



**WESTERN**  
POWERPOOL


# **WESTERN RESOURCE ADEQUACY PROGRAM: DEVELOPMENTS IN THE WEST**

*Organization of MISO States: Resource Adequacy Summit*

*May 16, 2023*

*Sarah Edmonds, President & CEO*

*Western Power Pool*



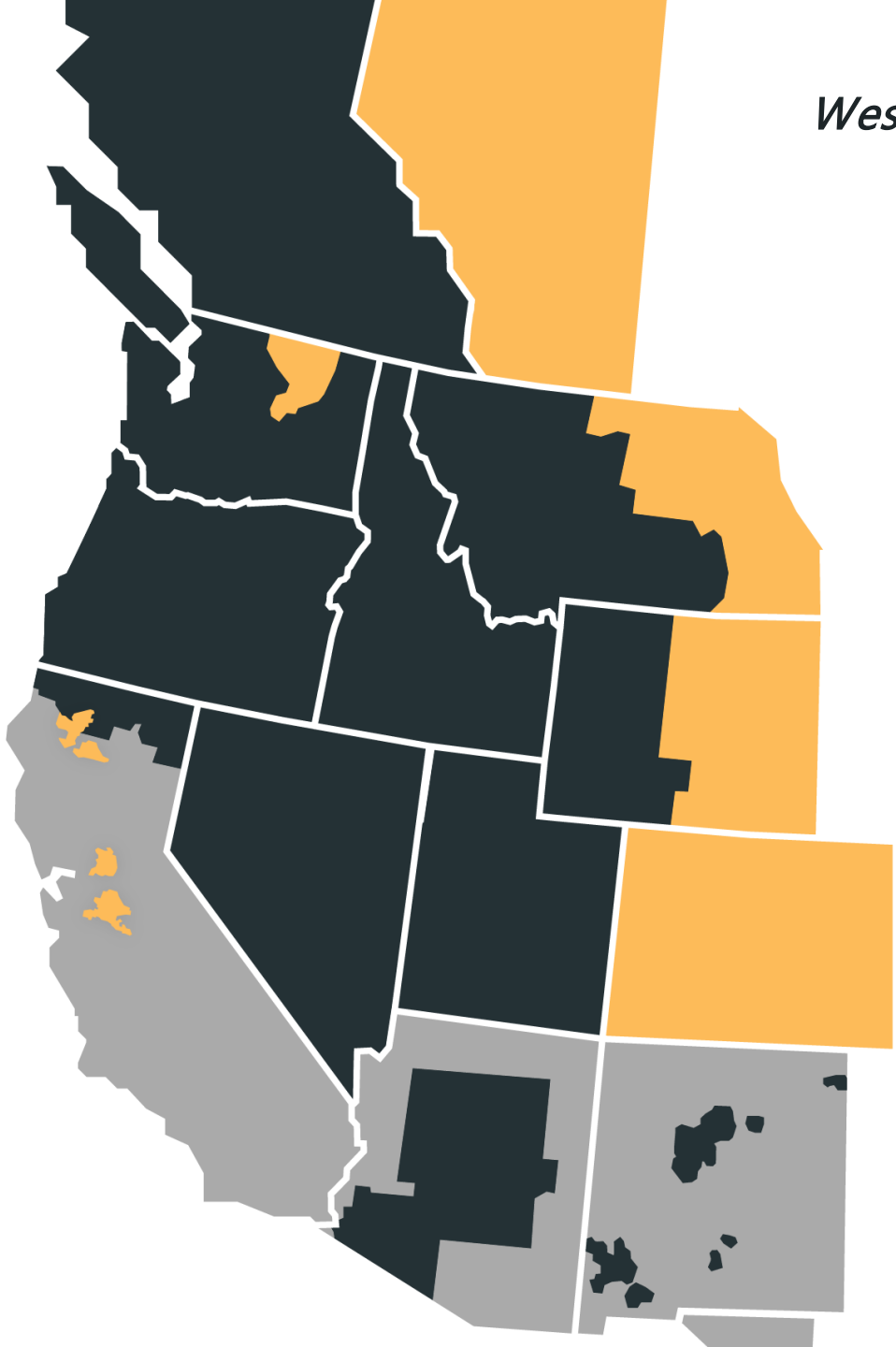
**THE WESTERN  
RESOURCE  
ADEQUACY  
PROGRAM (OR  
WRAP) IS.....**

- » *FERC-approved*
- » *First ever regional RA program in West*
- » *Voluntary (2-year exit)*
- » *Stand alone (non-market)*
- » *Penalty-based compliance program*
- » *Leverages significant regional diversity to deliver benefits in both the planning and operations functions of the program*
- » *Fully implements sometime between 2025-2028*

