

# **Western Transmission Expansion Coalition "WestTEC"**

Public Webinar June 6, 2024

# Agenda Overview

- » Purpose and Goals of WestTEC
- » WestTEC updates and announcements
- » Review of Project Charter and Regional Engagement Partners Plan
  - » WestTEC Governance, Committee Updates and Key Regional Partner Remarks
  - » Study Goals, Objectives and Technical Approach
  - » Public Engagement and Schedule
- » Next Steps
- » Discussion/Q&A

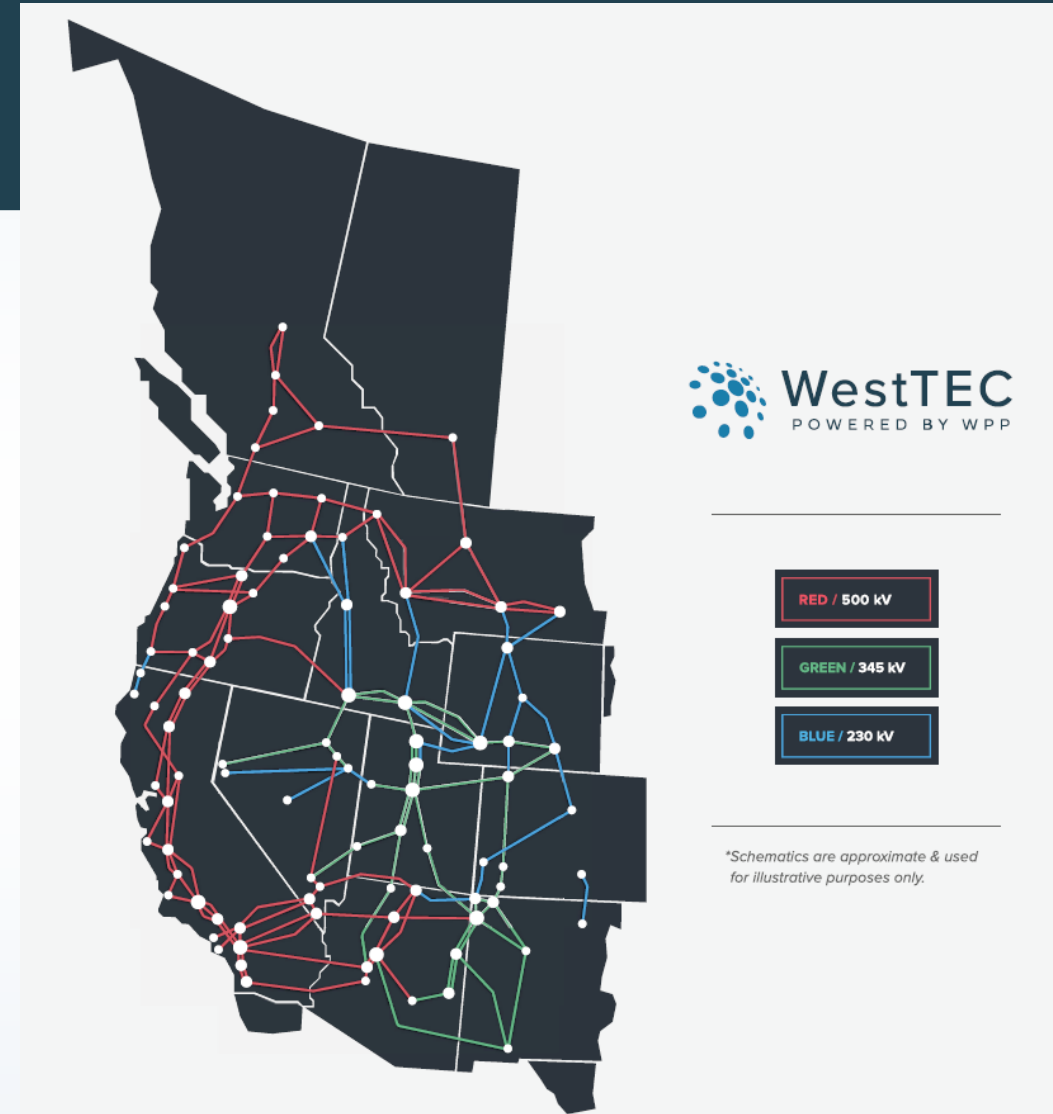
# The Presentation Team

- » **Western Power Pool:** Sarah Edmonds and Chelsea Loomis
- » **Consultants:**
  - **Energy Strategies:** Keegan Moyer
  - **GDS Associates:** Lea Fisher and Rachel Risley
- » **WATT Co-Chairs:** Jennifer Galaway, Portland General Electric, Ben Fitch-Fleischmann, Interwest Energy Alliance, Jeff Billinton, CAISO
- » **Regional Engagement Committee (REC) Co-Chairs:** Vijay Satyal, Western Resource Advocates, Robb Davis, GridLiance
- » **Steering Committee:** Kelsey Martinez, PNM, John Martinsen, Snohomish PUD
  - Communications Sub-Committee: Sean Egusa, BPA, Lauren Tenney-Denison, PPC, Danielle Mills, CAISO
- » **Tribes:** Connie Paoletti, Navajo Transitional Energy Company, Donald Williams, From the Light Consulting
- » **CREPC TC:** Robin Arnold, Western Interstate Energy Board

