

DRAFT

RTO West Stage 2 Development Process

RTO West Planning and Expansion Proposal January 23, 2002

[The purpose of this paper is to describe the RTO West planning process for the March 1, 2002 filing. While it does not describe “planning at the seams”, the Seams Steering Group – Western Interconnection (“SSG-WI”) Planning Work Group is preparing a recommendation on (i) how to follow up the recent WGA efforts regarding interregional planning, (ii) how planning issues should be handled in the transition period between now and when RTO West becomes operational, and (iii) how Western Interconnection-wide planning driven by the three western RTOs might occur in the future (with an emphasis on actual planning versus coordination). These discussions will be described in detail in the interregional coordination section of the filing letter.]

A. RTO West Planning and Expansion Authority and Responsibilities

RTO West will have ultimate authority for the security of operation and the adequacy of the long-range planning for and expansion of the RTO West Controlled Transmission Facilities.

With respect to those facilities described in subsection 6.1.2.1 of the Transmission Operating Agreement (“TOA”) (“Certain Distribution Facilities”), any RTO West planning process that involves total transfer capability improvements on such facilities shall include the owner of such facilities to determine the best one-system solution. The owner of such facilities will maintain ultimate planning authority for the local distribution planning for load service. *[Further work is needed to make sure that this document comports with section 6.1.2.1 of the TOA.]*

A Participating Transmission Owner (“PTO”), in consultation with its customers and appropriate state entities, has planning authority for its non-RTO West Controlled Transmission Facilities, including those needed to serve wholesale transactions. If, however, the PTO or the Transmission Customer are not satisfied with the results of the PTO and state planning processes relating to such facilities that are used to provide wholesale service and agree to challenge the results, they can access the RTO West dispute resolution process prior to taking their concerns to FERC [*Will need further clarification on the scope of the process, e.g., mediation/create record v. arbitration*].

RTO West will implement a pro-active, inclusive, least-cost, public planning process. RTO West will make every effort to encourage and support market-based expansion decisions. In addition, RTO West will have the authority to require expansion to ensure transmission adequacy (the ability of the RTO West System to deliver required power without regard to the cost of the power being delivered or the congestion costs incurred). RTO West will provide a forum for an open subscription process to facilitate construction of market-sponsored projects to relieve congestion. In the event that the RTO finds that specific instances of market failure have precluded cost-effective mitigation of chronic, significant congestion, RTO will have the authority to take whatever cost-effective actions (consistent with each individual PTO’s TOA) it feels are appropriate to mitigate the congestion. Each PTO is subject to RTO West’s authority as set out in the TOA.

B. Goals and Objectives

The RTO West filers and stakeholders propose a planning and expansion approach that meets the following goals and objectives:

- 1) Provides that a single entity is responsible for the adequacy and planning and expansion of RTO West Controlled Transmission Facilities and Certain Distribution Facilities to the extent provided in the TOA to ensure an outcome that maintains or improves existing reliability levels as contemplated in Order No. 2000;
- 2) Maintains and expands the RTO West System in a manner that encourages an open and competitive market;
- 3) Requires a planning process that is specific enough to be used by (i) facility owners, transmission customers, and regulators for environmental and siting approval, maintenance, and financing decisions and (ii) RTO West for cost allocation decisions;
- 4) Works in concert with the RTO West pricing methodology and congestion management model;
- 5) Considers options other than transmission as part of an overall least-cost planning process to determine the best method of ensuring transmission adequacy;
- 6) Meets transmission customers' needs in a comparable and equitable manner while meeting reliability, performance, operational, and efficiency goals;
- 7) Reviews planning guidelines and reliability criteria on an on-going basis; and

- 8) Provides for participation by RTO West in coordinated or joint planning with other interconnected RTOs.

C. Description of Planning Process

RTO West, working in cooperation with the PTOs and such advisory stakeholder committees as it creates, shall design, implement, and maintain a non-discriminatory, proactive, least-cost, public planning process. RTO West shall encourage market-based responses to the planning and expansion needs of the RTO West System. The process will allow for public input.

