



Public Stakeholder Meeting

April 7, 2010

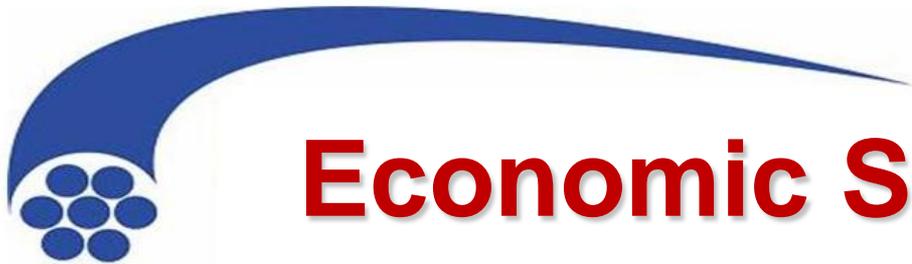
Conference Call / Webinar

“To ensure efficient, effective, coordinated use & expansion of the members’ transmission systems in the Western Interconnection to best meet the needs of customers & stakeholders.”

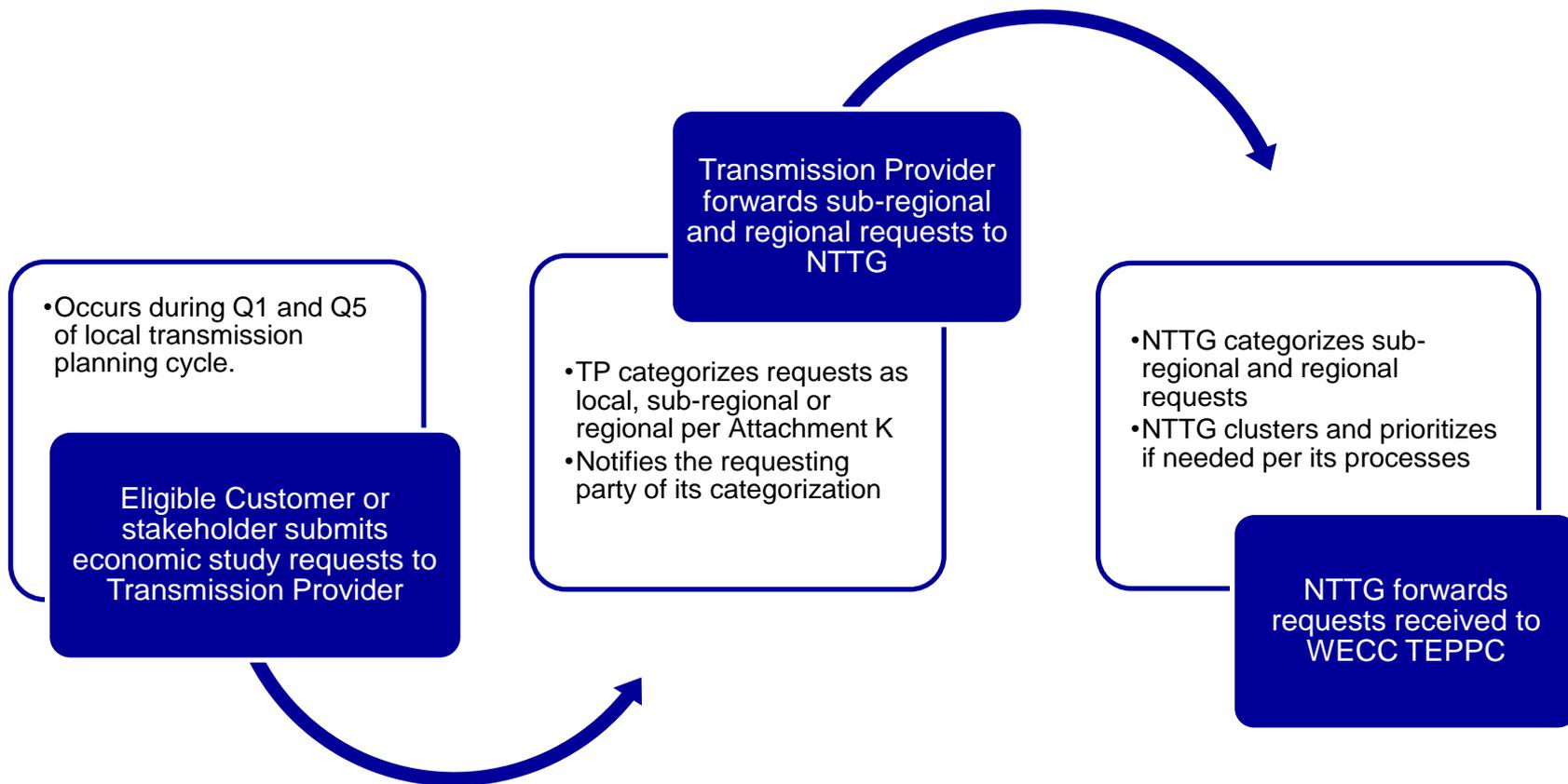


Agenda

- Welcome and introductions
- NTTG Economic Study Request categorization process overview
- Review of Economic Study Requests submitted to NTTG
- NTTG clustering guidelines and discussion
- Vote to select top two studies
- NTTG Q1 data collection
- NTTG Q2 study plan development
- Next steps and opportunities for additional stakeholder input



Economic Study Request Categorization Process Overview





NTTG Categorization Process

Economic Study Requests will be classified as sub-regional if:

- (1) identifies POR and POD that are all within the NTTG scheduling system footprint as determined by the NTTG Transmission Use Committee, and the POR/POD utilize only NTTG Funding Agreement Member scheduling paths; or
- (2) is otherwise reasonably determined by a Transmission Provider to be a sub-regional request from a geographical and electrical perspective, including but not limited to, an evaluation determining that the study request utilizes the interconnected transmission systems of the NTTG Funding Members



NTTG Categorization Process

Economic Study Requests will be classified as regional if:

- (1) identifies POR and POD that are all within the WECC scheduling system footprint, as determined by the NTTG Transmission Use Committee, and the POR/POD utilize only WECC Member scheduling paths; or
- (2) is otherwise reasonably determined by a TP to be a regional request from a geographical and electrical perspective, including but not limited to, an evaluation determining that the study request utilizes only WECC member interconnected transmission systems

