

Purpose and Objective

The purpose of the Transmission Expansion Planning Policy Committee (TEPPC) is to conduct and facilitate economic transmission planning in the Western Interconnection. TEPPC has four main functions:

1. Develop and maintain a public data base for production cost and related analysis;
2. Develop and implement interconnection-wide transmission expansion planning processes in coordination with the Planning Coordination Committee (PCC), other WECC committees, Regional Planning Groups (RPGs) and other stakeholders;
3. Guide and improve economic and operational analyses and modeling of the Western Interconnection and conduct related transmission utilization and expansion studies; and
4. Based on the above, prepare interconnection-wide transmission planning assessments consistent with applicable NERC and WECC reliability standards.

These functions respond to and serve WECC members, transmission stakeholders, federal and state energy policies, Regional Planning Groups (RPGs), and entities that have the responsibility for planning and implementing transmission projects.

The TEPPC Planning Protocol was approved by the WECC Board of Directors (Board), with the most recent amendment being approved on May 22, 2012. During 2015, the Board ~~has been conducting~~ a Section 4.9 review of its organizational roles and structure, consistent with its bylaws. ~~As of October, 2015 that review is still underway. TEPPC plans to conduct a comprehensive review of its Charter and Planning Protocol in 2016, after the Section 4.9 review is complete. In December, 2015, the WECC Board of Directors appointed the TEPPC Review Task Force (TRTF) to address several issues concerning TEPPC's organizational structure and activities. Also in December, 2015 the Board approved an Interim Planning Protocol to govern TEPPC's planning activities during 2016 while the TRTF completed its work which was intended to include creating a revised TEPPC Charter and TEPPC Planning Protocol. In April, 2016 the TRTF merged with the Planning Coordination Committee Review Task Force (PCCRTF) to form the Joint PCC-TEPPC Review Task Force (JPTRTF), as both task forces recognized efficiencies in considering their respective work activities as one task force.~~

The JPTRTF will present its final recommendations to the Board for consideration at its December 7, 2016 meeting. However, it will not be possible by December, 2016 to create a revised planning protocol that would govern TEPPC's planning activities during 2017. TEPPC recommends the following 2017 Interim TEPPC Planning Protocol to govern TEPPC's reliability assessment activities during 2017



while any changes to TEPPC's organizational structure that are approved by the Board in December, 2016 are being implemented.

Due to evolving circumstances within the energy sector some processes and timelines described in the TEPPC Planning Protocol are no longer applicable, effective and/or feasible for TEPPC's 2016 work. Therefore, for 2017, TEPPC proposes to (i) suspend the existing Planning Protocol pending the final outcome of the [Section 4.9 Review JPTRTF's final Report and Recommendations](#); (ii) leave the existing TEPPC Charter unchanged and included in this document as Appendix A; (iii) conduct its 2017 activities in accordance with this Interim Planning Protocol,¹ and (iv) ~~undertake a comprehensive review of the existing~~ create a new or revised Charter and Planning Protocol during 2017 consistent with the Board's decision on the JPTRTF's final Report and Recommendations and submit ~~recommended changes~~ the new or revised documents for consideration by the WECC Board of Directors.

This 2017 Interim TEPPC Planning Protocol will remain in effect through December 31, 2017 or until replaced by a different planning protocol approved by the Board.

1. TEPPC Membership and Governance

1.1. TEPPC Membership

TEPPC shall be comprised of the following individual WECC member organizations and stakeholders:

- Two WECC Board Members;
- One representative from each of the WECC recognized Regional Planning Groups (RPGs);
- One representative from a Public Utility Commission;
- One representative from a State or Provincial Energy Department or Office;
- One transmission owner;
- One load serving entity representative;
- One generator owner representative;
- One consumer representative;
- One expert in the Integrated Resource Planning (IRP) processes;

¹ Specific numbered sections in this Interim Planning Protocol are not intended to correspond to similarly numbered sections in the existing Planning Protocol.

- One wholesale market expert; and
- One environmental representative.