1) RTO West Planning Responsibilities

At a minimum, RTO West will have the following responsibilities:

- a) Designing, with input from the PTOs and other stakeholders, a public planning process that is compatible with the other elements of the RTO West design;
- b) Establishing advisory committees relating to planning, reliability and operational planning to be chaired by RTO West and with members from the PTOs and other stakeholders (at a minimum, a Planning Issues Committee should be established to provide input to the RTO West planning staff and, in certain instances, the RTO West Board);
- c) Coordinating the overall planning process and the efforts of the various participating entities, including interfaces between RTO West planners and non-PTO transmission owners;

- d) Developing in a public process applicable reliability criteria, transmission adequacy standards, and other appropriate planning guidelines, for example, optimization of limited transmission corridors (RTO West shall use applicable NERC and regional criteria until such time as RTO West chooses to supplement such standards as provided in the TOA through an open stakeholder process);
- e) Modifying, if appropriate, and enforcing interconnection standards;
- f) Managing system data, including maintaining system planning databases, creating future power flow and stability base cases, and maintaining system models for system studies with the input of PTOs and other users of the RTO West Transmission System;
- g) Coordinating compliance studies;
- h) Determining the transfer capability and projected flows on all paths including their interaction with other paths (Total Transfer Capability and Operating Transfer Capability,) on an on-going basis and a five-year projected basis, including identifying paths that are experiencing or expected to experience congestion¹ (price, duration, etc.);
- i) Assessing the ability of the RTO West Controlled Transmission Facilities to deliver required power without regard to the cost of the power being delivered (“transmission adequacy”) by

¹ A congestion issue relates to the ability of the RTO West Transmission System to deliver less expensive remote generation to RTO West loads.

- i) Considering all transmission facilities that impact the RTO West Controlled Transmission Facilities, including facilities located in other RTOs, whether or not they are under RTO West's control;
- ii) Gathering available generator forecasts, load forecasts from all relevant entities, and system topology information (published at least annually);
- iii) Analyzing and further developing such information as appropriate (including supplemental load forecasting) to provide a foundation for testing the transmission adequacy of the system as a whole;
- iv) Performing system screening to determine where the system limitations are, and identifying PTOs whose facilities are involved in the limitations; provided this RTO responsibility does not preclude a PTO from concurrently doing its own screening or other planning;
- j) Identifying opportunities for improvement (RTO will conceptually define projects, may engage in conceptual planning work, and will provide preliminary cost estimates, but will not engage in detailed design of proposed solutions);
- k) Encouraging market-driven expansion by market sponsors to step forward to implement improvements through an open solicitation of interest;

- l) Considering non-transmission alternatives as part of its transmission adequacy analysis as described in subsection D.3)a) below;
- m) Developing mechanisms for the on-going public release of the information developed in items f) through l) above;
- n) To the extent that the RTO is involved in interconnection requests, determine who should perform the interconnection study;
- o) Developing an annual transmission expansion plan that covers the subsequent 5 years (or more if additional time is required to implement the alternatives) that includes the information developed in items f) through l) above, as well as the following information from all PTOs and market participants:
 - i) Discussion of limited corridor issues in light of applicable RTO West planning guidelines;
 - ii) List of Projects:
 - A) Proposals (with identification of who is proposing):
 - (1) Transmission adequacy;
 - (2) Market-proposed congestion relief; and
 - (3) Potential congestion clearing projects that are identified in item i) above;

b) Committed Projects (with identification of the project sponsor or project participants):

(1) PTO sponsored transmission adequacy;

(2) RTO ordered transmission adequacy;

(3) Market sponsored congestion relief; and

(4) Other “RTO” projects; and

p) Coordinating with other agencies (Western Governors’ Association, regional transmission associations, power pools, WSCC, other independent system operators, regional transmission organizations, independent transmission companies, non-PTO transmission owners, and other affected entities), including submission of data for joint studies and preparation of associated reports.

2) **Role of FERC, States, and Tribes**

RTO West will actively work with FERC, other Federal agencies, the States, and the Tribes to determine how they might participate in the RTO West planning process in order to make review and approval of a project and its cost recovery as efficient as possible.