# WRAP PARTICIPANTS (22)

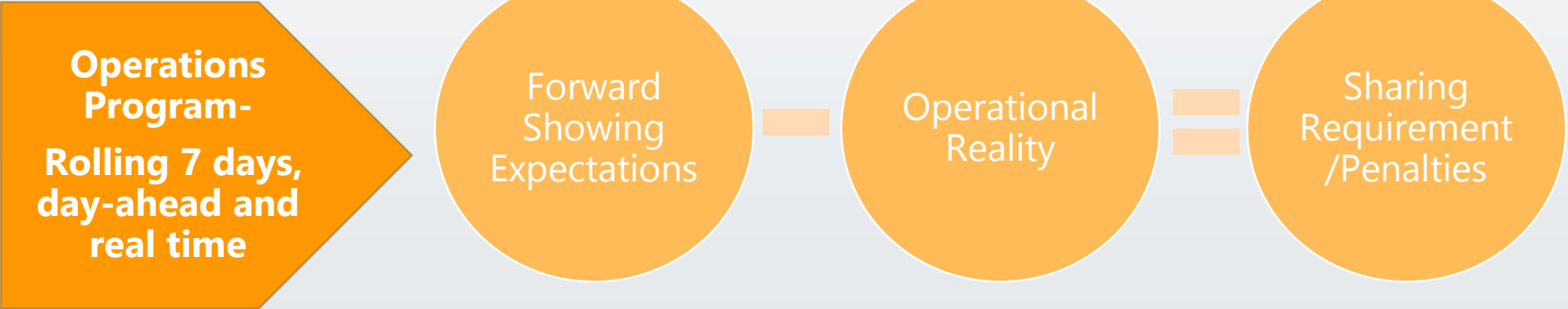
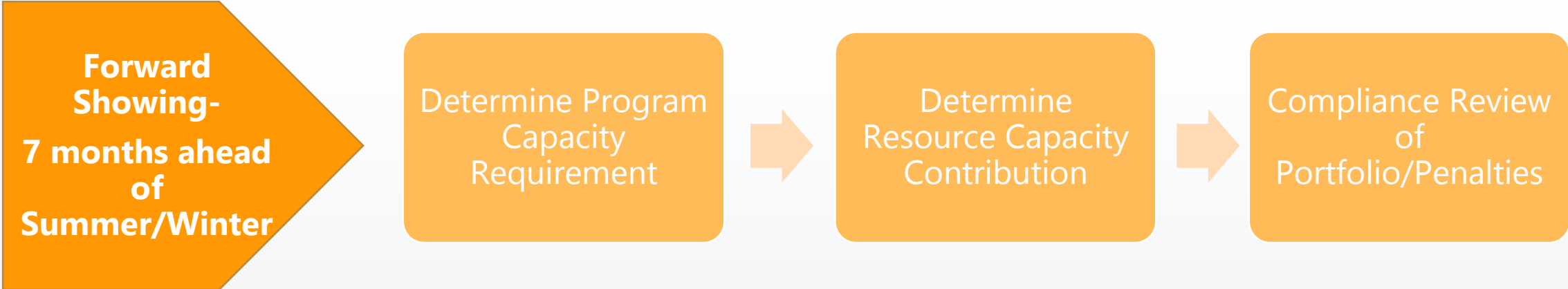
- Arizona Public Service
- Avista
- Bonneville Power Administration
- Calpine
- Chelan County PUD
- Clatskanie PUD
- Eugene Water & Electric Board
- Grant PUD
- Idaho Power
- Northwestern Energy
- NV Energy
- PacifiCorp
- Portland General Electric
- Powerex
- Public Service Company of New Mexico
- Puget Sound Energy
- Salt River Project
- Seattle City Light
- Shell Energy
- Snohomish PUD
- Tacoma Power
- The Energy Authority

*Western Power Pool*



- ADDITIONAL WPP FOOTPRINT
- NON-WPP FOOTPRINT
- CURRENT WRAP FOOTPRINT

# BASIC MECHANICS



# QUALIFYING CAPACITY METHODOLOGY

## WRAP

**Wind and Solar:** ELCC (average)

**Run-of-River Hydro:** Historical output on Capacity Critical Hours

**Storage Hydro:** WPP-developed hydro model that considers the past 10 years generation, potential energy storage, and current operational constraints

**Thermal:** UCAP (resource capability is adjusted to reflect historic forced outage rates during capacity critical hours)

**Short Term Storage:** ELCC (average)

**Hybrid Resource:** "Sum of parts" method - ESR will use ELCC (average) and generator will use appropriate method

**Customer Side Resources:** load-modifier or capacity resource

**External Resources (imports):** must be supported by an identified source, an assurance that the capacity is not used for another entity's resource adequacy requirements, an assurance that the seller will not fail to deliver in order to meet other supply obligations, and affirmation of NERC priority 6 or 7 firm point-to-point transmission service rights (or network integration transmission service rights) from the identified source to the point of delivery/load

# WRAP GOVERNANCE STRUCTURE