Q1 ESR Categorization

NTTG Transmission Provider	Submitting Entity	Categorization POR & POD	TP Geographical & Electrical Perspective
Deseret Generation and Transmission Cooperative	No study requests received	n/a	n/a
Idaho Power	No study requests received	n/a	n/a
Northwestern	PPL Montana #1	Regional	Regional
Northwestern	PPL Montana #2	Regional	Sub-regional
Northwestern	PPL Montana #3	Sub-regional	Sub-regional
Northwestern	PPL Montana #4	Regional	Sub-regional
Northwestern	PPL Montana #5	Regional	Regional
Northwestern	Northwestern #1	Sub-regional	Sub-regional
Northwestern	Northwestern #2	Sub-regional	Sub-regional
Northwestern	Northwestern #3	Sub-regional	Sub-regional
Northwestern	Northwestern #4	Regional	Regional
Northwestern	Gaelectric North America #1	n/a	Sub-regional
PacifiCorp	No study requests received	n/a	n/a
Portland General Electric	No study requests received	n/a	n/a

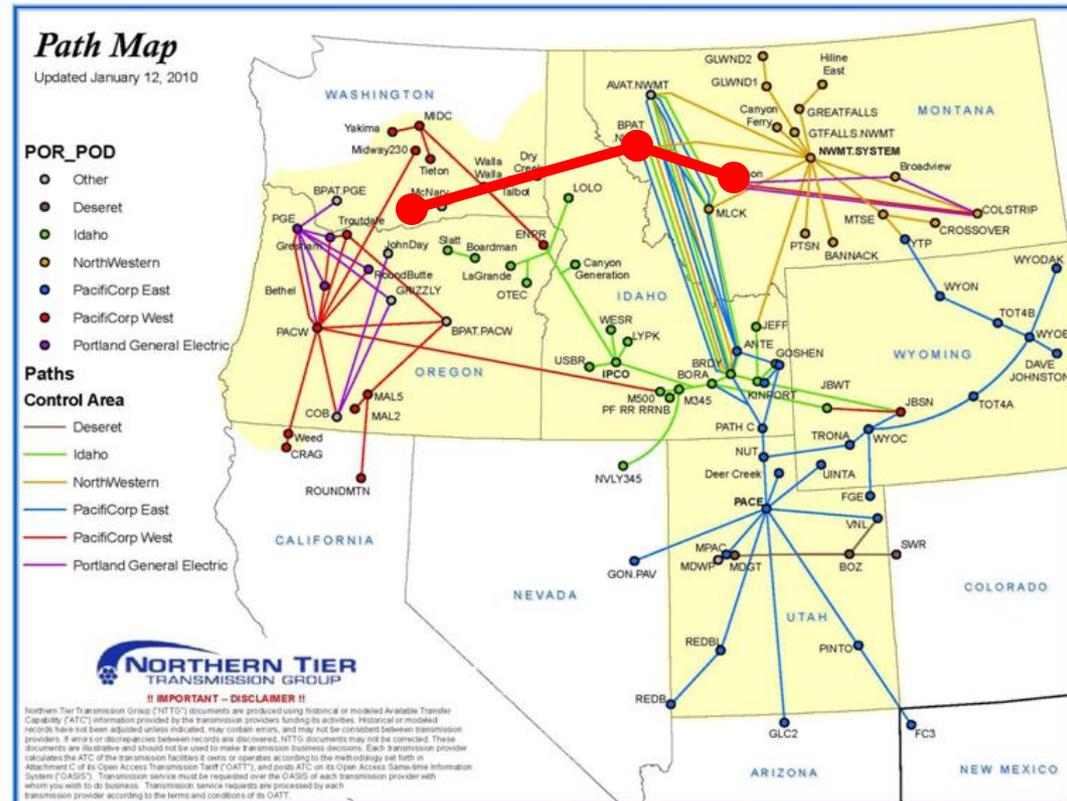


ESR PPLM #1

Request:

Follow-up on the Garrison Pumped Storage Economic Study Request PPL submitted in early 2008 by examining the comments supplied by PPL and others on the preliminary study results presented by the WECC staff in 2009.

TP Classification:
Regional



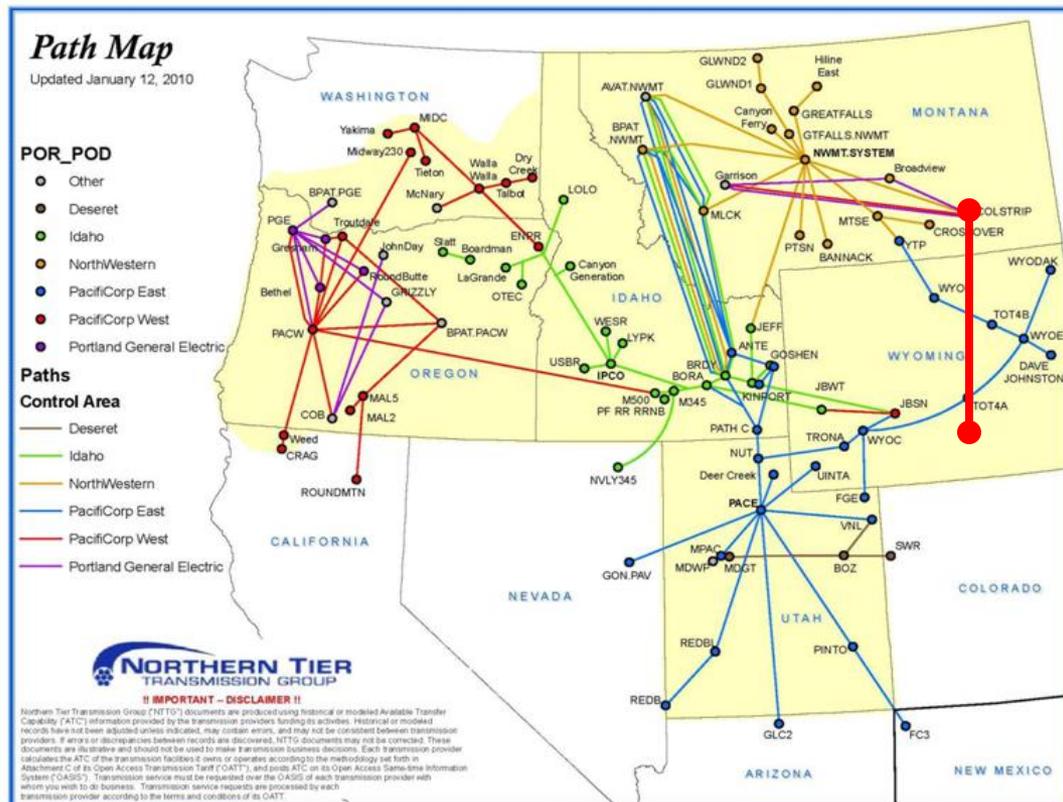


ESR PPLM #2

Request:

Please consider an economic study for a double-circuit 500 kV line from Colstrip south toward Denver, at least to the north end of Zephyr.