The WECC Board approves the appointment of all TEPPC members with recommendations being made to the Board by the TEPPC Chair as described in the TEPPC Charter. With limited exceptions, all meetings of TEPPC are open to stakeholder participation, however only TEPPC Members may vote in TEPPC meetings when a vote is required. The provisions for required meetings, meeting notices, agendas, voting quorum, etc. are addressed in the TEPPC Charter.

1.2 TEPPC Subcommittees and Work Groups

Information on TEPPC's recognition of RPGs and their representation on TEPPC is addressed in the TEPPC Charter.

The TEPPC Chair may call a closed session to protect confidentiality of proprietary information or to receive attorney-client communications.

TEPPC has established a Technical Advisory Subcommittee (TAS) to collect and disseminate data needed for economic studies of transmission expansion and produce studies of future transmission system utilization and needs using analysis of historical data, production cost simulation, and other study techniques and tools as needed. TAS provides a broad forum for stakeholder participation in TEPPC's study activities. TAS has three work groups:

- Data Work Group (DWG)
- Modeling Work Group (MWG)
- Studies Work Group (SWG)

In addition, TEPPC has established the Scenario Planning Steering Group (SPSG) with membership consisting of diverse Western Interconnection stakeholders. The role of the SPSG is to provide strategic guidance to the TEPPC on:

- a. Emerging policy, regulatory, environmental, industry and social trends that may have significant impacts on electric transmission expansion planning;
- b. Future scenarios of the Western Interconnection to be modeled in transmission planning studies;
- c. The modeling tools and data sets to be used;
- d. Key assumptions to be used in creating and reviewing the scenarios; and
- e. Metrics to be used in modeling the WECC scenarios.

The SPSG has one work group: the Environmental Data Work Group (EDWG).²

Participation in TAS, the SPSG and their work groups is open to all stakeholders. All TAS, SPSG and work group meetings are open. These groups operate primarily by consensus although informal voting among all participants—or formal voting as dictated by their governance documents—may be used to address issues where consensus cannot be reached. All stakeholders are encouraged to be active participants in TAS, SPSG and work group activities, lending their time and expertise to the combined planning effort.

1.3 Regional Planning Groups

Regional Planning Groups (RPGs) perform reliability assessments, develop transmission alternatives, conduct technical and economic evaluations of those alternatives and develop plans to provide reliable service for their respective areas in accordance with their charters, tariffs or other guiding documents, and input from their members. Pursuant to common tariff language filed with FERC in response to the inter-regional transmission planning coordination and cost allocation requirements of FERC Order 1000, four FERC jurisdictional planning regions were formed.³ These planning regions, considered RPGs by this Interim TEPPC Planning Protocol, will post planning data and information on their respective websites to facilitate coordination among themselves and stakeholders. The four planning regions will also jointly hold an annual interregional coordination stakeholder meeting.⁴ The planning regions may use TEPPC and other WECC data bases for their own planning activities.

Each RPG that has adopted a document describing its activities and governance structure may designate a representative to serve as a member of TEPPC. As of [August, 2015](#)[October, 2016](#) there are seven RPGs with representatives serving as members of TEPPC:

- Alberta Electric System Operator (AESO);
- British Columbia Coordinated Planning Group (BCCPG);
- California Independent System Operator (CAISO – FERC Planning Region);
- California Transmission Planning Group (CTPG);
- ColumbiaGrid (FERC Planning Region);

² The EDWG has evolved beyond the Environmental Data Task Force (EDTF) mentioned in the existing Planning Protocol, becoming a permanent working group, rather than a temporary task force.

³ Collectively known as the Western Planning Regions (WPRs): California ISO, Columbia Grid, Northern Tier Transmission Group, and WestConnect.

⁴ The new FERC Order 1000 inter-regional planning processes required by the WPRs' (or their constituent transmission providers') compliance filings at FERC, are not reflected in the existing TEPPC Planning Protocol.

- Northern Tier Transmission Group (NTTG – FERC Planning Region); and
- WestConnect (FERC Planning Region).

