

Attachment A
to
Report of the California ISO, the RTO West Filing Utilities,
and the WestConnect Applicants Concerning Activities of
the Seams Steering Group - Western Interconnection

Summary of Major Deliverables and Timetable

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Summary of Major Deliverables and Timetable

Purpose: The purpose of this document is to provide a high level summary of the major SSG-WI deliverables and the timetable for their delivery. In addition, consistent with the statements made in the main body of this filing, the SSG-WI participants have also identified as “high priority” those items that will be the primary focus of the SSG-WI effort. Finally, while the overall timeframe for resolving many of the issues identified in this report is likely to extend beyond 2003, the focus of this document is on the major deliverables of 2003, broken down by quarter.

To facilitate understanding of this document, the following abbreviations are used:

CMAWG – Congestion Management Alignment Work Group

PWG – Transmission Planning Work Group

MMWG – Market Monitoring Work Group

CSIC – Common Systems Interface Coordination Work Group

PRWG – Price Reciprocity Work Group

1st Quarter - 2003

- **MMWG – High Priority.** Develop and detail options for the Steering Group to consider (as part of forming a recommendation to the Western RTOs) related to whether the West-wide market monitoring function should be structured around a single, primary market monitor for the Western RTOs’ markets, or if this function can be performed by an umbrella or coordinating body that monitors for seams issues.
- **CSIC -** Propose implementation plans for seams-related systems and processes.
- **CSIC -** Examine other systems as appropriate.
- **PRWG -** Identify applicable existing charges and proposed charges applied to various transactions.
- **CMAWG – High Priority.** First report on progress of work group on the high level technical tasks described below:
 - **CMAWG – High Priority.** Analyze whether a mixed model of physical and differing (options versus obligation-based) financial rights, including their scheduling implications, is manageable for both system operators and users, and whether it allocates transmission efficiently;
 - **CMAWG – High Priority.** Determine whether, to the extent redispatch is required or used to manage congestion, it is necessary to have a single set of congestion clearing prices across the seams so that no inter-RTO barriers to trade or arbitrage opportunities result, and if so, how the RTOs can assure it. Establish whether this requirement extends to multiple products such as ancillary services, as well as redispatch for congestion clearing, and to both day-ahead and real-time markets;

- **CMAWG – High Priority.** Evaluate whether there is a way to allow differing granularity for the physical system model used by each Western RTO for its internal and its external calculations (internal to one is external to the others) or whether a single equally detailed physical model is required for each RTO.

2nd Quarter - 2003

- **CSIC -** Implementation coordination (helping the Western RTOs keep current with and take into consideration each other’s systems implementation processes).
- **CSIC -** Simulation coordination (helping the Western RTOs develop process simulation approaches that take into account approaches of neighboring RTOs and avoid gaps in the simulations).
- **CSIC -** Business process modeling (identify opportunities to improve consistency among the Western RTOs with respect to transaction processes and terminology).
- **PRWG -** Collect data and analyze the financial implications on the current/proposed processes for collecting revenues related to interregional transactions.
- **MMWG – High Priority.** Develop an initial proposal regarding confidentiality of and access to data.
- **PWG – High Priority.** Develop a process to identify transmission projects that are needed for economic reasons to facilitate a competitive and seamless West-wide wholesale electricity market.
- **PWG – High Priority.** For projects that: (1) would have a direct effect on more than one RTO, (2) are developed by sponsors outside of the Planning Work Group planning process, and (3) seek cost recovery from Western RTO ratepayers, SSG-WI will develop a process to evaluate whether the projects are justified (necessary and cost-effective).
- **PWG – High Priority.** Determine if and how SSG-WI will support implementation projects recommended by the Planning Work Group.
- **PWG – High Priority.** Develop a process to resolve differences in transmission interconnections that will enable parties to avoid going to the Commission under the process set forth in sections 210 and 211 of the Federal Power Act.
- **CMAWG – High Priority.** Second report on progress of work group on the high level technical tasks described under “1st Quarter” above.

3rd Quarter - 2003

- **PWG – High Priority.** Develop SSG-WI Western Interconnection Transmission Plan.
- **PRWG -** Finalize development of options for price reciprocity.
- **CMAWG – High Priority.** Develop a consensus proposal concerning the “core elements” of a seamless Western electricity market. This effort will build off of

the work previously done through the Western Electricity Coordinating Council (the “WECC”) and will clarify which elements of the western market need only to be compatible and those that need to be standardized.

4th Quarter - 2003

- **PRWG** - Develop proposals for addressing pricing seams with and services offered to non-participants.
- **PRWG** - Develop assessment criteria, consider available pricing options, and identify suggested alternative.

Attachment B
to
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Executed Memorandum of Understanding and Cooperation
Among RTO West, WestConnect, and the California ISO

MEMORANDUM OF UNDERSTANDING AND COOPERATION

This Memorandum of Understanding and Cooperation ("Memorandum" or "MOU"), dated as of the 5th day of December, 2002, by and among RTO West, a Washington, no n-profit corporation ("RTO West"), the Interim Committee of WestConnect, ("WestConnect") and California Independent System Operator Corporation, a California nonprofit public benefit corporation ("CAISO" and, together with RTO West and WestConnect, the "Parties"), sets forth certain general principles and preliminary understandings regarding matters under discussion among the Parties as part of the Seams Steering Group-Western Interconnection ("SSG-WI").