TP Classification
Sub-Regional





ESR PPLM #3

Request:

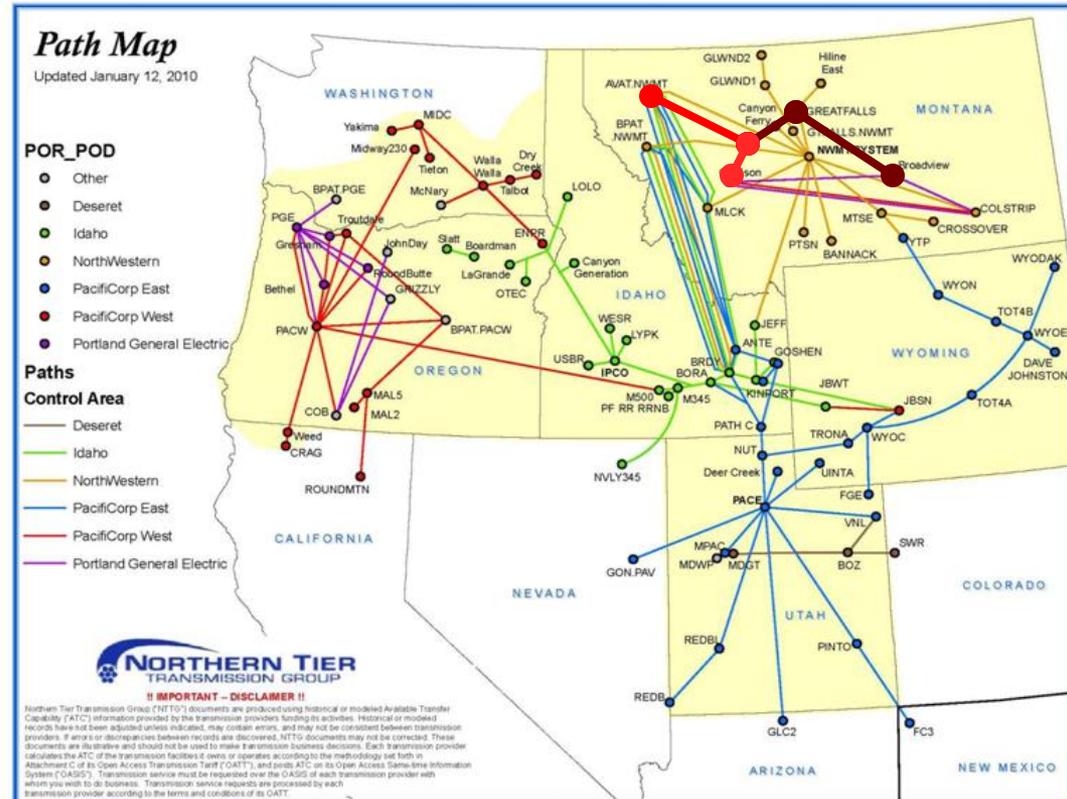
Two double-circuit 345 kV lines to tie Great Falls to both Broadview and to Ovando and 500 kV from Garrison to Ovando to Hot Springs.

NWE Clarification:

Replace the GF-BV 230 kV and the GF-GR (BPA) with double circuit 345 kV.

TP Classification

Sub-Regional



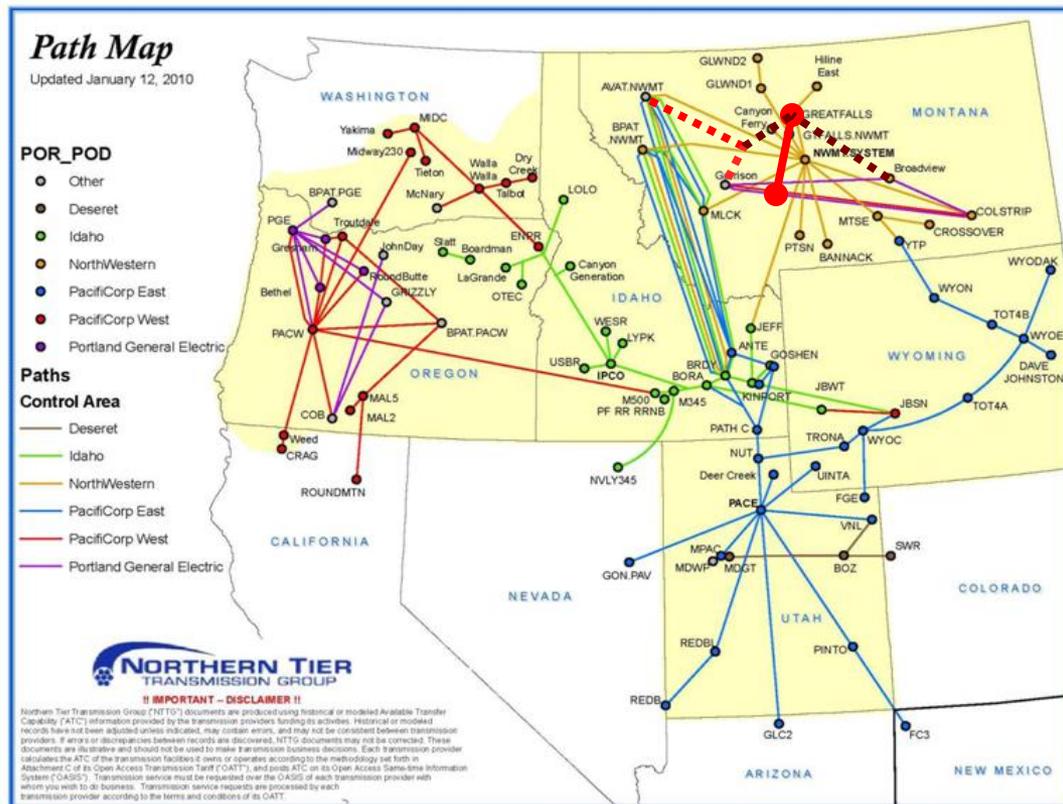


ESR PPLM #4

Request:

Further, please consider a 345 kV uprate to the existing 100 kV lines from Great Falls to Helena. Continue past Helena to the Townsend 500 kV substation.

