



ENERGY IMBALANCE MARKET (EIM) PROGRAM BRIEF

Tacoma Public Utility Board

July 14, 2021

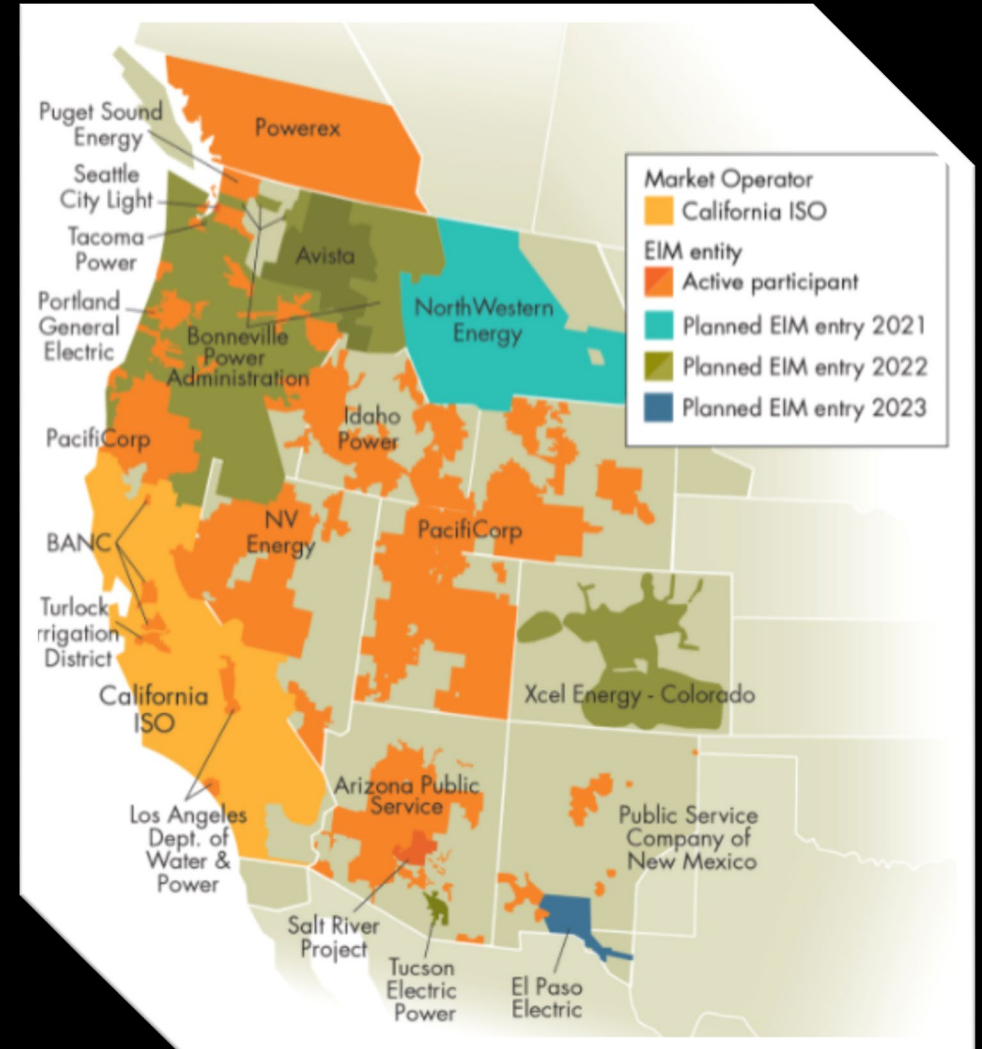
CONTENTS

- What is the Energy Imbalance Market
- Why is Tacoma Power joining the EIM
- What has been accomplished
- What is left to do
- Budget status

WHAT DOES EIM STAND FOR?

E – Energy
I – Imbalance
M – Market

When Tacoma joins in March 2022, 82% of load in the Western interconnection will be served within the Western EIM.



WHAT IS EIM?

EIM is

- A centralized wholesale market (not bi-lateral)
- An energy market only (not ancillary services)
- A real-time, five-minute market (not hourly)

*EIM is a real-time **energy** supply **market** that offers electricity generation and transmission services. It automatically balances demand every 15 minutes and dispatches power plants to meet demand every five minutes with the lowest cost **energy**.*

