



Northwest Transmission Assessment Committee (NTAC)

SCOPE OF WORK

Mission

NTAC will be the open forum to address forward looking planning and development for a robust and cost effective NWPP area transmission system.

Background

The electric utility industry continues to change with new issues, proposed regulations, new forums, and an emerging market influence. However, with all these changes the fundamental needs of end-use customers remain the same. Utilities serving these customers struggle to address their individual requirements as well as to analyze and address reliability needs.

Discussion during various meetings have identified a view that the NWPP geographic area is lacking a forum to address the further planning and development of a robust NWPP area transmission system. This planning and development would identify future transmission needs by performing studies to identify solutions. The forum will consider transmission and non-transmission alternatives. This effort would go beyond reliability planning and maintaining current capability, to include economic efficiency and market power mitigation.. To fill the existing void in the geographic area of the NWPP associated with the planning of a robust transmission system, the NWPP TPC has broadened its scope of activities to include expansion planning dealing with commercial issues. This forum will need to exist until its functions are assumed by a different forum or through a comprehensive RTO planning function. The goal is to avoid duplication now and into the future.

[SSG-WI work effort placeholder]

This Scope of Work outlines a forum and structure where participants can engage in regular and detailed discussions about the further planning and development of a robust NWPP area transmission system.

Goals and Objectives

The overall goals of this effort are:

1. To provide necessary information to maintain and/or enhance the reliability of the transmission system under the operation and planning control of the NWPP area participants.
2. To develop a transmission assessment that identifies transmission constraints under a range of scenarios and suggests possible solutions to relieve those constraints, including transmission and non-transmission alternatives.

3. To provide information to identify the options to support the continual electric requirements including load growth of the end use customers within the area of the NWPP.
4. To facilitate the use of consistent assumptions for forecasting load growth within the NWPP.
5. To maintain a database of the existing and committed generation resources and committed transmission expansion projects within the NWPP.
6. To develop a transmission assessment that will also identify transmission opportunities that can increase the competitive supply of electricity.
7. To coordinate with other transmission planning efforts within the Western Interconnection.
8. To use an open and transparent process. The transmission assessment will be available to any interested party.

General Approach

In order to meet the goals of this effort, the planning process must integrate the planning activities of regional utilities and other market participants that provide for (a) load growth, (b) interconnection of new generation, and (c) insurance that reliability standards are met.

The NTAC will develop and publish an annual Transmission Expansion Assessment for the NWPP region for the 10 year planning horizon. The Transmission Expansion Assessment will identify costs, benefits, impacts, and other relevant information regarding transmission expansion for reliability, transmission for new resources, and additional expansion to support a competitive supply of electricity for the NWPP region. The NTAC will not allocate benefits and/or costs of the Transmission Expansion Assessment. The Transmission Expansion Assessment will be a unified regional transmission plan (“one utility concept”) but will not replace or supercede existing tariffs or other existing legal obligations.

All participants are expected to provide necessary information (studies, options, expansion plans, etc.) to NTAC on a sufficient and timely basis, and to raise issues that may have potential effects on the transmission system.

NTAC will use consensus to identify necessary and feasible studies to be performed. The studies performed will be completed within the limitations of resources provided by the participants. If additional funds or resources are requested by NTAC from the TPC in order to perform these studies, then TPC will have the responsibility of approving or rejecting that funding request. The TPC admits new members who are willing to share the TPC’s costs on a pro rata basis.

The following are the responsibilities of the participants in this process:

- **NWPP TPC** – oversight, review, and funding. The TPC will select the NTAC Chairman.
- **NTAC** – NTAC participants will provide input and resources to perform all the necessary studies, work and analyses necessary to develop the annual Transmission Expansion Assessment. NTAC will select the Vice Chairman.
- **NWPP Staff** – provide facilitation, coordination, and dissemination of information.
- **Transmission Providers** – retain local planning responsibilities within the NWPP area to ensure reliability of their systems.

