

EIM Implementation Update

April 19, 2017

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Presented to: The EIM Governing Body



**“EIM is one of
PGE’s most
important
initiatives in
2017” —**

*Jim Piro
President & CEO*



Who is PGE?



Serving Oregon since 1889

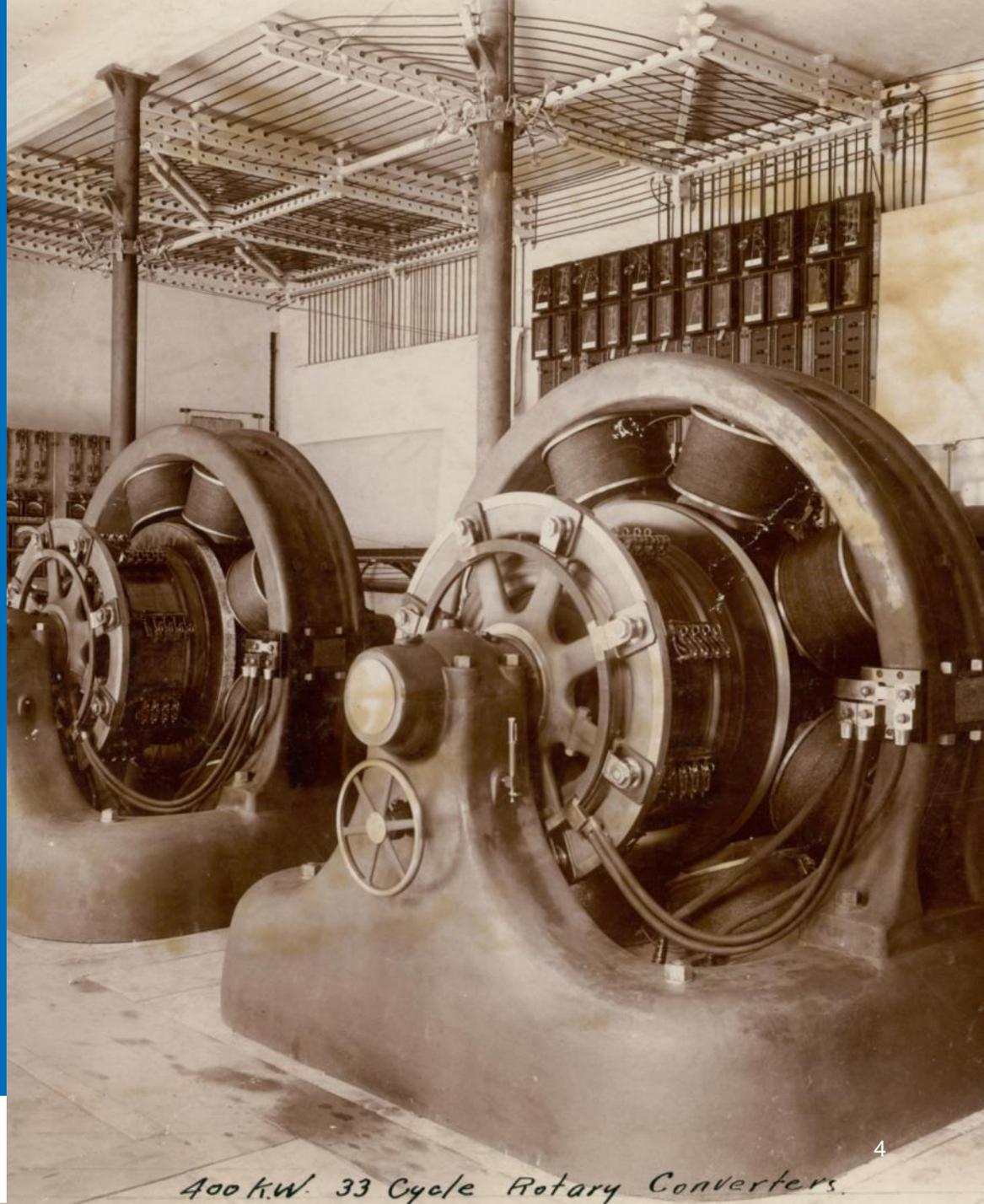
Serving 1.8 million Oregonians

45% of Oregon's population

51 cities served

Diversified power system:

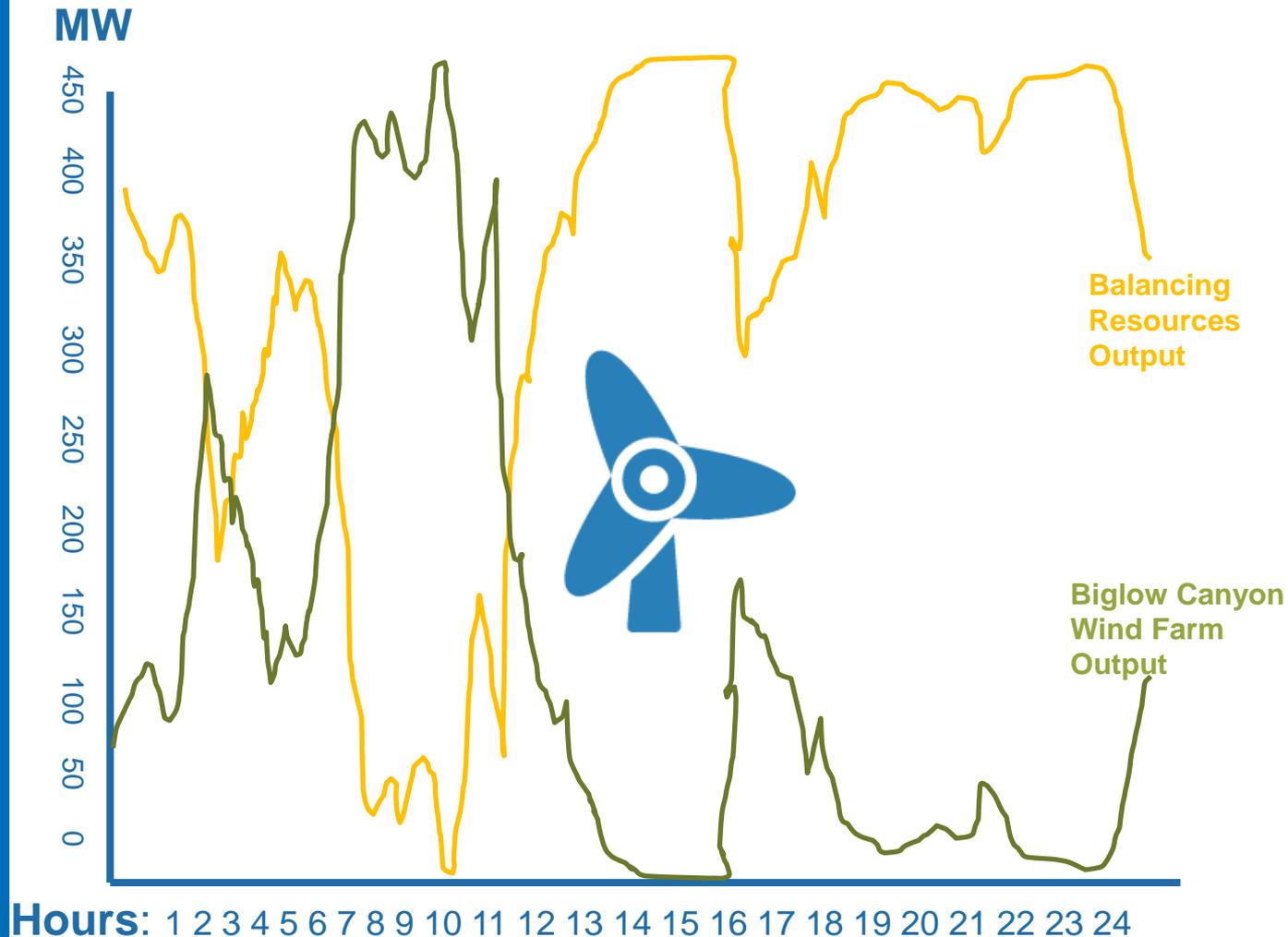
- 16 power plants
- 3,843 megawatts (MW) of generation
- Summer peak load of 3,950 MW (2009)
- Winter peak load of 4,073 MW (1998)



400 kW. 33 Cycle Rotary Converters.

