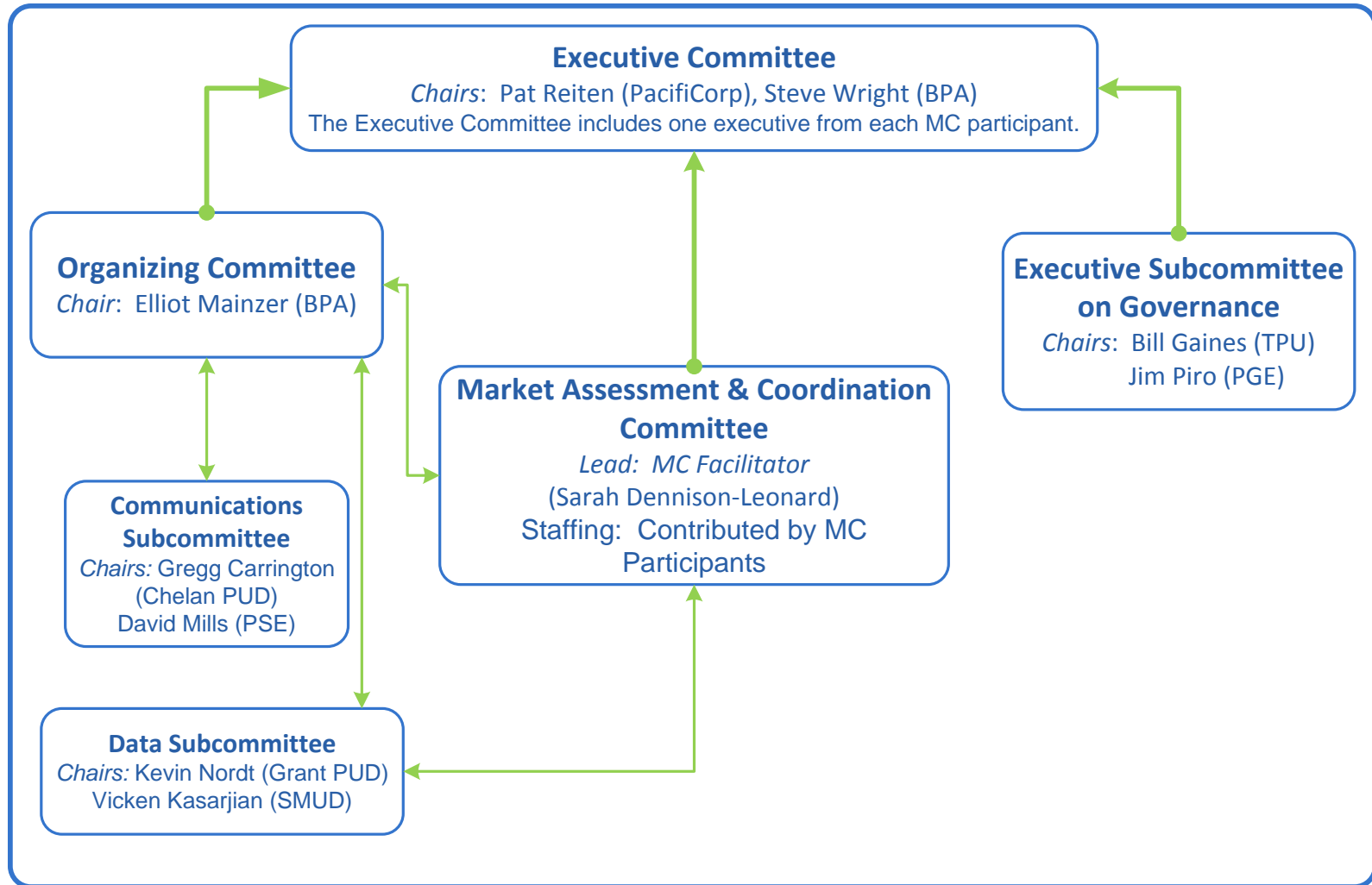


NWPP Members' Market Assessment and Coordination Committee (MC)