Expected Duties

1. The NTAC will coordinate the development of a consistent load and resource database (including transmission capacity) in cooperation with other related groups such as CREPC's WRAT, PNUCC, and the NWPC.
2. The NTAC will develop a list of committed transmission additions for use in its Transmission Expansion Assessment.
3. The NTAC will coordinate the development of consistent databases and methods to support economic, production cost, and resource adequacy studies. This will include data support for Northwest hydro modeling.
4. The NTAC will refine Northwest data used in the SSG-WI path utilization report, and suggest/develop improvements or enhancements to the report to ensure an accurate understanding of the uses of the Northwest transmission system.
5. The NTAC will represent the NW sub-regional study effort at the SSG-WI Planning Work Group (PWG). Information submitted for support of the SSG-WI studies will be derived from NTAC's methods and database.
6. The NTAC will perform regular assessments (probably annual) of the NWPP transmission system by performing studies to:
 - a. Estimate future transmission usage and congestion patterns assuming the addition of new generation resources and load growth scenarios. A broad participant involvement process will be used to identify relevant scenarios.
 - b. Estimate the costs of proposed transmission expansion projects and assess the effects of proposed transmission expansion scenarios on future transmission use patterns and congestion (including economic effects).
 - c. Evaluate alternatives to such transmission expansion projects as are proposed by participants.
 - d. Assess congestion on Northwest paths (or flowgates) on a uniform basis, to identify and prioritize locations where upgrades may be advisable for reasons of reliability, efficiency, or market power mitigation, and thus require further study.

Terminology

- Determination of Base Year. The Base Year will be used to establish benchmarks for reliability, generation dispatch, congestion, loss-of-load probability, and other measures of the use and quality of the transmission system. The Base Year is expected to be 2004.
- Near Term Year. The SSG-WI PWG's Near Term Year (200*) will be used to estimate reliability, generation dispatch, congestion, loss-of-load probability, and other measures of the use and quality of the transmission system for the near term. The identification of the next Near Term Year will be coordinated with SSG WI (NTAC will assign a coordinator for this purpose).
- Out Year. The SSG-WI PWG's Out Year (20**) will be used to estimate reliability, generation dispatch, congestion, loss-of-load probability, and other measures of the use and quality of the transmission system for the long term. The identification of the next Out Year will be coordinated with SSG WI (NTAC will assign a coordinator for this purpose).
- Existing Transmission Constraints and Needs (Path Utilization Report). NTAC will assemble a path utilization report based on current conditions, and will include path utilization results in its regular assessments.
- Committed Transmission Projects. Committed Projects are those that have reached a defined stage of development (e.g., construction has begun), and will also include projects for which firm commitments¹ have been made. NTAC will develop criteria to determine what "committed" means, and will collect information from transmission owners to create a database of known transmission projects (e.g., Coulee-Bell).
- Committed Resource Additions. Committed Resources are those that have reached a defined stage of development (e.g., construction has begun), and will also include projects for which firm commitments have been made. NTAC will develop criteria to determine what "committed" means, and will collect information from generation owners to create a database of known resource additions.
- Common Load Forecast. NTAC will use the common load forecast methodology that is being developed in WECC and the NWPP. NTAC will evaluate and modify forecasts that are submitted by load-serving entities as necessary to achieve consistency with its assessments.
- Power Supply Assessment. NTAC will assess the transmission system for all time periods in terms of reliability (e.g., loss of load probabilities), generation dispatch efficiency, and the existence (e.g., timing and extent) of load pockets.

Input Streams

- Applications for interconnection points for new generation. NTAC will assemble interconnection requests already submitted to transmission providers. This information will be used to help identify potential needs for transmission upgrades.

¹ "Firm commitments" requires further definition.