3) Role of PTOs

RTO West will provide an opportunity for PTOs to participate actively in the RTO West planning process, including providing needed data, resolving adequacy problems for which they have responsibility, providing detailed project proposals as required, and implementing solutions. The owners of Certain Distribution Facilities shall be involved in any RTO planning process that involves total transfer capability improvements on such facilities to determine the best one-system solution. (The owner of the Certain Distribution Facilities will maintain the planning responsibility for the local distribution planning for load service.)

4) Role of Non-PTO Project Sponsors

RTO West will provide an opportunity for non-PTO project sponsors to participate in the RTO West planning process, including providing detailed project proposals to RTO West to include in its expansion plan. Such plans will comply with RTO planning guidelines and applicable reliability criteria.

D. Expansion

1) Market-Driven Projects

The overarching goal of the planning proposal is to have a dynamic market-driven planning process that results in the appropriate and least-cost expansion of the RTO West System. It is contemplated that the formation of RTO West will result in significantly

more information about the RTO West System, the use of such system, and the price paid for such uses. One of the primary drivers of the congestion management model is to provide appropriate price signals such that rational and economically-sound decisions are made by PTOs and other market participants about expanding the system or implementing non-transmission alternatives. The RTO West planning staff will identify problem areas on the system, both from a transmission adequacy and congestion perspective. The RTO West staff will work with PTOs to ensure transmission adequacy. RTO West will also provide conceptual proposals to deal with congestion (current and projected) in an open process with full participation of interested parties. The RTO will solicit interest in such proposals, and facilitate participation to the extent desired by interested parties. Other parties may submit proposals for consideration in the planning process. If a project does not become fully subscribed, the RTO shall not assume that there has been market failure; rather, the RTO should determine the cause for the inadequate subscription (e.g., the project was not appropriately scoped or designed, the project is not economically viable based on perceived market risks, etc.) and determine if any changes would make the project viable.

2) PTO Voluntarily Builds for Adequacy

After RTO West's approval of a PTO's expansion plans to satisfy the transmission adequacy standards, the PTO will proceed with construction of any needed upgrade or facility and keep the RTO West informed of its status.

3) RTO West's Expansion Authority

RTO West has authority to cause system expansion in two instances, when a PTO has not demonstrated to the RTO West's satisfaction that it meets the transmission adequacy

standards or when significant chronic, commercial congestion has not been mitigated as a result of market failure.

Given that the RTO West rate recovery mechanism is primarily a load-based access fee, RTO West should only cause cost-effective expansion that primarily benefits RTO West's load.

[Still under discussion -- In exercising its authority, RTO West will consider non-transmission solutions. While the RTO West By-Laws contain some limitations on its ability to implement non-transmission solutions (for example, RTO West cannot build or purchase the output of a new generating facility), RTO West may accept a non-transmission solution proposed by a third party so long as it is proven to meet the applicable reliability criteria and the FERC will allow its costs as a transmission cost for the benefiting party (parties).]

a) Transmission Adequacy

Transmission adequacy is the physical ability of the RTO West System, irrespective of the cost of energy, to serve load. PTOs have primary responsibility for complying with RTO West transmission adequacy standards. RTO West has authority to ensure transmission adequacy as follows.

(i) Collection and Analysis of System Information

To provide a foundation for testing the transmission adequacy of RTO West Transmission System, on an on-going basis, RTO West will gather available generator

and load forecasts, and system topology information. This data will be available on RTO West's Web site on an on-going basis and organized and published annually in documentary form. RTO West will analyze and further develop that information as appropriate (including supplemental load forecasting).

After aggregation of this information, RTO West will determine which PTO's(s') system(s) are likely to be used to serve transmission requests and other projected load requirements, and forward such information to the affected PTO(s).

(ii) Verify that PTO's Proposed Adequacy Project Solves System's Problems

PTOs have the primary responsibility for satisfying RTO West's transmission adequacy standards. PTOs will, based upon the foregoing information provided by RTO West and any other information available to them, determine whether they will be in compliance with the transmission adequacy standards during RTO West's planning horizon.

