

20-Year Extended Planning Horizon Study Workshop

Western Power Pool

September 23, 2022

20-Year (2042) Long Term Study

Identify
Transmission for
Future Resources

Long-term Public
Policy
Assumptions

Prepare for Future
NorthernGrid
Studies





Study Participants

Avista

Bonneville Power Administration

Chelan PUD

Idaho Power

NorthWestern Energy

NV Energy

PacifiCorp

Portland General Electric

Puget Sound Energy

Seattle City Light

Snohomish PUD

Tacoma Power

Scoping Timeline

Scope Workshop #1

- September 23

Initial Scope Recommendations

- September 30

Draft Study Scope Document

- October 7

Scope Workshop #2

- October 21 (TBD)

Finalize Study Scope Document

- Targeting November 4

Goals for Study

Identify **Data**
Needs for 20-Year
Horizon

Consolidate Long-
term **L&R**
Assumptions

Develop Extended
Planning Horizon
Cases

One Utility Look at
Regional System

Identify **New
Transmission
Constraints**

Identify **New
Resource Needs**

Develop **New
Transmission
Plans and Projects**

Provide insights for
future regulatory
requirements
(e.g. FERC NOPR)

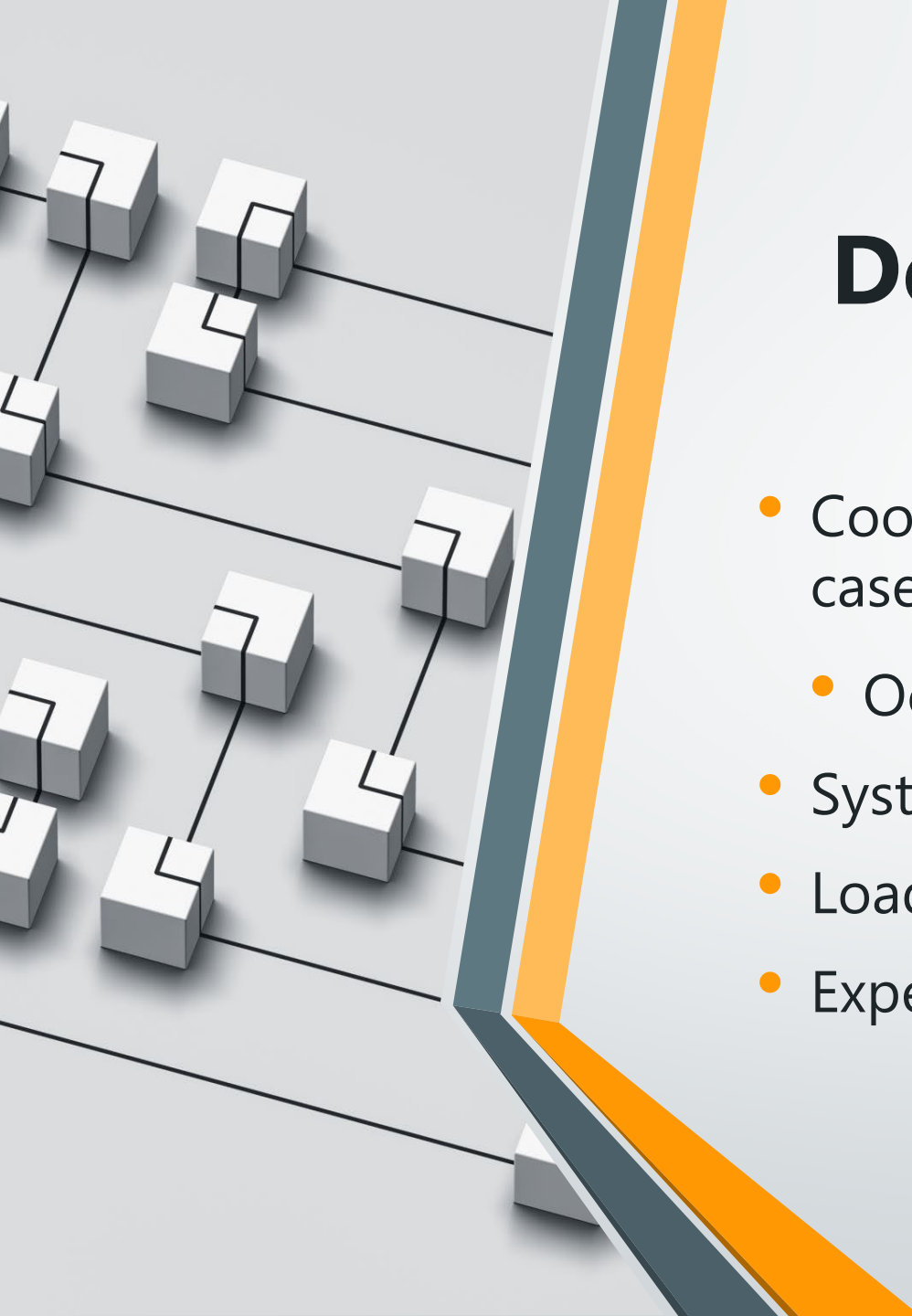


Identify Data Needs



- Collect and consolidate utility IRPs, load forecasts and resource forecasts for 20-year horizon.
- Utilize existing data sources including WECC, PNNL, WIRED, CAISO 20-year study, etc.
- Identify data gaps
- Develop path for consistent assumptions





Developing 20-Year Models

- Coordinate with WECC 2040 PCM and Power Flow case development
 - October 6 – WECC Meeting
- System Topology Changes
- Load and Resource Forecasts
- Expectations of area interchange

Primary Data Sources

Utility planned
projects and
retirements

Utility IRPs

State and National
Lab Studies and
Reports

WIEB/WIRED

River Flow Models



Production Cost Elements



Storage charging profiles



Fuel Pricing



Emissions Pricing



Hurdle Rates



Resource availability changes

Goals for Study

Identify

New transmission constraints, resource needs, flowgates and interfaces

Plan

Transmission reinforcement and expansion

Test

Data and process changes needed for expected Regional Planning requirements

Load Forecast Questions

What other data sources may be available?

Public Policy Assumptions

Climate Change Assumptions

Electrification (transportation, heating, etc.)

Energy Efficiency, DER and DSM

Resource Forecast Questions

Utility Submitted L&R Resource Locations and Sizes

Developing PCM Dispatch Assumptions

Future Generation Additions and Locations

Hydroelectric System Model Availability

Fuel, Emissions and Hurdle Rate Pricing

Modeling Questions

How would we address unserved load?

Identifying new interfaces and flowgates

Evaluating alternative solutions (e.g. non-wires)

How do identified transmission projects proceed?

Treatment of regional vs. local transmission constraints

Stakeholder Engagement

Engage interested stakeholders during scoping, initial study results, solution identification, final results and reporting

Test run of future NorthernGrid 20-Year Planning Process

Western Power Pool Website – TPC Special Studies

- <https://www.westernpowerpool.org/about/programs/tpc-studies>



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Open Discussion, Initial Questions and Comments

**Send Additional Scope
Recommendations, Questions and
Comments:**

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