# Why We're Here Today

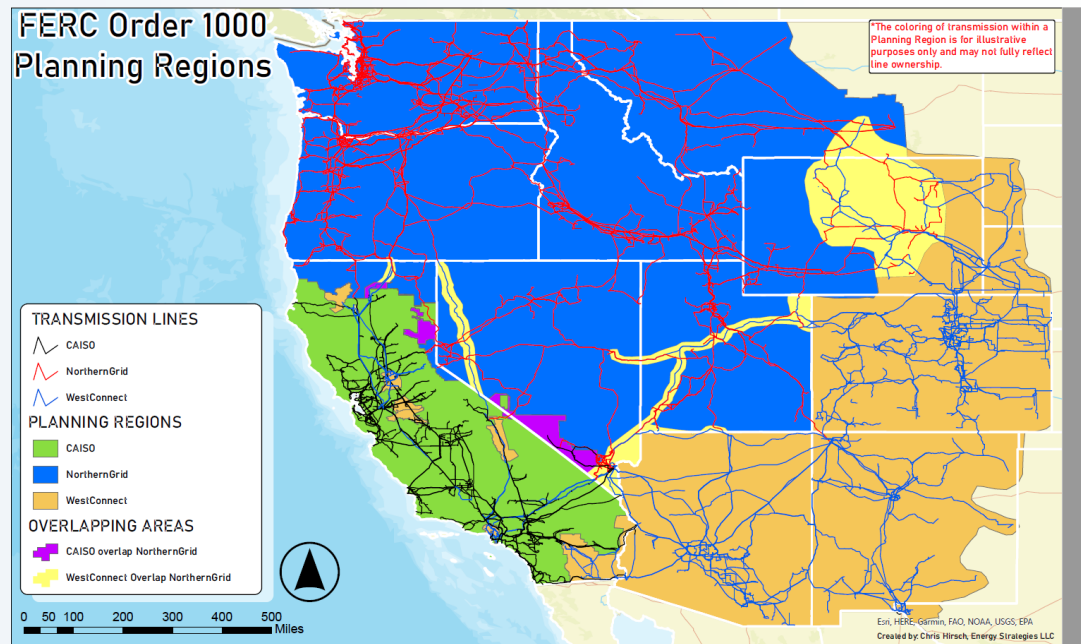
# What is the Western Transmission Expansion Coalition?

- » *“WestTEC”*
- » *Not a FERC process*
- » *West-wide 20-year transmission study (10-year look)*
- » *Industry-led with unprecedented stakeholder inclusion*
- » *Goal is to produce an actionable transmission study*



# Regional Transmission Planning in the West

Growing Recognition more  
Transmission is Needed



Current Approach to Planning  
*Insufficient*

- » No Regional Transmission Projects have been built
- » Forward looking planning limited
- » Interregional Planning has been virtually nonexistent