If a PTO concludes that it will be in compliance, it must demonstrate such compliance to RTO West's satisfaction, which will test that conclusion as described below. If a PTO determines that its system will need to be upgraded or expanded in order to comply with the standards during the planning horizon, the PTO has three options: (1) develop a plan to meet the standards in a least-cost planning process and propose the plan to RTO West, (2) develop a plan to meet the standards and propose the plan to the RTO who will evaluate it in its least-cost planning process, or (3) request RTO West to develop a plan through the RTO West least-cost planning process.

If multiple PTOs need to be involved in order to meet certain aggregated service requests, RTO West should coordinate the PTOs' determination of a plan of service and their respective obligations within a set timeframe. Notwithstanding this coordination role, the PTOs retain primary responsibility for developing a plan to meet the transmission adequacy standards and demonstrating the transmission adequacy of their facilities to RTO West. If the PTOs cannot reach agreement, however, RTO West has the authority

to determine what is the preferred least-cost plan that will satisfy transmission adequacy standards during the planning horizon.

All PTOs submit their demonstrations of adequacy or proposed plans to resolve transmission adequacy issues to RTO West, who will double-check the results (using the generator, load, and system topology information discussed above) on a simultaneous system-wide basis by assuming that all reasonable generation is on. In addition, in the event a PTO developed its proposed plan in its own planning process pursuant to option (1) above, RTO West must confirm that the PTO's process was an adequate least-cost planning process before approving the plan.

If all load is not served, RTO West will determine where transmission insufficiencies exist and publish the results. The RTO will then work with the affected PTOs to solve their system's transmission insufficiencies.

**(iii) Implement Adequacy Solution in Absence of Voluntary
Action by Participating Transmission Owner(s)**

If the PTO does not voluntarily take action to solve its system's transmission insufficiencies, RTO West will determine an adequate expansion solution using its least-cost planning process, cause the solution to be implemented, and allocate the costs of such solution to the PTO to be recovered in its Company Rate during the Company Rate Period and in a manner consistent with future RTO West pricing structures.

When there are competing PTO solutions to achieve transmission adequacy standards and the PTOs cannot agree which solution to implement or how to share its costs, RTO West will decide which is the preferred solution, cause that solution to be implemented, and allocate the costs of such solution among the benefiting PTOs to be recovered in their Company Rates during the Company Rate Period and in a manner consistent with future RTO West pricing structures.

b) Chronic, Commercial Congestion

RTO West has the authority to take whatever cost-effective actions it feels are appropriate if the Market Monitoring Unit determines that specific instance(s) of market failure have precluded the cost-effective mitigation of chronic, significant commercial congestion (including design and market rule changes as well as expansion); no specific process is being prescribed for resolving these types of failures.² RTO West's actions shall not reduce the reliability of load service. If RTO West determines it is likely to exercise such authority, prior to doing so, RTO West shall in an open stakeholder forum develop a process in which to exercise such authority and provide for challenges to the outcome of such process to be raised in the RTO West dispute resolution process. *[This subsection does not have full Filing Utility support]*

c) Obligation of RTO West to Ensure Negative Impacts of Interconnections have been Appropriately Mitigated

RTO West will require the following before allowing any new transmission facility or system upgrade to be interconnected to the RTO West Transmission System (irrespective of its ownership or who caused it to built):³

i) Negative Impacts on Reliability and Transfer Capability

RTO West will perform system impact studies to identify the impacts of the proposed interconnection or upgrade and require the facility's sponsor(s) to appropriately mitigate any negative impacts on RTO West Controlled Transmission Facilities to system reliability and transfer capability; provided commercial impacts; *[Further work is needed on impacts resulting from the addition of facilities needed to serve load]*

² The scope of the MMU's responsibilities are set out in the Market Monitoring Plan; as part of those responsibilities, the MMU will be periodically assessing markets that impact RTO West Markets, and will be aware of volatile power prices.