The Regional Planning Coordination Group (RPCG) is a forum for the RPGs to coordinate their planning activities with each other and with WECC. Among other activities, the RPCG develops the Common Case Transmission Assumptions (CCTA) that represent the transmission projects under development that the RPCG believes are likely to be completed within WECC’s 10-year planning horizon.

1. TEPPC Reporting Process

TEPPC’s approach for creating, conducting and reporting on TEPPC’s planning activities is comprised of four primary elements:

1. Maintaining a public database of planning data and models;
2. Facilitating an Interconnection-wide transmission expansion planning process;
3. Using tools such as economic grid simulation (production cost modeling) and capital expansion modeling to perform and report on analyses that address the reliability needs of, and potential economic solutions for, the Western Interconnection; and
4. Preparing summary assessment reports based on the above analyses.

The following are descriptions of each of these elements:

1.1 Maintaining a Public Database of Planning Data and Models

During 2017⁶, TEPPC will, as resources and time permit, continue to produce and revise planning data and models to support its internal planning needs, as well as the needs of and requests from the RPGs and other stakeholders. Specific data bases and models will be updated as shown below:

Table 1: Planning Data Update Schedule

Data Base	Production/Update Schedule for 2017 ⁶
2026 Common Case <u>(completed in 2016)</u>	• <u>Complete by March 31, 2016 Updated periodically during 2017 with updated data sets posted publicly</u>
2036 Reference Case	• Complete by June 30, 2017 ⁶
Wind and Solar Profiles	• Update as needed, and when data is available.
Resource and Transmission Capital Costs	• Update during 2017 ⁶

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Data Base	Production/Update Schedule for 2017 ⁶
Preferred Environmental Data ⁵	<ul style="list-style-type: none"> Update continually during 2017⁶

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Table 2: Planning Model Update Schedule

Model	Production/Update Schedule for 2017 ⁶
Production Cost Model	<ul style="list-style-type: none"> Based on input from TEPPC and its subcommittees and work groups, WECC may consider enhancements to its existing Production Cost Model
Long-Term Planning Tool	<ul style="list-style-type: none"> Based on input from TEPPC and its subcommittees and work groups, WECC may consider enhancements to its existing Long Term Planning Tool.
Environmental Data Viewer	<ul style="list-style-type: none"> Based on input from the EDWG, SPSG and TEPPC, WECC may add new and improved functionality.
Environmental Risk Classification System	<ul style="list-style-type: none"> Subject to SPSG approval, the EDWG may recommend changes to the Environmental Risk Classification System.
WECC Project Information Portal	<ul style="list-style-type: none"> Update continually as needed
Capital Cost Calculator	<ul style="list-style-type: none"> Update during 2017⁶
Supporting Models	<ul style="list-style-type: none"> Update periodically as revisions and improvements become available

Data collected for studies and for the TEPPC database will be determined by work priorities established by TEPPC and may include data related to end-use loads, energy efficiency, demand response, centralized and distributed generation, network topology, and environmental, water, land use, and wildlife considerations. Data collection and assumptions will be described in the annual study report.

⁵ Preferred environmental data is data that has been reviewed and accepted under the terms of the EDWG’s Data Quality Protocol.

- The data collection sources will include the work of other WECC committees, subcommittees and work groups; State integrated resource planning processes; RPGs; data developed by consultants and approved by TEPPC; national energy research laboratories and Transmission Providers.
- Stakeholders submitting study requests will be required to supply data and other information needed to evaluate their requests. Failure to do so timely will result in the elimination of that request from the study program.
- Data supplied by WECC members will conform with WECC's Information Sharing Policy.⁶

1.2 Facilitating an Interconnection-Wide Transmission Expansion Planning Process

During 2017~~6~~, TEPPC will continue to facilitate an Interconnection-wide planning process. Significant activities will include:

- ~~Four~~ Three in-person meetings during 2017~~6~~ for TEPPC, TAS and SPSG. Depending upon the disposition of the JPTRTF's recommendation to create a Reliability Assessment Committee (RAC), it may be appropriate to schedule a fourth in-person meeting for TEPPC, TAS and SPSG during 2017.
- Monthly coordination calls during months when there are no in-person meetings to allow continuing updates on current events and products and to encourage RPGs to report their key activities and products.
- In-person and remote meetings of TEPPC, its subcommittees and work groups as needed to continue the work with which they are charged.