# WestTEC Themes



Different



Inclusive



Expedient



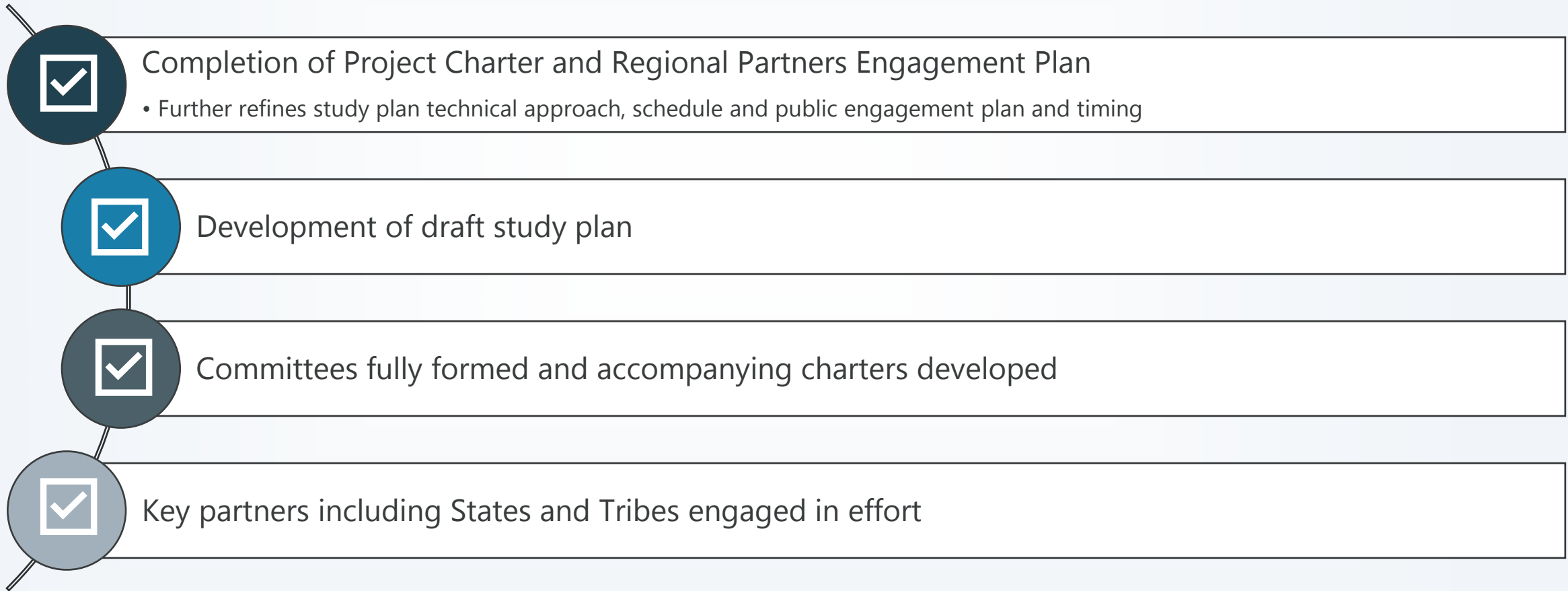
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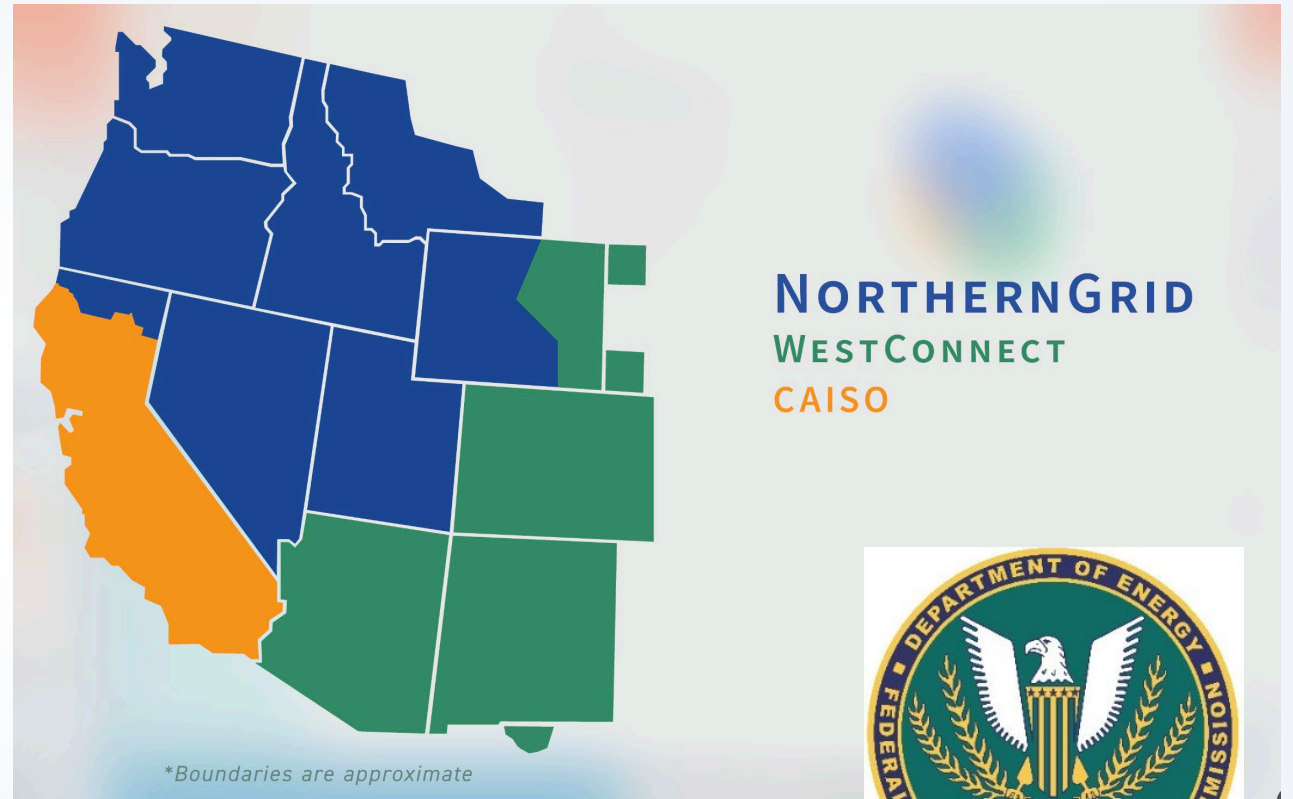
# WestTEC Updates



