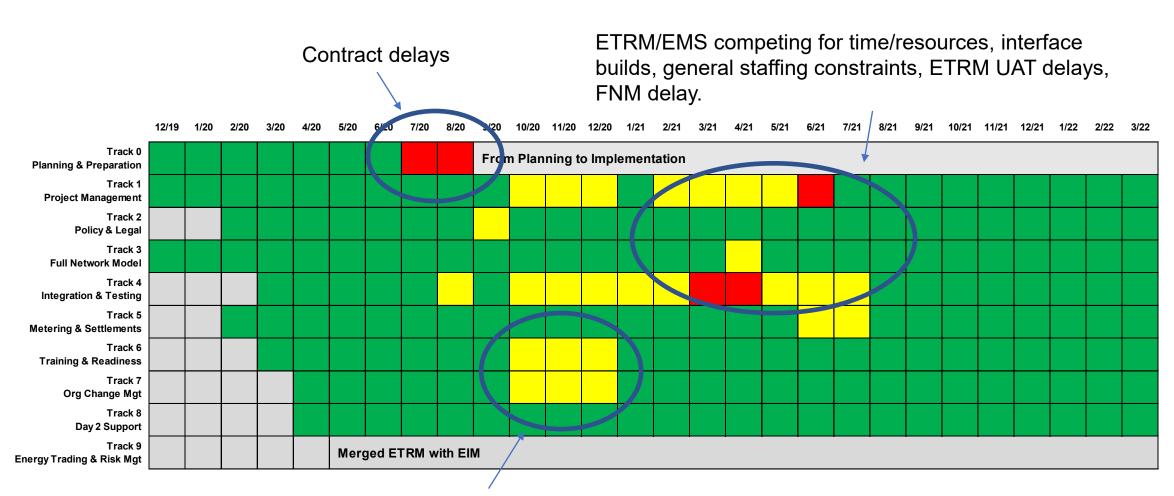
2019

Milestone 4b

Start Day-in-the-Life **Testing** Sept 1, 2021

Project In-Review

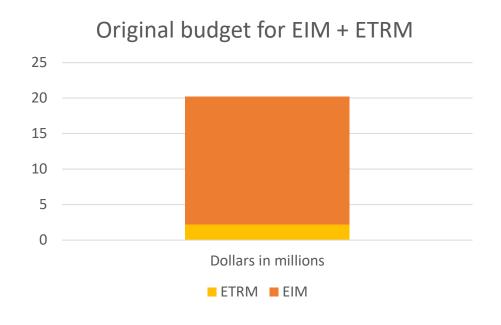




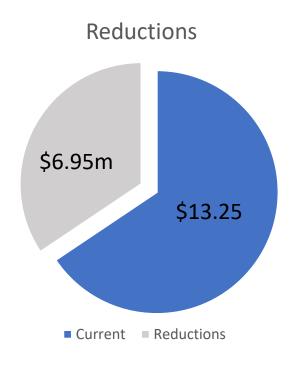
Staffing constraints

Project Finances





Total Budgeted \$20.2 Million



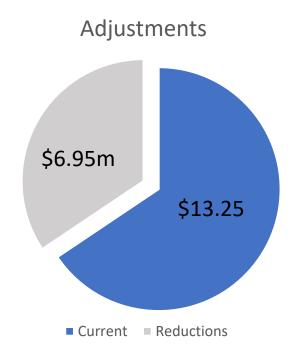
Total Adjusted Budget \$13.25 Million

Project Finances



HOW?

- Leveraged synergies between EIM/ETRM
- Negotiated down contracts
- Shifted some contract work to internal
- Fewer meter replacements needed
- Shifted FTE hiring strategy



Total Adjusted Budget \$13.25 Million

Questions?