TP Classification
Sub-Regional

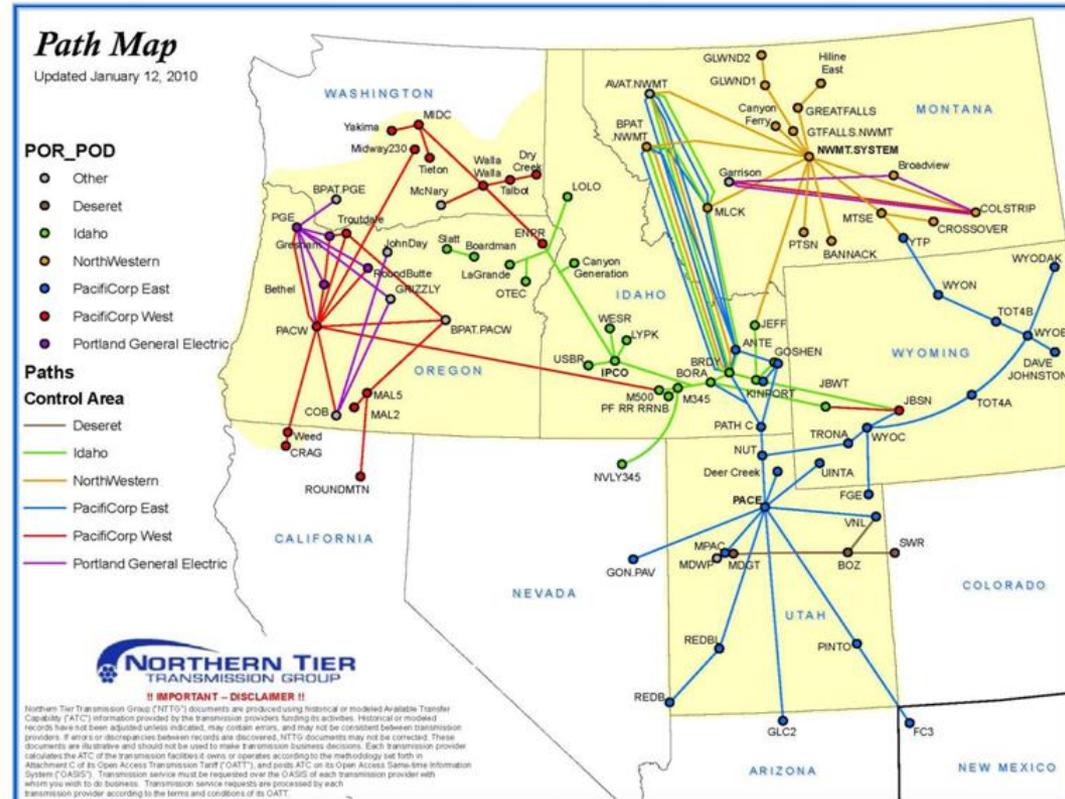




ESR PPLM #5

Request:

Would TEPPC please investigate the affects on new transmission development of the WECC Right of Way criterion that requires separation of a span length between parallel lines in a corridor or the loss of both lines must be considered a credible double?



TP Classification
Regional



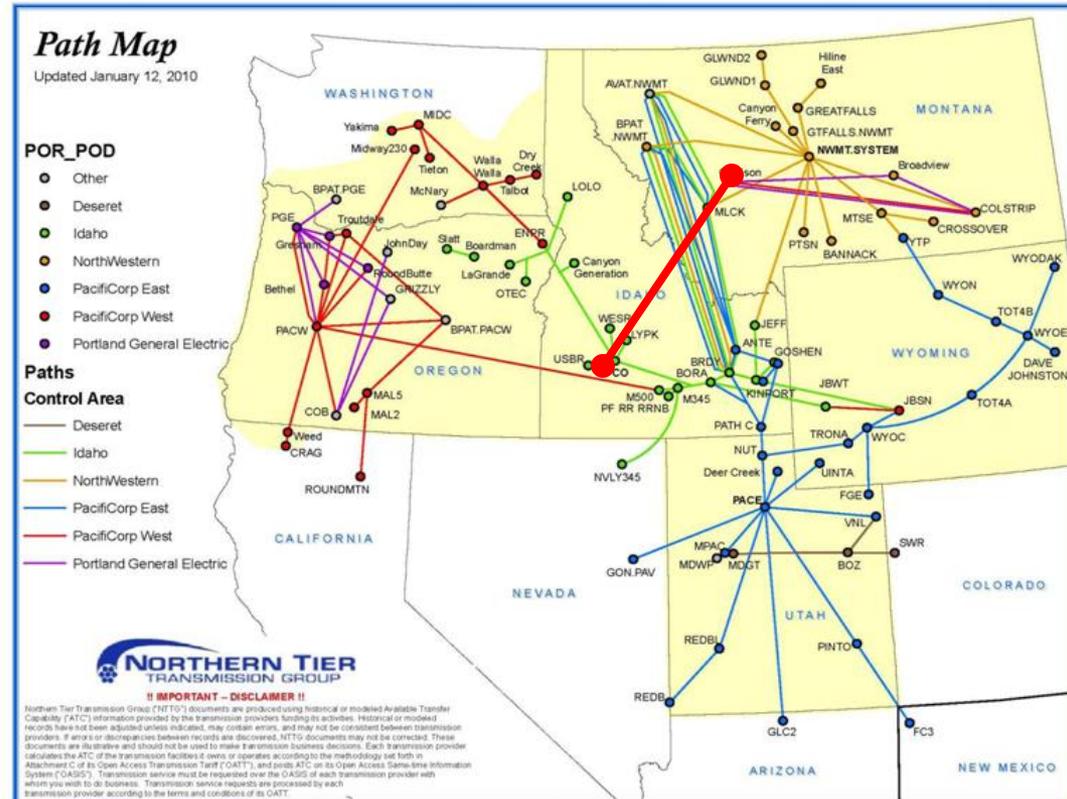
ESR NWE #1

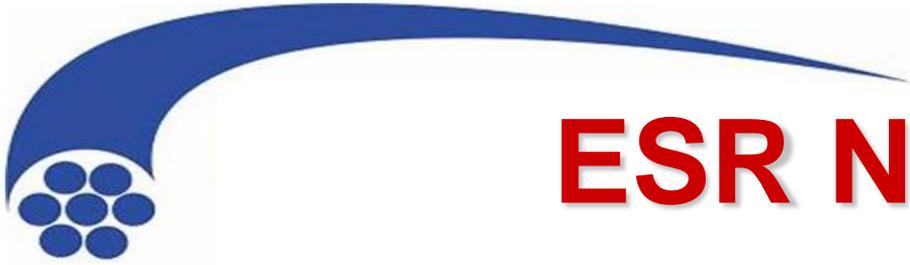
Request:

Mountain States Transmission
Intertie:

MSTI is a proposed 500 kV line, approximate 420 mile, extending from Townsend, MT to Midpoint, ID. It is series compensated and power flow is controlled using a Phase Shifting Transformer (PST).