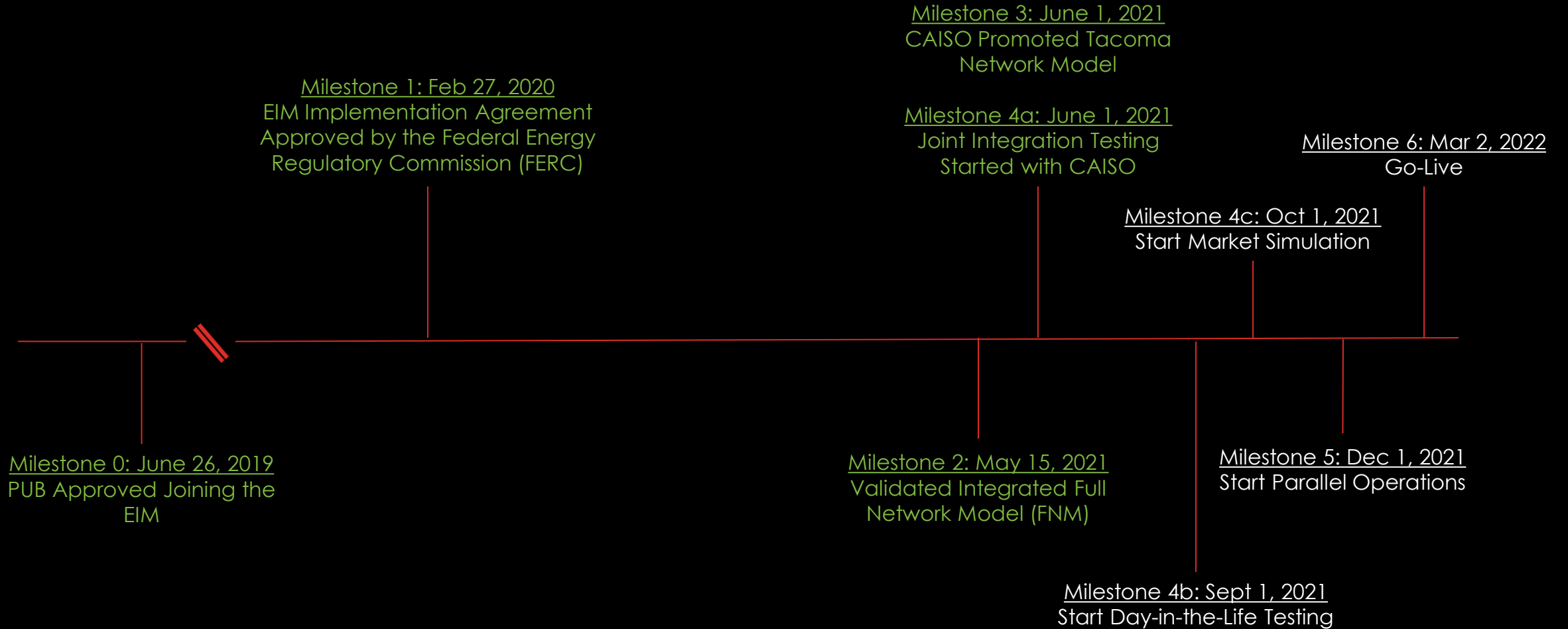
WHY IS TACOMA JOINING EIM?

- Traditional bi-lateral partners are joining the EIM
- Flexible hydro can support grid as more renewables are integrated
- Forecast positive Net Present Value over 10 years
- Participation gets us a “seat at the table” re future market evolution

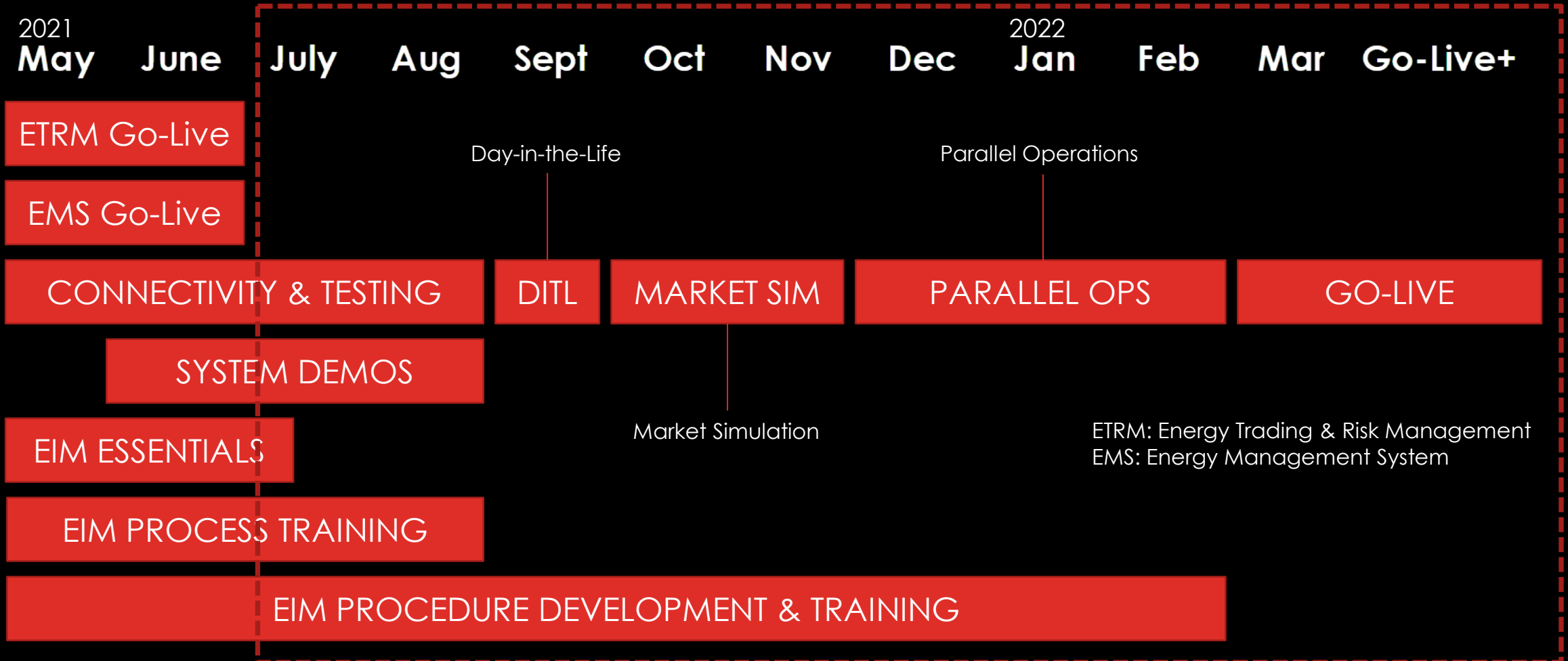
WHAT DOES IT TAKE TO JOIN EIM?