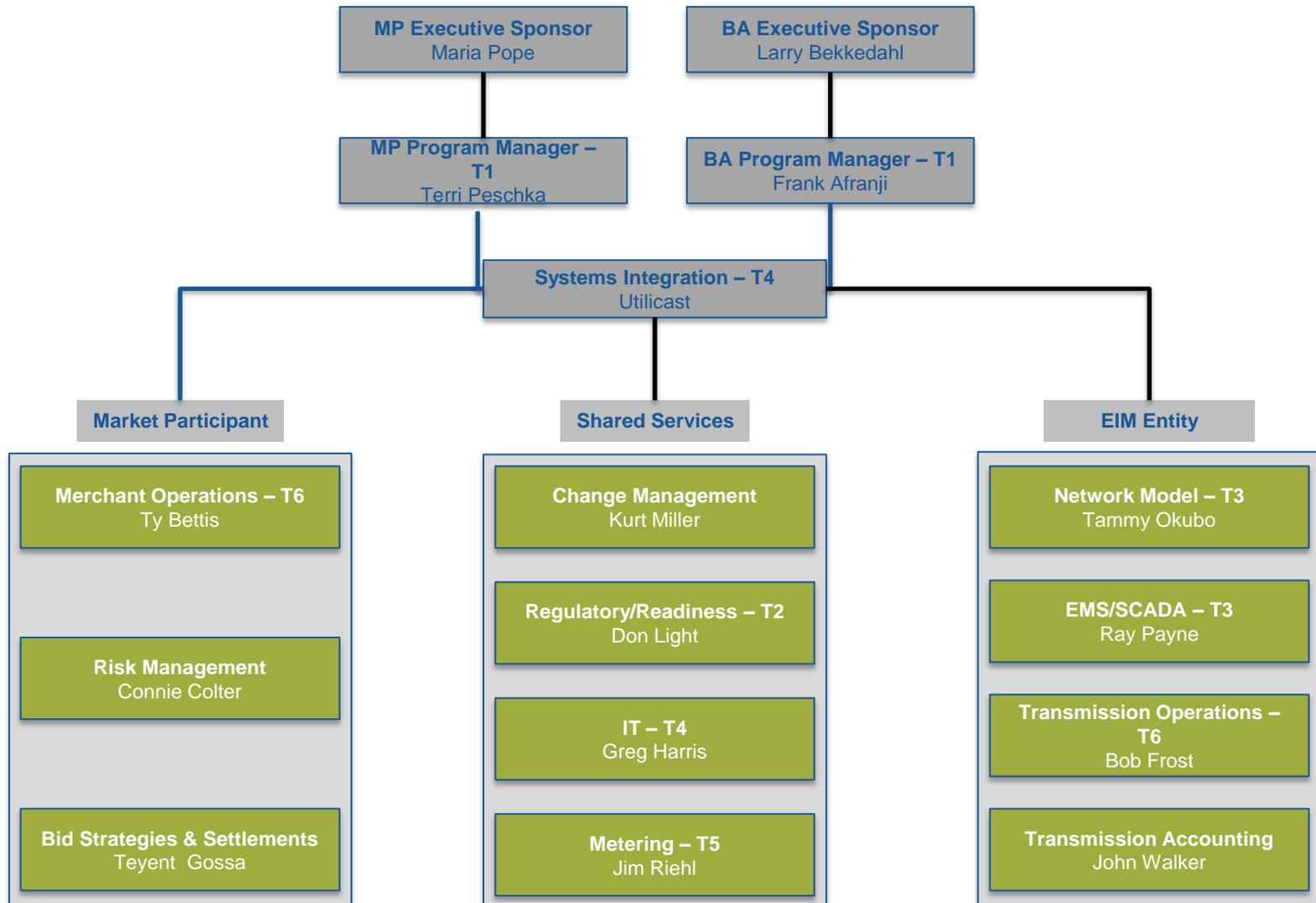
A balancing act

- Roughly 15% of PGE's generation comes from renewables like wind and solar
- By 2040, 50% of PGE's generation must come from renewables
- Moving to EIM helps PGE to "self-integrate" its wind.
- More efficient plant dispatch should lead to \$2 – 4 million per year in savings.