NWPP MC Organizational Structure



MC Initiative Participants

- Avista Corporation
- Balancing Authority of Northern California
- Bonneville Power Administration
- British Columbia Hydro and Power Authority
- Eugene Water & Electric Board
- Iberdrola Renewables, LLC
- Idaho Power Company
- NaturEner Wind Holding, LLC
- NorthWestern Energy
- PacifiCorp
- Portland General Electric Company
- Puget Sound Energy
- Public Utility District No. 1 of Chelan County, Washington
- Public Utility District No. 1 of Clark County, Washington
- Public Utility District No. 1 of Cowlitz County, Washington
- Public Utility District No. 1 of Douglas County, Washington
- Public Utility District No. 2 of Grant County, Washington
- Public Utility District No. 1 of Snohomish County, Washington
- Seattle City Light
- Tacoma Power
- Turlock Irrigation District
- Western Area Power Administration, Upper Great Plains

Problem Statement

Dialogue within the NWPP Balancing Authority community over the past 24 months has revealed several challenges associated with operating the regional power system in a reliable and cost-effective manner:

1. NWPP Balancing Authorities and scheduling utilities need additional tools to respond to rapid changes in load resource balance (ramps) and the increasing demand for balancing capacity driven by the growth of variable energy resources;
2. Utilities within the NWPP footprint are managing load and resource balance without systematically sharing the diversity between their systems; this may be resulting in increased costs and wear and tear on generating resources;
3. The region's increasingly constrained transmission system would benefit from new tools for congestion management and more efficient use of existing infrastructure;

Problem Statement (continued)

4. The costs and compliance risks associated with operating a Balancing Authority are increasing; this has reinvigorated conversations on potential BA consolidation among interested parties;
5. Evolving operational measures must clearly address cost causation and cost allocation;
6. NWPP members wish to recognize and, if possible, leverage existing platforms (such as automated sharing of contingency reserve) and innovative and valuable work from more recent initiatives within the NWPP footprint that deal with reliability, renewables integration, and transmission congestion management, including efforts by the NTTG/ColumbiaGrid/WestConnect Joint Initiative and the Northwest Wind Integration Forum. At the same time, these efforts would benefit from greater focus, coordination, and commitment to implementation among a critical mass of utilities; and
7. It is very important to the NWPP members to preserve the significant value that Power Pool Members already receive from the existing contingency reserve sharing program.

Enhanced Market/Operational Tools

- Regulation Sharing Plus
- Expanded Use of ITAP (WebEx) Platform
- Intra-Hour Scheduling
- Dynamic Scheduling System (DSS)
- Intra-Hour Pre-Scheduling
- Flexible Bilateral Contracts

Energy Imbalance Market Design Issues

1. Non-RTO Transmission utilizing multiple TSPs
 - a. Adequate cost recovery for transmission without cost shifts
 - b. Discussing Imputed Costs Model vs. Non-Imputed Costs Model (SPP)
2. Capacity and Ramping Sufficiency
 - a. Ensure/verify capacity sufficiency for ramping to cover VER fluctuations
 - b. Clarify current and future obligations of market participants and Transmission Providers
3. Hydro-electric operations
 - a. Coordinated projects on a single river system
 - b. Linked operations on multiple river systems
 - c. Address hydro opportunity cost pricing