1.3 Performing Planning and Economic Analysis of the Western Interconnection

During 2017~~6~~, TEPPC will continue using appropriate modeling tools, such as production cost and capital expansion models to analyze planning issues affecting reliability in the Western Interconnection. TEPPC plans to complete studies in different planning horizons, including the 10 year and 20 year horizons, to better understand operational issues, potential congestion, capital expansion needs and other economic considerations in the Western Interconnection which, in turn, impact reliability needs. Thus, TEPPC operational and economic study cases will both inform and be informed by reliability studies that may be conducted within and/or outside of the TEPPC process itself (for example, by exchanging data and assumptions).

⁶ The existing Planning Protocol contains references to more specific data submittal and sharing processes that may no longer be accurate following WECC bifurcation and associated process and role adjustments.

During 2017⁶, TEPPC will:

- Release study reports on a schedule to be determined by TEPPC, but at a minimum including an annual summary report;⁷
- Work with its stakeholders to provide recommendations for prioritizing TEPPC’s economic, operational and reliability assessment work;
- As initiated by either WECC staff or TEPPC’s stakeholders, and with approval of TEPPC, complete reports on specific economic, operational and reliability issues that may arise over the course of the year; and
- Streamline reporting to use the most appropriate format, ranging from Power Point slide decks to comprehensive reports, to share the information needed to communicate timely impactful analytic results.

The 2026 Common Case, which shall include consideration of input from RPGs, will be the starting point for development of all 10-year and 20-year study cases. The RPCG-provided CCTA will be the starting point for TEPPC’s decision regarding future transmission additions assumed to be in service for use in developing all 10-year and 20-year study case assumptions.

1.4 Preparing an Interconnection-Wide Summary Assessment Report⁸

TEPPC will work with its stakeholders to prepare a summary report during the Fourth Quarter of 2017⁶ to report on analyses completed during the year. The summary report will summarize all analytic activities completed during 2017⁶ with an emphasis on;

- Issues and observations that are common among multiple individual analyses; and
- Insights gained that affect WECC’s priority reliability challenges and/or that have strong economic and operational implications.

2. Work Plan Timeline and Criteria

TEPPC will plans to develop and complete its planning activities during 2017⁶ according to the following schedule:

Time Period	Activities
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⁷ The reporting activity described here and below in Section 2.3 of the Interim Planning Protocol contrasts with the existing Planning Protocol which calls for 10- and 20-year “plans” consistent with terms of the ARRA grant administered by DOE, and which also specifies the timing for draft and final Study Results reports separately for the first and second years of a biennial cycle, as well as a yearly Annual Report.

⁸ As noted in footnote 8, this varies from the reporting activity described in the existing Planning Protocol.

Time Period	Activities
January 1-31, 2017 ⁹	<ul style="list-style-type: none"> Stakeholders submit study requests during the Request Window. All stakeholders—including individual stakeholders and committees, subcommittees and work groups within WECC—must submit requests by January 31, 2017.
February 1 – March 31, 2017	<p>Study Program Development</p> <ul style="list-style-type: none"> WECC staff reviews and summarizes study requests and recommends 2017 study priorities, possible study request consolidations and availability of resources to conduct studies. SWG and TAS review the study requests and WECC staff-recommended priorities and then develop a proposed work plan. Recommendations may include proposals to consolidate requests which in turn may entail modifications of study requests to accommodate consolidation. TEPPC and stakeholders review proposed work plan.
April 27, 2017 (7 days prior to TEPPC meeting)	Post draft Study Program for stakeholder review
April 12, 2016 / May 4, 2017	<p>Work Plan Approval¹⁰</p> <ul style="list-style-type: none"> TEPPC approves proposed 2017 Work Plan at its scheduled meeting.
May 12 / June 5, 2017 (30 days following TEPPC approval of the proposed work plan)	<p>Reconsideration Period</p> <ul style="list-style-type: none"> Any party who disagrees with inclusion or exclusion of a particular study request within the 2017 Study Program may submit a request for reconsideration within 30 days of TEPPC's decision.¹¹

⁹ The existing Planning Protocol establishes a study request window from November 1 through January 31.