- Legal agreements
- New systems
- Upgrades to current systems and infrastructure
- Significant IT architecture and interface work
- More than a year of training and testing
- Energy Control Center upgrades and more system operators

WHAT HAS BEEN DONE SO FAR?



WHAT IS LEFT TO DO?

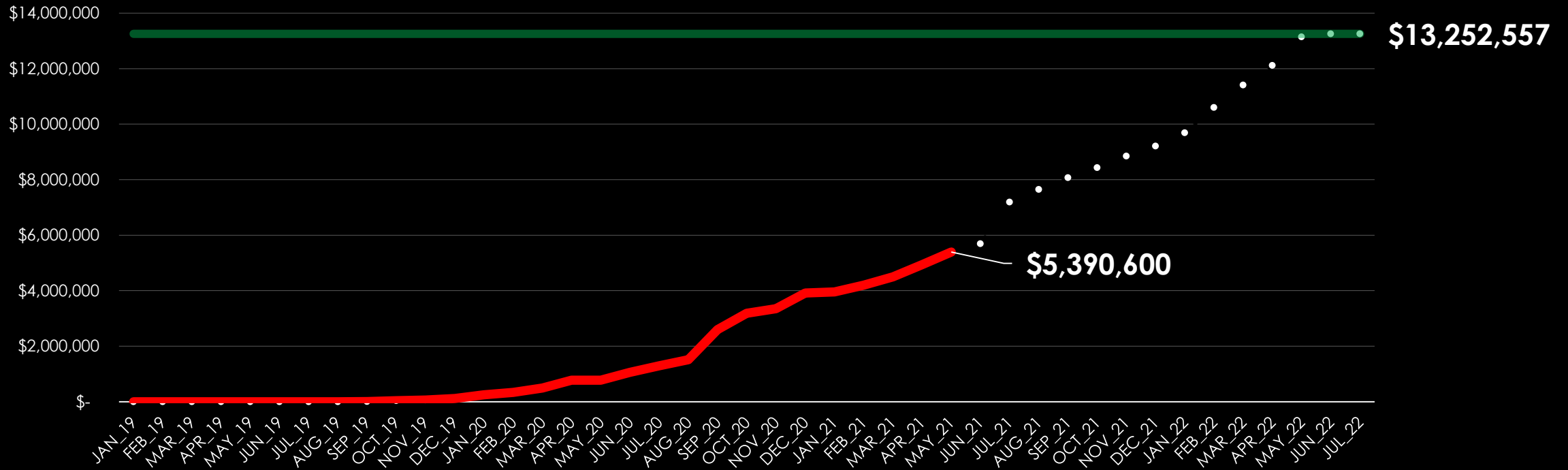


BUDGET BACKGROUND

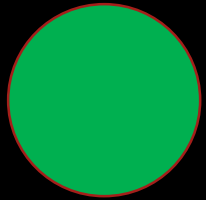
- Original Estimate (2019) = \$18 MM
- Revised Budget (2020) = \$13.5 MM

EIM PROGRAM BUDGET

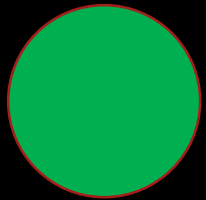
Total (Capital + O&M) Project Life Forecast



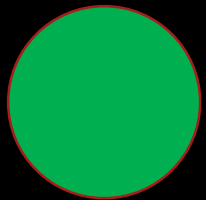
EIM PROGRAM STATUS



Schedule



Scope



Budget