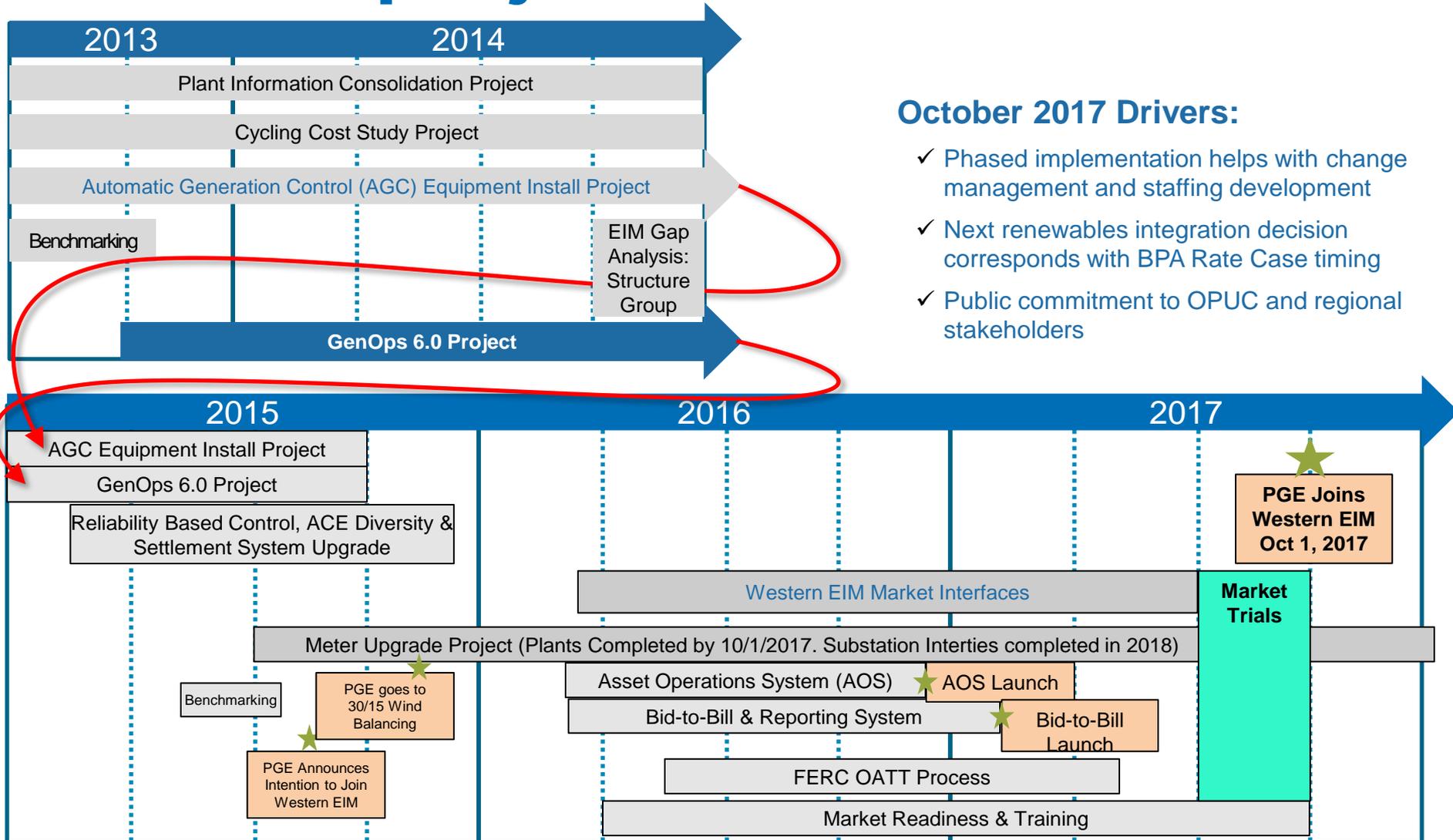


Balancing Wind: A Simplified Look

Project organization structure



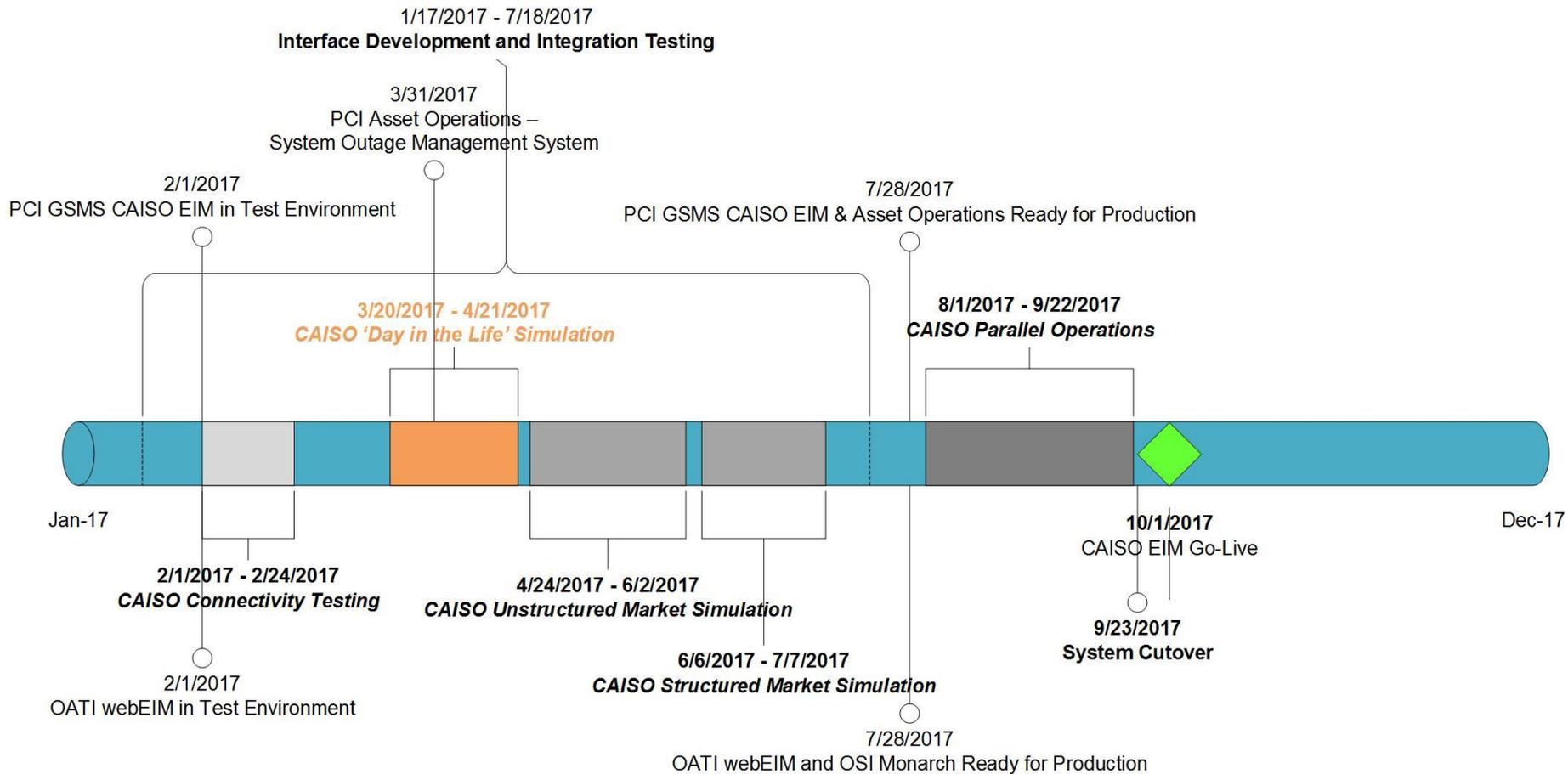
Overall project schedule



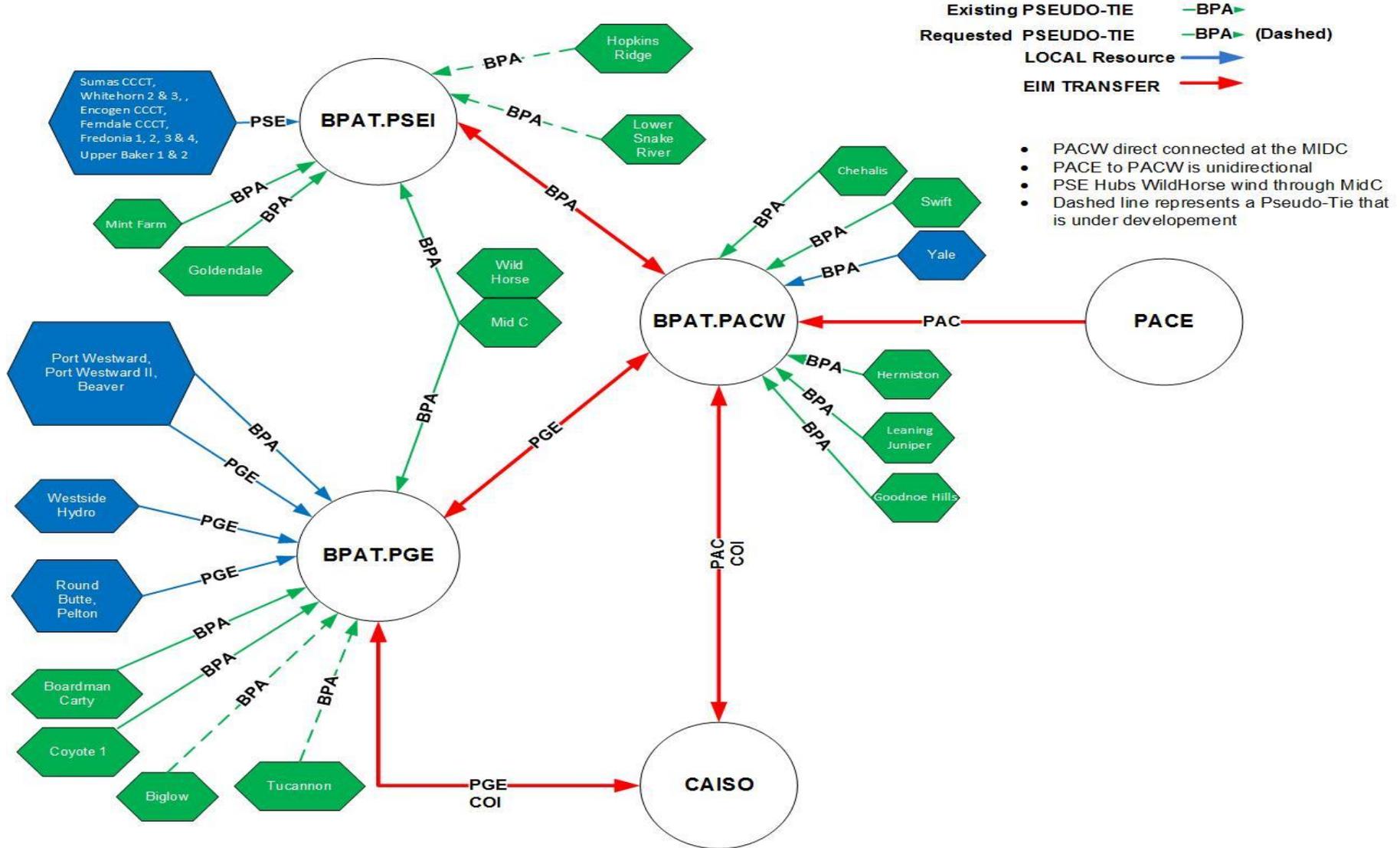
October 2017 Drivers:

- ✓ Phased implementation helps with change management and staffing development
- ✓ Next renewables integration decision corresponds with BPA Rate Case timing
- ✓ Public commitment to OPUC and regional stakeholders

Project timeline



Bubble Diagram for EIM Transfers



Challenges

- **PGE used multiple software platforms from different vendors; multiple vendors means integrating and conforming various software interfaces**
- **Tailoring change management and training that is appropriate for more than 350 people companywide**

Key Accomplishments

- **Founded the EIM Implementation and Policy Forum**
- **Deployed CAISO computer-based trainings (CBTs) for 350 impacted PGE employees.**
- **Formed cross-functional working group to address:**
 - **CAISO EIM Market Simulation Scenarios and Settlements**
 - **Methodology for dispatching generation units in CAISO EIM**



PGE next steps:

- Complete all required market simulations required for go-live
- File for Market Based Rate Authorization with FERC
- Complete analysis of impacts on BPA flowgates and establish associated Variable Transfer Limits
- Certify completion of 33 Readiness Criteria and file with FERC
- PGE will continue to explore ways for smaller BAAs to participate in the Western EIM