TP Classification
Sub-Regional



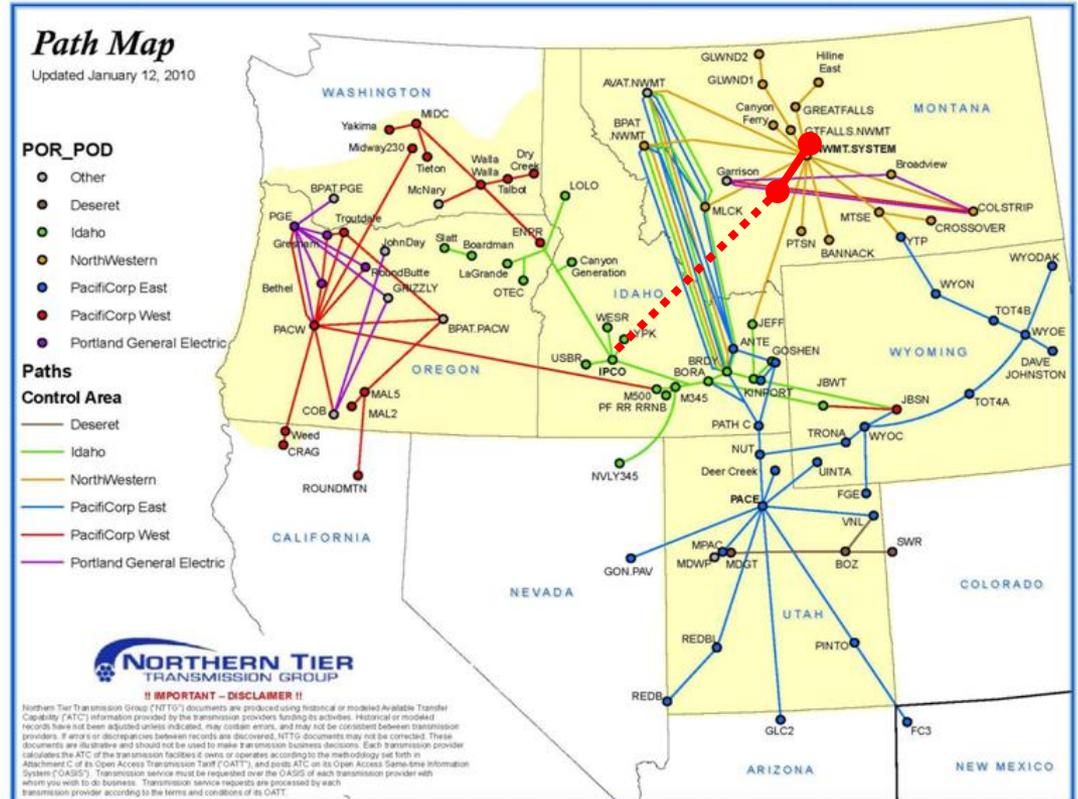


ESR NWE #2

Request:

Collector Project:

The collector lines from the high wind areas in Montana to the northern terminal of MSTI.



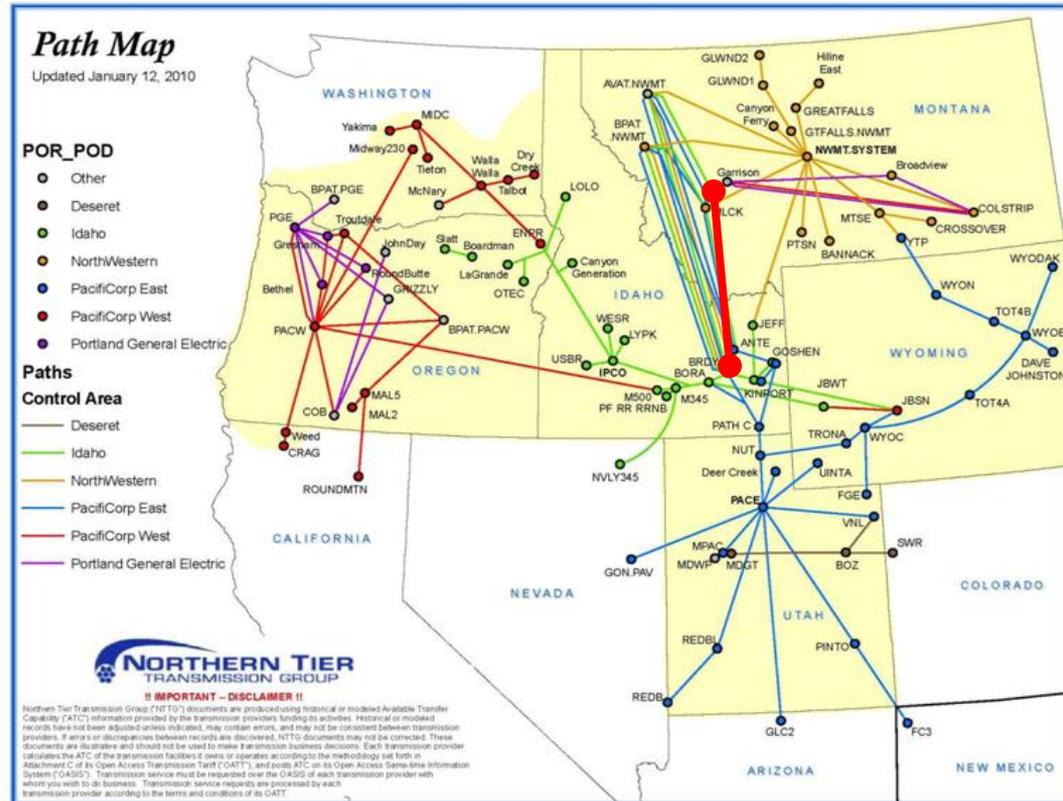
TP Classification
Sub-Regional

ESR NWE #3

Request:

Path 18 Upgrade:

NorthWestern and the other Path 18 owners are contemplating increasing the capacity of the existing 230 kV AMPS line



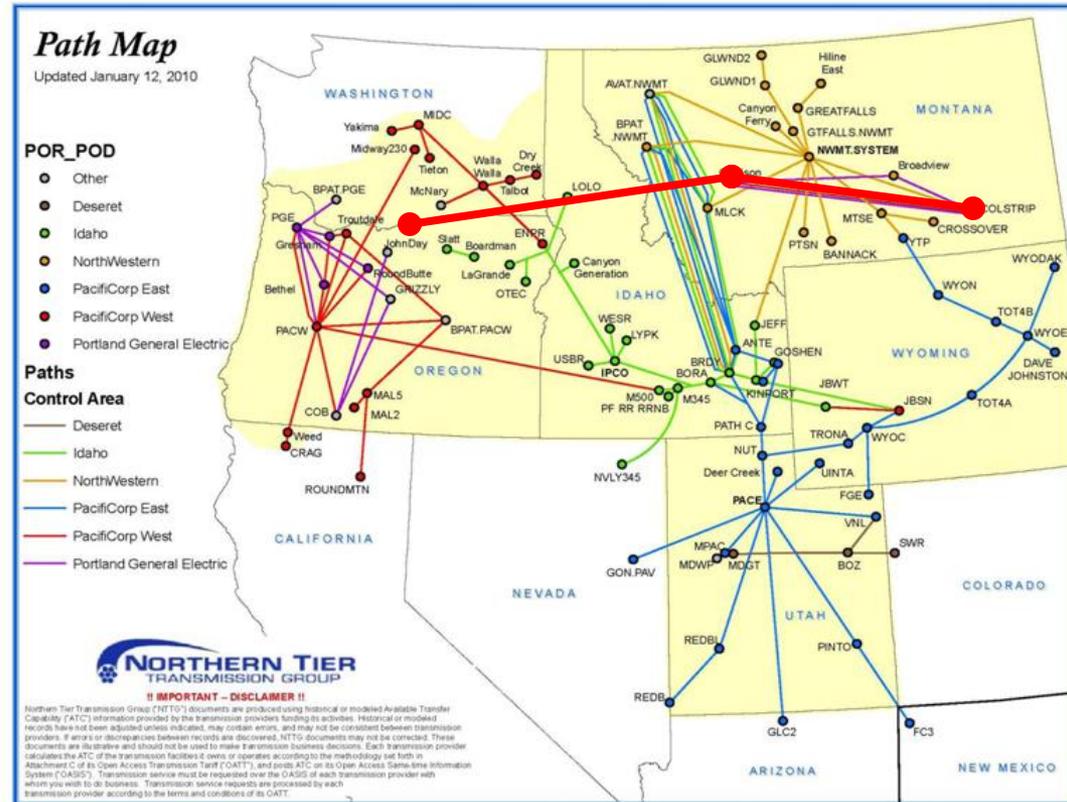
TP Classification
Sub-Regional

ESR NWE #4

Request:

500 kV Upgrade:

The owners of the Colstrip Transmission System and BPA are considering increasing the capability of the existing twin 500 kV transmission lines that may start as far east as Colstrip, Montana and end as far west as the Mid C marketing hub.

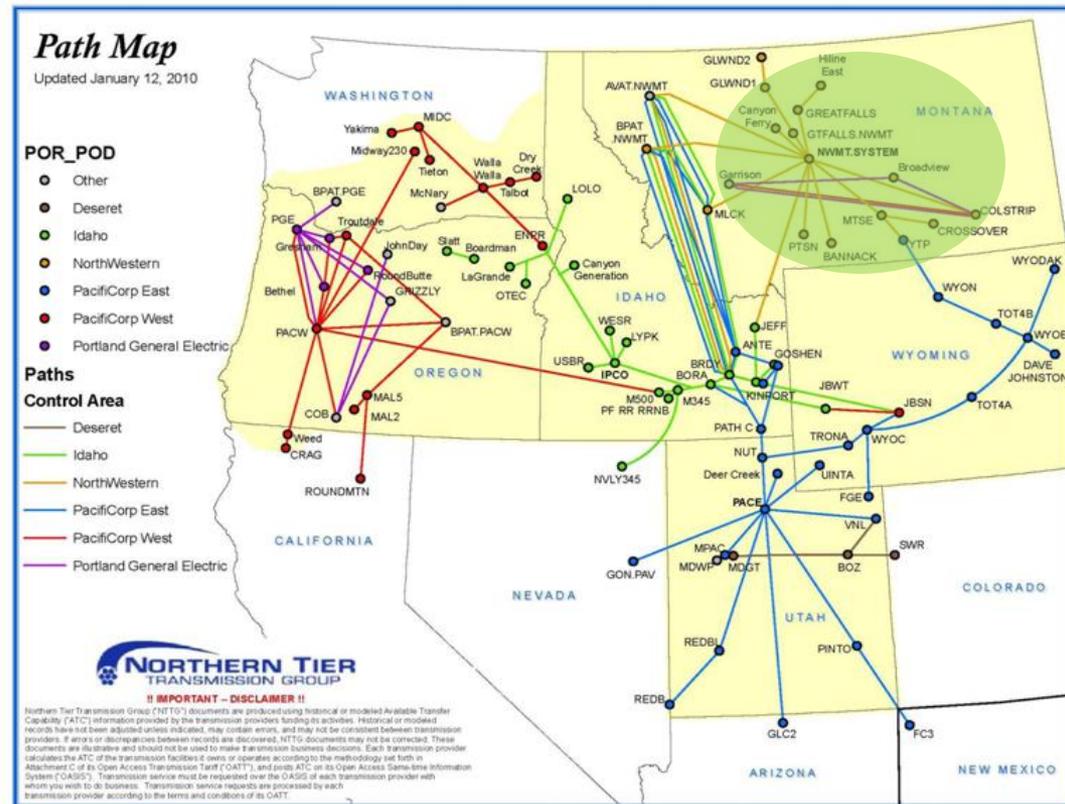


TP Classification
Regional

ESR MT PSC #1

Request:

Consider local economic studies not considered in NWE's 2008-2009 plan in the following order of priority: 1) High DSM study 2) Demand Response(Peak Shaving) Study and 3) Distributed Generation Study to determine the effects these programs could have on reducing, deferring or eliminating transmission system reliability problems



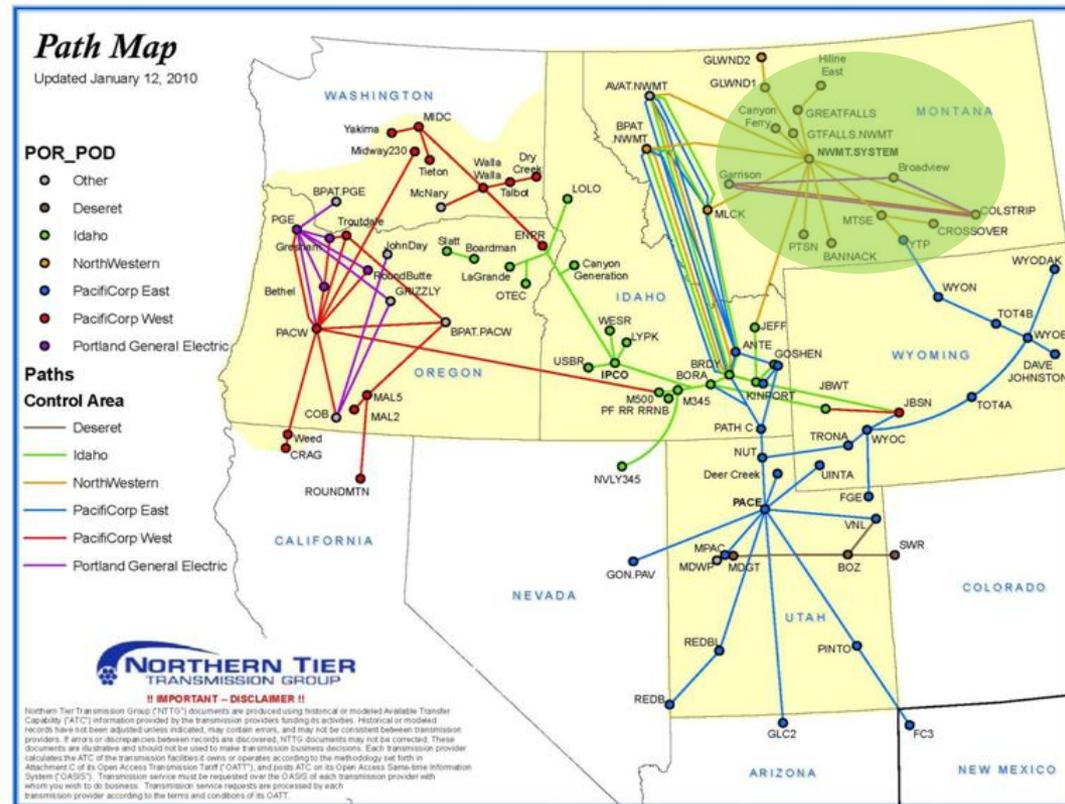
TP Classification

Not an ESR, will study in NWE's 2010-11 Biennial Plan.

ESR Gaelectric #1

Request:

Interested in knowing what an efficient expansion of the existing MT NWE transmission system would look like if 6000 MW were interconnected. Not interested in economic dispatch. Interested only in what is effectively a large scale, system-wide, electric transmission cluster study.



TP Classification
Sub-Regional



Clarification of Terminology

- A “**study**” constitutes a **body of analysis** that results in a report of findings related to one or more questions or issues. It **may contain multiple “cases” or “scenarios”** to address specific modeling requirements or sensitivity analyses.
- **Economic Study Request** – request to model the ability of specific upgrades/investments to transmission, resources, or demand response to reduce the cost of reliably serving forecasted customer needs.
- **Clustering** – geographically and electrically similar, and can be feasibly and meaningfully studied as a group.

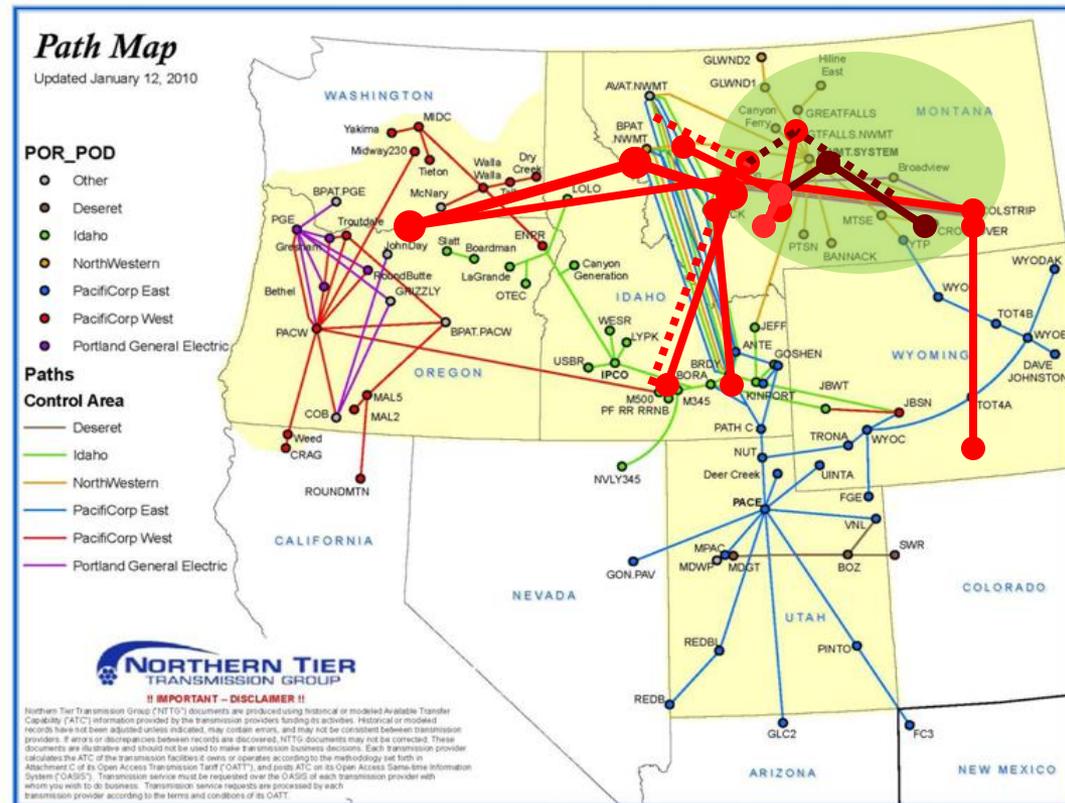
Clustering/Study

What questions need to be answered by the requests?