# Recent Milestones Achieved



# Regional Transmission Planning in the West



# WestTEC Funding

## Funding Efforts

### The Plan

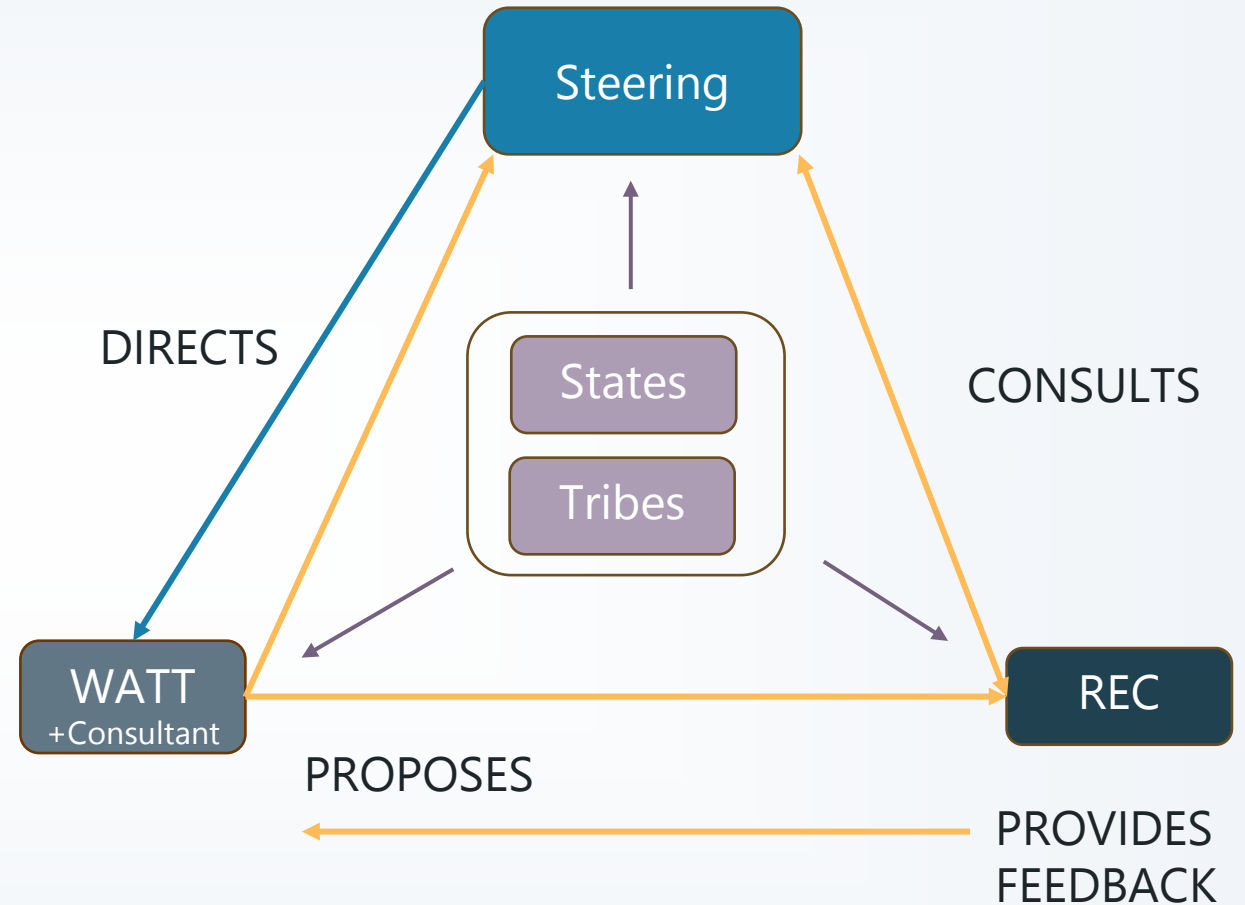
- Participant-Funded Effort

### Possible Other Sources

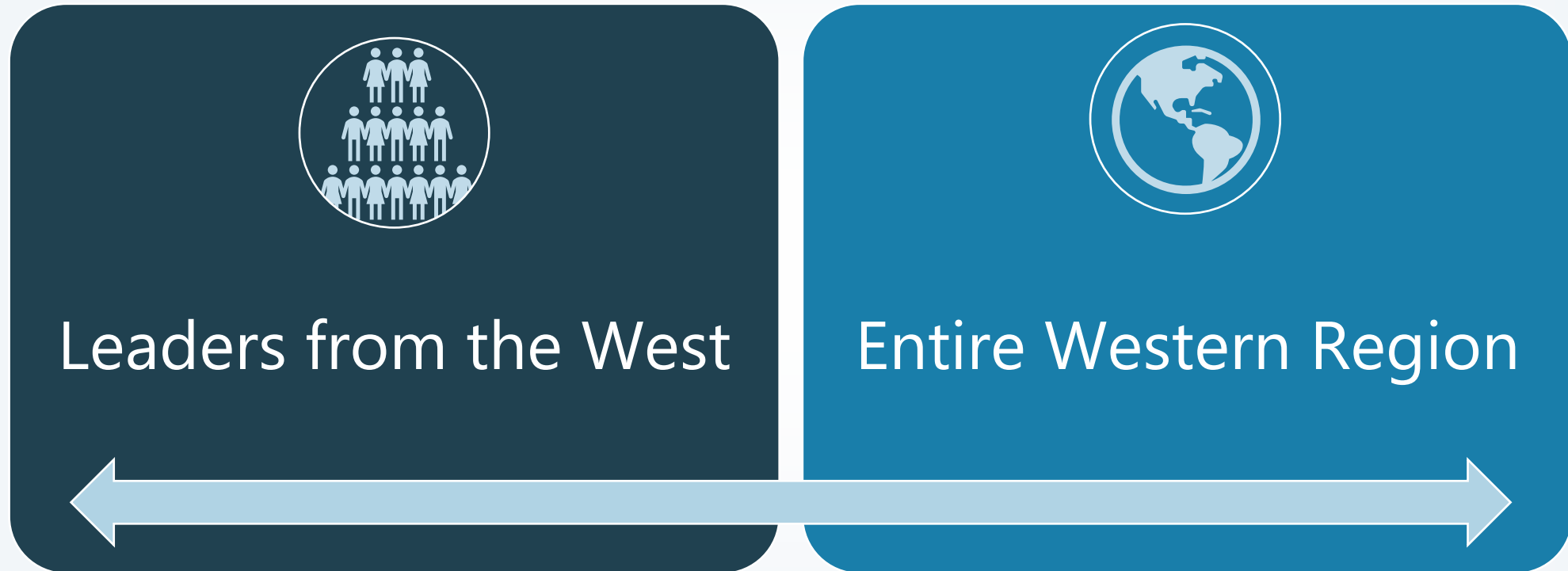
- DOE
- WECC
- Public Interest

# WestTEC Governance

# Committees and Governance



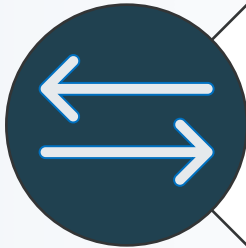
# Steering Committee



## **Main Responsibilities:**

1. Resolving and making major decisions to structure the transmission study
2. Actively collaborating with and seeking feedback from WATT, REC and public participants