Analysis Team Approach

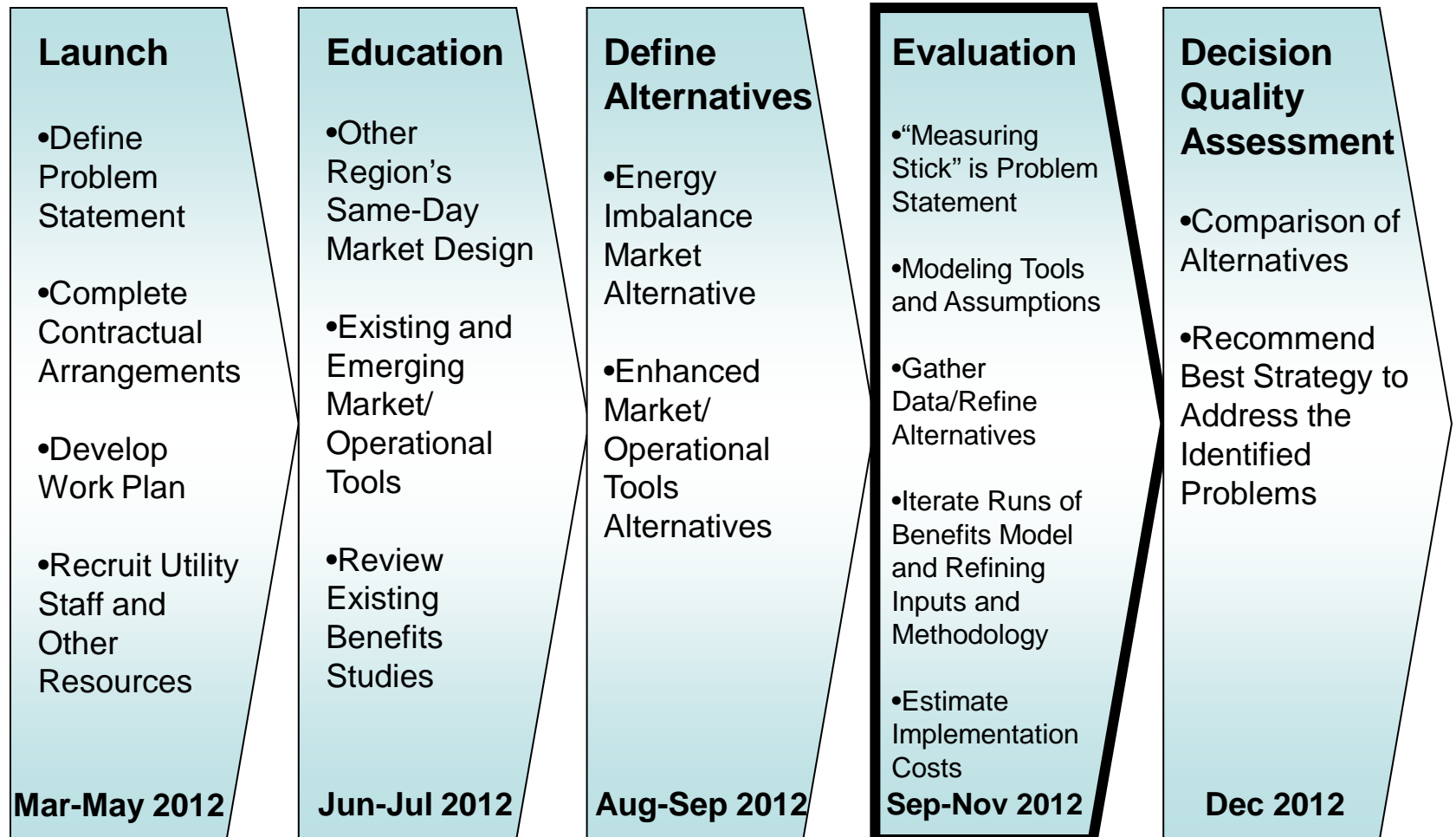
EIM Analysis

- Simplify EIM analysis where possible
 - Understand other EIM modeling efforts (e.g. WECC and PUC EIM efforts) to inform MC effort
- Determine minimum achievable Benefits
- Enlist external analysis resources
- Determine 'gaps' in analytical resources

EMT Analysis

- Work with EMT Workgroup to define options for analysis
- Use model, cases and resources from EIM analysis, when possible
- Determine minimum achievable benefits

Work Plan/Timeline



Collaboration Opportunities

- Monthly MC meeting open to all interested persons (Oct. 25, Nov. 15, Dec. 14)
- External experts invited to share knowledge and insights
- Consulting resources – such as PNNL
- Spring 2013 share results with PUC EIM Taskforce