Are they similar geographically and electrically?

NTTG recommendation:

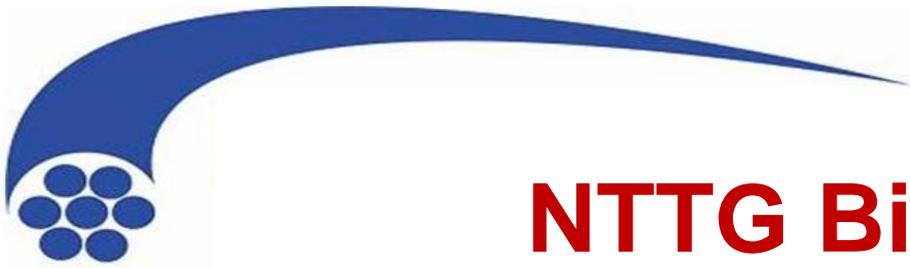
1. Aggregation and export of Montana resources to
 - a) Pacific Northwest (Mid C)
 - b) Central & Eastern Idaho
 - c) Southern Wyoming at source node of Zephyr, or
 - d) a sink near Denver





NTTG Prioritization Process

- NTTG Planning Committee members vote to identify up to two sub-regional Economic Study Requests per NTTG planning cycle.
- Each Planning Committee member casts a single vote for their preferred study and secondary study within their membership class
 - Transmission provider/developer
 - Transmission customers/users
 - Regulators and other state agencies
- Within each membership class, a two-thirds majority of voting members present is required for approval.
- Approval by the transmission provider/developer class and at least one remaining class is required for approval.



NTTG Biennial Plan

- Overview of data received during Q1 data gathering process
- Process for developing NTTG study plan during Q2
- Opportunities for stakeholder involvement



NTTG Planning Calendar

- **Q1 : DATA SUBMITTED**
 - Loads, Resources, and Transmission
 - Data from transmission providers
 - Data from stakeholders
- **Q2 : DEVELOP STUDY PLAN**
 - Assumptions on loads, resources, transmission, desired flows, seasonal characteristics, etc.
 - Determine the methodology, criteria, databases, analysis tools
- **Q2 : PERFORM ECONOMIC CONGESTION STUDIES**
 - Based on current TEPPC work, most recent NTTG studies
- **Q3, Q4 : PLAN ANALYSIS, DRAFT REPORT**



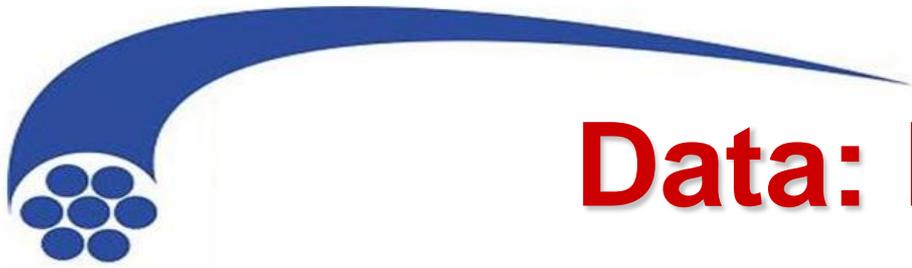
Sources of Data

- Q1: DATA SUBMITTALS
 - From transmission providers and stakeholders
 - Loads
 - Resources
 - Transmission
 - Data from transmission providers may include:
 - Data from their Integrated Resource Plans
 - Demand response
 - Point-to-point transmission-user forecasts
 - Other information from their local transmission plans



NTTG Data Received

- Q1 Data submittals were received from the following entities:
 - Basin Electric
 - Grasslands Renewable Energy
 - Idaho Power Company
 - NorthWestern Energy
 - PacifiCorp
 - Portland General
 - Power Company of Wyoming
 - TransCanada



Data: Loads

- IRP and WECC LRS loads from Transmission Providers with network load responsibility
- Loads at transmission sinks for proposed projects



Data: Resources

- New resources consistent with L&R, IRP forecasts of Transmission Providers with Balancing Authority Areas
- Future resources in source areas of projects submitted by transmission developers
- Oregon: 1,200-2,700 MW
- Washington: 500-2,000 MW
- Idaho: 400-600 MW
- Utah: 0-2,200 MW
- Wyoming: 3,400-6,000 MW
- Montana: 3,000-3,500 MW



Data: Major Transmission

1. TransWest Express (600 kV DC)
2. Zephyr Project (500 kV DC)
3. Chinook Project (500 kV DC)
4. Cascade Crossing
5. Mountain States Transmission Intertie
6. Montana Intertie Upgrade
7. Path 18 (AMPS Line) Upgrade (230 kV)
8. MSTI Collector System (230 kV)
9. Boardman – Hemingway
10. Gateway West
11. Gateway South
12. Gateway Central
13. Hemingway-Captain Jack
14. Walla Walla to McNary (230 kV)



Q2: Study Planning

- Agree on assumptions for loads, resources, transmission, desired flows, seasonal characteristics, constraints, etc.
- Determine the methodology, criteria, databases, and analysis tools to be used.
- All stakeholder submissions will be evaluated on a basis comparable to data and submissions required for planning the transmission system for Transmission Providers' retail and wholesale customers.
- Alternative solutions will be evaluated based on a comparison of their relative economics and ability to meet reliability criteria.



Q2 Stakeholder Input

- Stakeholder Webinars
 - Will be scheduled for May and June
- Planning Committee meetings
 - Open to all interested stakeholders
 - Generally on Wednesday afternoons
 - Review and guide the study work group efforts
- Reliability & Economic Study Work Groups
 - Confidentiality issues constrain participation
 - Participants expected to share workload
 - Weekly conference calls



Transition to Q3-Q4

- NTTG semi-annual stakeholder meeting
 - The economic studies work will be reviewed and acceptance of the report put to a vote.
 - The work plan will be presented and voted on.
- Work begins on adequacy and reliability assessment of alternative expansion scenarios.



Questions?