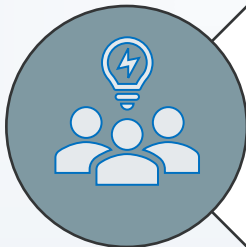
# Regional Engagement Committee and Key Partners



Public Engagement



Align with State Policies and  
Consumer Interests



Diverse Membership

# WestTEC Assessment Technical Team - WATT



Technical Participants



Connection between  
Independent Consultant and  
all WestTEC Groups





# Additional Subcommittees

## Communication and Regional Partner Engagement Subcommittee

- The Steering Committee has formed a Communication and Regional Partner Engagement Subcommittee for public engagement communication to partner with REC to ensure consistent collaboration and joint ownership of managing public webinars and feedback.

## Data Strike Team

- WATT has formed a Data Strike team, with representatives from all WestTEC committees to produce a data source and data management plan for the WestTEC Project.

# Study Goals, Objectives and Technical Approach

# What are the study's goals?

» The primary goal is to produce an **actionable transmission study** that is useful to planners, developers, regulators and the study's regional partners

## Study Goals

**Develop Actionable Portfolios:** Create transmission portfolios addressing 10-year and 20-year needs, useful for planners, developers, and regulators.

**Ensure Reliability:** Meet NERC compliance, provide operational flexibility, and identify necessary transmission capacity for reliable operations.

**Improve Efficiency:** Reduce congestion and meet future energy needs, considering planning reserve margins for reliability.

**Increase Affordability:** Enable investment savings through coordinated transmission portfolios and better infrastructure utilization.

**Enhance Visibility and Coordination:** Provide a clear view of combined capabilities and requirements to support informed planning and solutions.

**Support Cost Allocation:** Offer regional-level information to assist in cost allocation discussions for future projects.

**Ensure Fairness:** Develop an unbiased plan that aligns with regulations and benefits all resource types and stakeholders.



# What will make this study actionable?



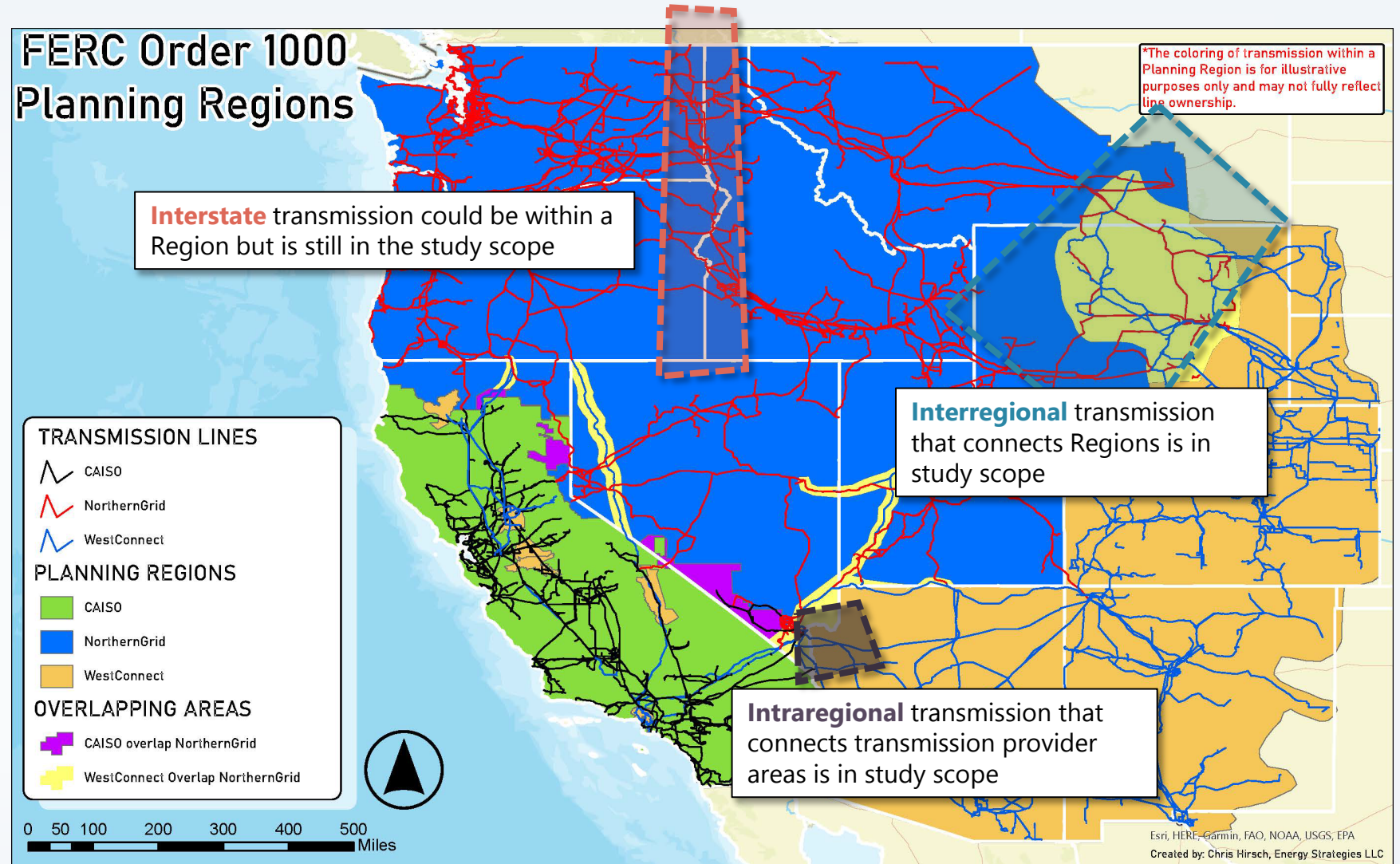
## How will it be used...