³ A PTO-sponsored upgrade or expansion being implemented for purposes of satisfying transmission adequacy standards must receive RTO West approval as described in section D.2) above.

ii) Opportunity for Participation

The sponsor(s) of the new facility or upgrade must have offered other interested parties the opportunity to participate in the planning process for the interconnection. If the other parties wanted to modify the proposed project to increase its transfer capability or reliability and were willing to assume the increased costs of the project, the plans for proposed interconnection shall be modified; and

iii) Meeting Other Interconnection Requirements

The facility addition or upgrade must meet all interconnection and integration requirements imposed by PTOs and RTO West pursuant to the TOA, generation integration agreements, and load integration agreements.

To summarize, if a sponsor comes forward with an “other-than-transmission-adequacy” expansion project, assumes complete financial responsibility, and satisfies the requirements stated above, the RTO will allow the project to be interconnected to the RTO West Transmission System. RTO West-caused construction must also meet the above requirements in order to be interconnected to the RTO West Transmission System.

E. Development of Process For RTO West Caused Construction or Third-Party Enhancement of Existing Facility

With the input of the PTOs and other stakeholders, RTO West will define a process to govern when it plans to exercise its authority and cause an upgrade or facility to be built and when a third party proposes to enhance an existing PTO facility. At a minimum, the process will provide that (i) a PTO on whose system the upgrade or expansion is proposed has the right to submit a bid to construct the upgrade or expansion, (ii) either a PTO or the successful third-party contract will act as project manager (ensuring that RTO

West does not enter the construction business), and (iii) that the affected PTO(s) can be involved in the construction (at a minimum, in a coordination role).

F. Allocation of Benefits and Costs *[Further work is necessary to make sure the following comports with section 6.1.2.1 of the TOA]*

RTO West has the authority to allocate costs of expansion in two instances: (i) when it has exercised its authority and caused a facility or addition to be built or requires a PTO to participate in an upgrade or expansion to ensure transmission adequacy (including when PTOs cannot agree on cost allocation for joint projects) or (ii) when a project sponsor requests an allocation and can demonstrate that its project has conferred a transmission adequacy benefit on a PTO. All such allocations are subject to RTO West dispute resolution.

1) Allocation of Costs When the RTO has Exercised its Expansion Authority

When the RTO causes the construction of an upgrade or new facility *[or implements a non-wire solution to avoid the need to construct]*, it should allocate costs based upon the principle that costs should follow benefits. Accordingly, the RTO should (i) identify the benefits of the upgrade or facility *[non-wires solution]*, (ii) determine the beneficiaries, and (iii) allocate the costs to the beneficiaries proportionate to the benefit received. The RTO can allocate costs relating to the following benefits as set out below.

a) Transmission Adequacy Benefit

A transmission adequacy benefit is conferred when an upgrade or facility, *[non-wires solution]* brings a PTO into compliance with the transmission adequacy standards during RTO West's planning horizon. The RTO will allocate the costs of a transmission adequacy upgrade or facility *[or non-wires solution]* to the PTO(s) who are being

brought into compliance. The PTO(s) will recover the costs of such facility through its (their) Company Rate(s) during the Company Rate Period and in a manner consistent with the RTO West pricing methodology thereafter.

b) Area Benefit

An area benefit is conferred when a project results in a demonstrable, “other-than-transmission-adequacy” benefit to a portion of the RTO West System (e.g., general reliability, reduction of losses). RTO West will allocate the costs relating to identified, specific area benefits to the load located in the area being benefited. The PTO(s) of such load may include the allocated costs in its (their) Company Rate(s) during the Company Rate Period and in a manner consistent with the RTO West pricing methodology thereafter.

c) System-Wide Benefit

A system-wide benefit is conferred when a project results in a demonstrable “other-than-transmission-adequacy” benefit to the entire RTO system (e.g., voltage support, general reliability, reduction of losses). The RTO will develop a method to allocate the costs that is consistent with both of RTO West’s pricing and congestion management policies.

d) Congestion Relief⁴

A congestion relief benefit is conferred when an RTO West project results in an avoidance of congestion costs. To the greatest extent possible, RTO West should directly assign the costs of congestion relief projects to the projects’ beneficiaries (RTO West should not default to spreading the costs across the system just because it is difficult to