- Integrated Resource Plans (IRPs). NTAC will review the transmission implications of utility IRPs (e.g., identify which transmission corridors are most likely to be affected by planned resource additions).
- Energy Scenarios. NTAC will review the transmission implications of different energy scenarios (e.g., undeveloped coal, natural gas-fired projects, and renewable resources).
- IPPs. NTAC will ensure that the transmission implications of proposed generation projects are analyzed, whether the generation is expected to be developed by utilities or IPPs.
- Renewables. NTAC will examine the transmission implications of proposals to develop renewable resources, along with all other resources.
- Transmission Plans. NTAC will assemble the transmission expansion plans of transmission owners into a consistent set for assessment and evaluation. NTAC will entertain proposals for transmission projects from all market participants.
- Alternatives (including non-wires). NTAC will actively solicit alternative solutions to problems on the transmission system, and will evaluate such alternatives in the same manner as transmission additions.

Analyses

How should NTAC sort through the various proposals and analyze them? Because NTAC is moving into new territory, it is important to establish reasonably objective criteria that can be used to determine whether a project is officially “included” in NTAC’s transmission plan: recommended for construction (by “someone”). There are likely to be three objectives of proposed transmission projects (and alternatives): to ensure reliability, to support competition, and to relieve transmission constraints. Before NTAC can effectively analyze proposed transmission projects (and alternative solutions to transmission problems), new analytical tools may be needed.

While NTAC will entertain proposals from all market participants, additional studies beyond the general study scope may be desired. However, further discussion of funding of specific studies is necessary, to avoid a situation in which NTAC is inundated with demands for studies. Some studies may be funded through the NWPP-TPC, while others may be more appropriately funded by the project sponsor (e.g., an IPP or group of transmission users/owners). [To be further discussed and details added.]

How should the proposed projects be evaluated for their economic effects? Given that any project is likely to have multiple types of impacts on the grid, various forms of indexes, indicators or yardsticks will be necessary to evaluate proposals.

- Reliability impacts could be evaluated in terms of reducing the likelihood and duration of outages (transmission, not distribution).
- Efficiency impacts (i.e., economic dispatch) could be evaluated in terms of the total cost of producing and transmitting energy (not just variable operating costs). The lower total cost could occur because of displacement of higher cost generation by lower cost generation (in both the short run and the long run). This yardstick could also address complaints about “transmission constraints that should be relieved”, because the reason for such relief is presumably lower delivered energy costs. This analysis should take into account ancillary

services that are required to support transmission transactions, as well as transmission line losses.

- Market conditions (i.e., encouraging greater competition or expanding “load pockets”) could be evaluated by (a) establishing an index or indices of market concentration or potential market power (e.g., mark-ups over competitive market prices), and then (b) estimating the extent to which such an index or such indices might be expected to improve due to a proposed transmission (or non-wire) project. Market concentration should be evaluated in terms of various products and geographically defined markets: energy, transmission, and ancillary services.

Coordination Efforts

- SSG-WI Planning Group Needs - NTAC will work with the SSG-WI Planning Work Group (PWG) to identify data and analysis needed from the Northwest to support the PWG’s efforts.
- California - NTAC will ensure that the implications to the Northwest of proposed California transmission projects are analyzed and understood. Proposals may also be submitted to NTAC for analysis by California interests.
- Rocky Mountain - NTAC will coordinate its studies with those performed by the Rocky Mountain transmission study group (e.g., to the extent that the Rocky Mountain group develops a transmission assessment plan that is similar in scope and intent to that of NTAC).

Audience

- PNUCC-TIG
- SSG-WI
- RRG/RTO West
- Regulatory Bodies
- Individual Market Participants
- WGA

Examples of Similar Kinds of Transmission Plans

STEP, MISO

Schedule

- Collection of Initial Data
- Assessment of Existing System
- Identification of Problem Areas
- Solicitation of Proposed Solutions
- Analysis of Proposed Solutions
- Publication of Initial Long-Term Assessment

- Annual Updates/Responses to Specific Requests for Studies; Continuing Coordination with SSG-WI, Rocky Mountain Region, Cal-ISO, WestConnect Area