- » **Inform Planning:** Serve as inputs for local and regional planning, enabling coordinated transmission solutions.
- » **Facilitate Development:** Support transmission developers and utilities in initiating and refining projects.
- » **Engage Stakeholders:** Promote engagement with communities, tribal nations, and regulators.
- » **Evaluate Benefits:** Provide data for assessing benefits and their distribution.
- » **Guide Decisions:** Offer context for planning and investment decisions.
- » **Optimize Siting:** Help identify optimal transmission paths for resource siting.
- » **Support Regulation:** Assist regulators in evaluating utility transmission projects for approval and cost recovery.

## What it will include...

- » Assessment based on **credible and transparent methodologies**, reflecting regional partners' input.
- » **Detailed descriptions** of required infrastructure, including locations, technologies, and upgrades.
- » Clearly articulated **drivers and dependencies** justifying each transmission solution or portfolio.
- » Comprehensive **cost estimates** and qualitative and quantitative assessments of **benefits** for the broader Western region.
- » **Preliminary routing options** to support permitting, siting, and construction feasibility studies.
- » **Transmission alternative review**, highlighting trade-offs and reasons for selecting preferred options.

# What transmission will the study address?



Map highlights transmission associated with each Order 1000 Planning Region ("Region" in the Study Plan)

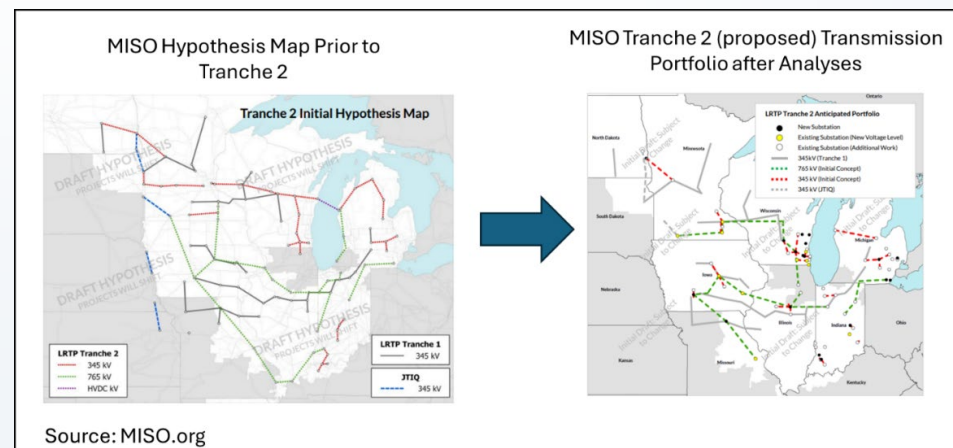
Source: WestConnect



# How will the study identify transmission portfolios?

- » WATT has developed a complex 10-step study methodology encompassing:
  - » Capacity expansion modeling
  - » Busbar mapping of generation
  - » Development of a "hypothesis map"
  - » Powerflow and congestion assessments
  - » Transmission solutioning
- » The technical goal is to develop a transmission portfolio that **reliably** and **efficiently** moves power from where it is generated to where it is consumed
- » Transmission portfolios will be developed for the Reference Case as well as Planning Scenarios (see next slide)

## MISO Hypothesis Map Example





# What benefits, scenarios, and sensitivities will be considered?

- » **Benefit assessment** will consider seven unique benefit categories, quantified for each transmission portfolio
  - » **Operational efficiency, capacity savings, improved resource adequacy, resiliency benefits, increased resource access, avoided emissions, avoided/deferred reliability upgrades**
- » **Planning Scenarios** will be used to help address planning uncertainties, providing a platform to assess how different futures could affect grid reliability and the need for transmission expansion
  - » **Regional partners will be engaged in scenario development via facilitated workshops to help identify key drivers impacting energy landscape**
  - » **Scenarios will enable a synthesis of transmission needs across varying futures**
- » **Extreme event scenarios** will be constructed to test the performance of transmission portfolios under extreme weather events
- » **Powerflow assessment sensitivities** will explore how transmission portfolios respond to alternative dispatch and load conditions (e.g., winter cold, calm, and dark event)