⁴ FTOs will be created as a result of a project with congestion relief benefits provided that system transfer capability is increased. To the extent that RTO West directly assigns the portion of the costs of such project attributable to congestion relief to specific entities, those entities will also receive the corresponding FTOs. If, however, RTO West elects to spread the costs of such facilities, the FTOs will be auctioned by the RTO and the proceeds will offset the costs that are to be spread.

determine specific beneficiaries). RTO West will decide how to determine the beneficiaries of congestion relief and allocate costs accordingly.⁵

(2) Allocation of Adequacy Project Costs when Joint Project Sponsors Cannot Agree on Allocation

When more than one PTO is involved in a transmission adequacy project and such PTOs cannot agree on a cost allocation, RTO West shall determine the benefits each party will receive and allocate costs accordingly.

(3) Project Sponsor Requests Allocation

RTO West will allocate a portion of the costs of a new third-party upgrade or new facility when a project sponsor can demonstrate that its project confers a needed transmission adequacy benefit on a PTO(s). A PTO(s) will only be found to have received a transmission adequacy benefit if the new upgrade or facility avoids or defers the need of the PTO to implement a transmission adequacy solution within RTO West's planning horizon (as previously determined by RTO West in its planning process). The costs that RTO West can assign to the benefiting PTO(s) shall be capped by the avoided costs the benefiting PTO(s) would have paid to implement the least-cost alternative required to satisfy the transmission adequacy standards. The PTO will recover the costs of such allocation through its Company Rate during the Company Rate Period and in a manner consistent with the future RTO West pricing methodologies.

(4) Challenges to RTO Allocation Decisions

All of RTO West's cost allocation decisions will be subject to RTO West alternative dispute resolution and appealable to FERC.

⁵ While a PTO is not expressly precluded from recovering costs attributable to congestion relief benefits from its Company Rate, it is anticipated that a PTO will attribute the costs to power functions relating to a specific set of customers and directly assign the costs to power costs. Ultimately, the appropriate regulatory entity will decide who will pay for such costs.

G. Who is Entitled to FTOs Corresponding with New Transfer Capability

(1) New Facilities

The project sponsor of a new facility shall receive FTOs created by such facility; provided that, prior to the commencement of construction, the project sponsor and RTO West will negotiate the specific property rights to be received by the project sponsor (e.g., the injection and withdrawal locations for such FTOs).

(2) Rights Corresponding to New Transfer Capability on Existing Facilities

For a period of 18 months after the RTO becomes operational, when an upgrade or addition creates additional transfer capacity on an existing PTO facility, the party paying for the upgrade or expansion shall be assigned the resulting FTOs subject to the PTO's right to participate in the upgrade and receive a portion of the resulting FTOs in exchange for cost-sharing responsibilities (yet to be defined). During that same period, PTOs will be asked to compile a list of facilities that they anticipate upgrading in the future in order to serve load growth, including a general description of the nature of the upgrade and a projected timetable.

Beginning in the 19th month after the RTO becomes operational, a party paying for an upgrade to a PTO's existing facility shall receive the FTOs resulting from such upgrade; provided that if the PTO identified the facility as one it anticipated upgrading, the project sponsor must reach an agreement with the PTO, prior to the construction of the upgrade, allowing the PTO to participate in the increased transfer capability at the time it is needed for the PTO's load growth and determining the cost responsibility of the PTO for such participation.

H. Transition to RTO West Planning

1) Operational Planning (Responsible from Day One)

RTO West has responsibility for the operational planning of the RTO West System, and will assume direct responsibility for operational planning functions beginning on RTO West's service commencement date.

2) Long-Term Planning (RTO Evolves – RTO Decides who does Planning Studies (assumes Initial Reliance on PTOs))

RTO West will determine how to implement its planning and expansion authority and fulfill necessary planning responsibilities consistent with the TOA. RTO West will determine what information it needs from PTOs, what use to make of such input, and whether RTO West or the PTOs (or some combination thereof) will perform studies. The PTOs anticipate that RTO West's approach will evolve over time.

3) Western-Interconnection Wide Planning Pending Formation of RTO West

[Bring in language from interregional section for emphasis.]