¹⁰ The existing Planning Protocol calls for TEPPC posting of the proposed study program by April 30.

¹¹ The existing Planning Protocol requires that requests for reconsideration be submitted by May 15.

Time Period	Activities
June 12 July 5, 2017 6 (30 days following close of Reconsideration Period)	TEPPC Decision <ul style="list-style-type: none"> TEPPC will respond to requests for reconsideration no later than 30 days after the reconsideration request submittal deadline.¹²
April 1 – December 31, 2017 6	Analysis and Reporting <ul style="list-style-type: none"> WECC staff completes analyses included in 20176 Work Plan. TEPPC Stakeholders review analytical results Reports on specific modeling analyses, as well as issue-based reports on other topics, are released as they are available.
October 1 – December 31, 2017 6	Transmission Planning Assessment Summary Report <ul style="list-style-type: none"> WECC staff prepares draft summary report of analytical activities completed during 20176. TEPPC and stakeholders review summary report.
December 12 3 , 2017 6	Transmission Planning Assessment Summary Report Approval <ul style="list-style-type: none"> TEPPC approves Transmission Planning Assessment Summary Report and submits for Board approval

2.1 Study Consideration Criteria

Within the annual study request window, stakeholders may submit a study request. The primary focus of TEPPC's study effort is an evaluation of transmission-related impacts of public policy goals within the Western Interconnection and alternatives for meeting those goals, as well as impacts of credible economic, institutional and technology developments. In prioritizing study requests for possible inclusion in the 2017~~6~~ Work Plan, WECC staff and TEPPC will consider the following [criteria/guiding principles](#):

1. The extent to which the request addresses reliability, economic and other planning concerns broadly across the Western Interconnection, rather than focusing on concerns that could be addressed more effectively within a single planning region.

¹² The existing Planning Protocol requires that TEPPC respond to requests for consideration by June 15.

2. Fundamental planning question(s) that would be answered by the requested study and the questions' importance across multiple planning regions and among a range of stakeholders such as customers, regulators, generation developers and Transmission Providers.
3. Policy issues of national, Western Interconnection or state interest that are raised or addressed in the study request.
4. Whether the objectives of a particular study request could be met by other studies, by consolidating multiple study requests, or by conducting more generic studies the components of which (e.g., loads, resources, transmission) are sufficiently representative and informative to substantially meet the needs of individual study requests.
5. The extent to which the study request requires the use of interconnection-wide production cost models currently used by TEPPC and whether the request could be better addressed through other kinds of analyses that would be best or only conducted outside of TEPPC.
6. The degree to which the requested study is necessary to meet a member Transmission Provider's compliance with its OATT, Attachment K.
7. Whether the study case or a similar case been evaluated previously, and if so, whether expectations regarding future conditions changed sufficiently to warrant re-study.

3. Next Steps

The JPTRTF Proposal that the Board will consider in December, 2016 includes a recommendation to create the Reliability Assessment Committee (RAC) followed by creating charters and protocols for the RAC and its subcommittees and work groups. The JPTRTF anticipates that creating these documents will continue through approximately September 30, 2017 and that the new RAC and subcommittees will be ready to assume the responsibilities currently performed by TEPPC by the Fourth Quarter of 2017. TEPPC will review and proposed changes to its existing Charter and the TEPPC Planning Protocol during 2016. TEPPC will maintain the core philosophies behind the protocol, such as facilitating an interconnection-wide planning process coordinated with and responsive to WECC, regional and other stakeholder concerns, opening an annual study request window and prioritizing the annual study program. After completing its review and proposed revisions of the existing Charter and TEPPC Planning Protocol, TEPPC will submit these revisions to the WECC Board of Directors for consideration.¹³

¹³ This contrasts with the existing Planning Protocol, which specifies an evaluation of the overall regional transmission planning process at the end of each biennial study cycle.