## **Additional items**

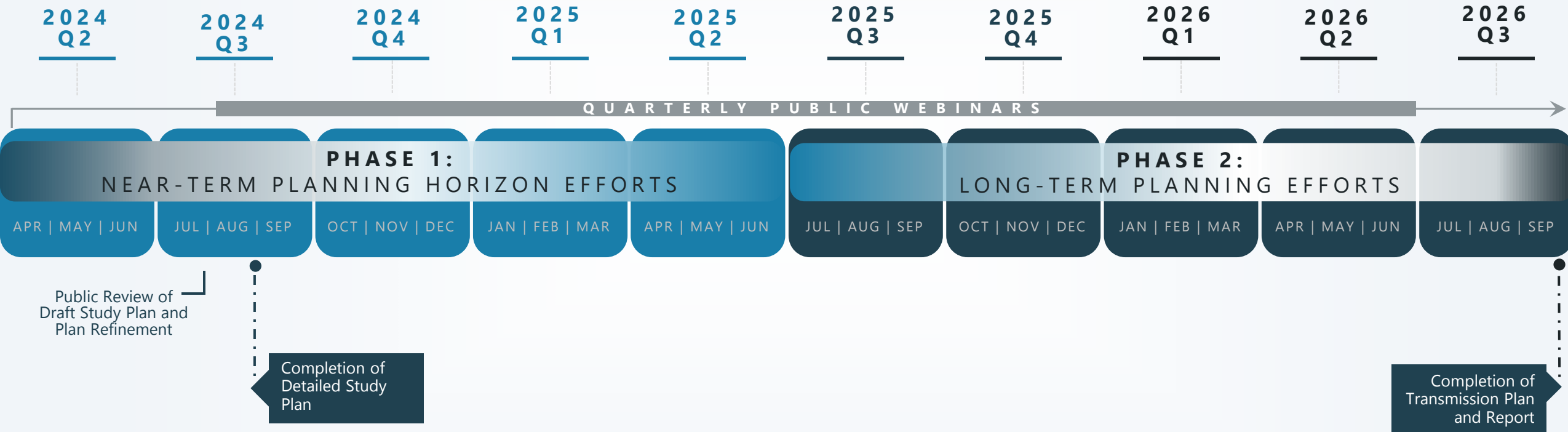
- » Reference Case development
- » Focus of each study horizon (10- and 20-year)
- » Tools and software
- » Seed cases
- » Limitations of the study





# WestTEC Public Engagement

# WestTEC Project Timeline

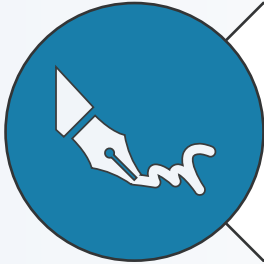


# Public Engagement



## Engage in Quarterly Webinars

- Webinars will be hosted throughout the WestTEC project



## Provide written comment

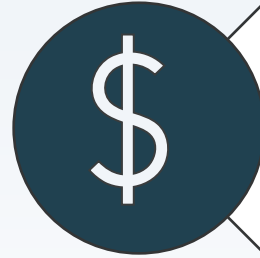
- Upcoming opportunity to provide written comment on the Study Plan in July 2024, future opportunities anticipated later in project



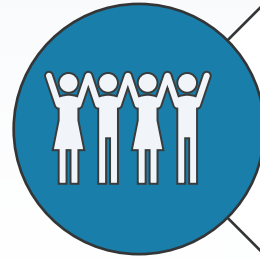
## Attend REC Meetings

- REC meetings are open to public, with reserved public comment opportunities in each meeting

# Next Steps



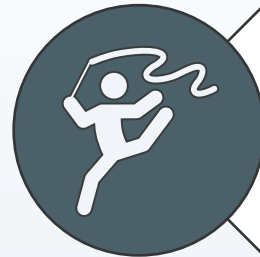
Secure Funding for Future  
Phases of Work



Committee and public  
engagement on study  
plan



Complete Study Plan



Remain Nimble!

# Discussion/Q&A

[Admin-WTEC@westernpowerpool.org](mailto:Admin-WTEC@westernpowerpool.org)

# Appendix: WestTEC Resources

- » [WestTEC Website](#)
- » [WestTEC Steering Committee Charter and Roster](#)
- » [WestTEC Regional Engagement Committee Charter and Roster](#)
- » [WestTEC Assessment and Technical Taskforce Charter and Roster](#)

# Appendix: Members of Steering Committee

- » **John D. Martinsen, Snohomish PUD (Co-Chair)**
- » **Kelsey Martinez, Public Service Company of New Mexico (Co-Chair)**
- » Ravi Aggarwal, Bonneville Power Administration
- » Larry Bekkedahl, Portland General Electric
  - » Jennifer Galaway (Alternate)
- » Richard Vail, PacifiCorp
  - » Kris Bremer (Alternate)
- » Josh Jacobs, Puget Sound Energy
- » Jared Ellsworth, Idaho Power Company
- » Mike Magruder, Avista
- » Michael Cashell, NorthWestern
- » Charlie Pottey, NV Energy
- » Casey Cathey, Southwest Power Pool
- » Rich Glick, GridWorks/State Liaison
  - » Robin Arnold, Western Interstate Energy Board (Alternate)
- » Branden Sudduth, Western Electricity Coordinating Council
  - » Kris Raper (Alternate)
- » Ben Fitch-Fleischmann, InterWest
- » Nicole Hughes, Renewable Northwest
- » Crystal Ball, Pacific Northwest Utilities Conference Committee
- » Heidi Pacini, WestConnect
  - » Charles Reinhold (Alternate)
- » Sarah Kist, Arizona Public Service
- » Paul Schwabe, Western Area Power Administration
  - » Tina Ko (Alternate)
- » Bryce Nielsen, Salt River Project
  - » Chris Hofman (Alternate)
- » Stephen Martz, Xcel Energy
- » Neil Millar, California ISO
  - » Danielle Mills (Alternate)
- » Michael McWilliams, Powerex
- » Spencer Gray, Northwest & Intermountain Power Producers Coalition
- » Scott Simms, Public Power Council
  - » Lauren Tenney Denison (Alternate)
- » Cathy Ehli, Warm Springs Power & Water Enterprises
- » Leslie James, Colorado River Energy Distributors Association

# Appendix: Members of WATT

- » **Jeff Billinton, California ISO (Co-Chair)**
- » **Jennifer Galaway, Portland General Electric (Co-Chair)**
  - » Ian Beil (Alternate)
- » **Ben Fitch-Fleischmann, InterWest (Co-Chair)**
- » Remy Franklin (Alternate)
- » Keegan Moyer, Energy Strategies
- » Ravi Aggarwal, Bonneville Power Administration
- » Scott Beyer, PacifiCorp
  - » Rikin Shah (Alternate)
- » John D. Martinsen, Snohomish PUD
- » Jens Nedrud, Puget Sound Energy
  - » Stephanie Imamovic (Alternate)
  - » Eleanor Ewry (Alternate)
- » Jared Ellsworth, Idaho Power Company
- » John D. Gross, Avista
- » Charlie Pottey, NV Energy
- » Zach Zornes, Chelan County PUD
- » Joshua Pilgrim, Southwest Power Pool
  - » Joshua Norton (Alternate)
- » Robin Arnold, Western Interstate Energy Board
- » Branden Sudduth, Western Electricity Coordinating Council
  - » Enoch Davies (Alternate)
- » Richard Doying, Renewable Northwest/Grid Strategies
- » Denden Tekeste, LS Power
- » Ajay Pappu, Invenergy
- » Marco Rios, Pacific Gas & Electric
  - » Shengnan Shao (Alternate)
- » Uzma Siddiqi, Seattle City Light
- » Heidi Pacini, WestConnect
- » Charlie Reinhold (Alternate)
- » David F. Wiley, Arizona Public Service
- » Stephen Jenkins, Public Service Company of New Mexico
- » Karen Reedy (Alternate)
- » Rebecca Johnson, Western Area Power Administration
- » Bryce Nielsen, SRP
- » Claire Van Gundy, Xcel
- » Bijju Gopi (Alternate)
- » Allison Auld-Hill, Southern California Edison
- » Hayk Zargaryan (Alternate)
- » Hamid Atighechi, Powerex
- » Michael Guité, BC Hydro
- » Aliza Seelig, Pacific Northwest Utilities Conference Committee
- » Henry Tilghman, Northwest & Intermountain Power Producers Coalition
- » Jason Fuller, Pacific Northwest National Laboratory
- » John Ollis, Northwest Power and Conservation Council
- » Casey Baker, GridLab
- » Cameron Yourkowski, Pattern Energy
- » Max Code (Alternate)
- » James O'Brien, GridLiance
- » Corey Kupersmith, Cascade Renewable Transmission



# Appendix: Members of REC

## Consumer-Owned Utilities

- » Chris Heimgartner, Whatcom County PUD
- » Matt Schroettnig, Northwest Requirements Utilities
- » Leslie James, Colorado River Energy Distributors Association
- » Erin Erben, PNGC

## Public Interest Organizations

- » **Vijay Satyal, Western Resource Advocates (Co-Chair)**
- » Angus Duncan, Natural Resources Defense Council
- » Eileen Quigley, Clean Energy Transition Institute
- » Mike Goetz, NW Energy Coalition
- » Fred Heutte, NW Energy Coalition (Alternate)

## Ratepayer Advocacy Organization Representatives (residential & small commercial)

- » Anthony Ornelas, Wyoming Office of Consumer Advocate
- » Kanya Dorland, Public Advocates Office at the California Public Utilities Commission

## Tribes

- » Donald Williams, From the Light Consulting LLC
- » Connie Paoletti, Navajo Transitional Energy Company

## Independent Transmission Companies

- » Gimod Mathew, Grid United
- » **Robb Davis, GridLiance (Co-Chair)**
- » Cameron Yourkowski, Pattern Energy
- » Sharon Segner, LS Power

## Independent Power Producers

- » Tashiana Wangler, Avangrid Renewables
- » Eusebio Arballo, EDF Renewables
- » Mark Walter, Savion
- » Andrew Breyer, Aypa Power
- » Nihit Shah, Aypa Power (Alternate)

## Industrial Customer Representatives (large commercial)

- » Heidi Ratz, Clean Energy Buyers Association

## Steering Committee Leadership

- » Kris Bremer, PacifiCorp
- » Ravi Aggarwal, Bonneville Power Administration
- » Kris Raper, Western Electricity Coordinating Council