WHEREAS, FERC has requested that the Parties formalize the relationship among the Parties as part of their respective Orders related to the formation of Regional Transmission Organizations ("RTOs") under Order 2000; and

WHEREAS, the Parties wish to develop and support an evolving seamless western wholesale energy market that minimizes trade barriers and promotes common business practices for inter-RTO transmission services ("Seamless Western Market"); and

WHEREAS, the Parties have a common Vision which has served as a starting point for seeking to implement the Seamless Western Market through the three western RTOs; and

WHEREAS, the Parties wish to reiterate their commitment to cooperate, while confirming the individual corporate decision-making autonomy of each, expressing their desire to benefit their respective constituencies, and preserving local and state political accountability and regional reliability.

NOW, THEREFORE, in consideration of the mutual benefits to the Parties to be obtained pursuant to this Memorandum of Understanding and Cooperation as set forth below, the Parties hereby agree as follows.

1. Purpose.

1.1 SSG-WI will serve as the discussion forum for facilitating the creation of a Seamless Western Market and for proposing resolutions for issues associated with differences in RTO practices and procedures. Each Party shall designate representatives to form a Steering Group ("Steering Group"), as provided below. The designated representatives shall represent the regional RTO being formed by the respective Party and will be authorized to bring issues affecting proposed operation of the Seamless Western Market from the individual RTO Parties to the Steering Group. The Steering Group representatives will identify and discuss the issues, and set the priorities and proposed schedules for presenting its recommendations to the RTOs for resolution. The Steering Group representatives will work together to develop consensus recommendations consistent with a Seamless Western Market. The Steering Group will refer its non-binding consensus recommendations to the three RTO Parties for their individual consideration.

- 1.2 The purpose of this MOU is to set forth a framework that will assist and guide the Parties in continuing their discussions, through the SSG-WI, regarding benefiting their respective regions and constituencies through interregional coordination.
- 1.3 The Parties agree to utilize this framework to cooperate and work together to achieve consensus positions on the interregional issues considered by SSG-WI; each Party and its respective governing body, however, retains complete power and authority to determine ultimately whether to adopt and/or implement consensus recommendations reached by the Steering Group.
- 1.4 The Parties desire to provide a collaborative framework for states, tribes, Canadian provinces, Mexican states, other local regulatory and enforcement entities, and FERC to participate in this process and the Parties agree to modify this MOU in the future as necessary to facilitate those entities' participation.

2. Implementation.

Subject to each Party's rights under this MOU, each Party agrees to commit resources, in whatever form each Party deems appropriate, to continue discussions towards reaching consensus positions on the interregional issues considered. Such action shall include the following:

- 2.1 Each Party shall appoint three representatives ("Steering Group Representatives"), and each Party shall additionally appoint one alternate representative to act in the absence of any one of the three representatives. Each Steering Group Representative shall serve on the Steering Group at the pleasure of the Party that appointed such Steering Group Representative and may be removed or replaced by such Party at any time. Each Steering Group Representative

shall be responsible for keeping his or her respective Party advised on matters relating to this MOU. The Steering Group Representatives shall select a chair of the Steering Group.

- 2.1.1 To lead and coordinate the efforts of the Parties to plan and provide for discussions to seek consensus on the interregional issues considered;
 - 2.1.2 To facilitate collaboration and input from market participants and other interested parties in the development of proposals for the Steering Group's consideration, as appropriate;
 - 2.1.3 To do such other things and carry on other activities that the Steering Group determines to be necessary, advisable, appropriate, convenient or incidental to the purpose of this MOU.
- 2.2 The Steering Group will develop and periodically update a SSG-WI Work Plan describing the specific functions of the SSG-WI. The Parties must unanimously approve the Work Plan.
- 2.3 The Steering Group responsibilities to carry out its purposes shall include the following:
- 2.4.1 To monitor and participate in the meetings and activities undertaken to seek consensus on the interregional issues considered.
 - 2.4.2 To form work groups and to devise a process for resolving issues through such work groups, including arranging for those discussions to be brought to the Steering Group for developing a consensus recommendation.
 - 2.4.3 To devise a process for securing the approval or ratification of each Party for consensus recommendations reached by the Steering Group.
 - 2.4.4 To develop a budget for the necessary costs to be incurred in arranging for meetings and activities appropriate to this MOU and to arrange for those costs to be shared by the Parties to this MOU.

- 2.5 Through the appointed Steering Group Representatives each Party shall have one vote. A consensus from the discussions on the interregional issues and any other matters provided under this MOU shall be determined only upon the unanimous vote of all Parties.
- 2.6 Meetings of the Steering Group may be held with adequate notice at any time, at any location or by conference telephone call, upon a call for a meeting by any Party.

3. Administration.

- 3.1 The Parties shall develop appropriate information-sharing mechanisms in connection with the matters to be considered by SSG-WI, consistent with confidentiality restrictions, limitations on dissemination of proprietary information, and federal, state and local laws applicable to each Party.
- 3.2 Each Party, any representative of such Party (including Steering Group Representatives), and any other participant shall bear its or their own expenses associated with participation in the activities under this MOU.
- 3.3 This MOU shall not be interpreted or construed to create an association, joint venture or partnership among the Parties or to impose any partnership obligations or liability upon any Party.

4. Termination.

- 4.1 This MOU will terminate upon an affirmative vote by the Steering Group to terminate the MOU. Each Party shall remain responsible for any costs incurred under this MOU prior to such termination. Termination of this MOU shall not affect the obligations of a Party under any collateral agreement executed to further the purposes, functions or responsibilities stated in this MOU.

4.2 The Parties' continued participation in the SSG-WI shall be at their sole discretion, and any Party hereto may withdraw from its participation in SSG-WI by giving written notice to the other Parties hereto. This Memorandum shall immediately become null and void if it is deemed improper and/or unenforceable by regulatory or judicial authorities having appropriate jurisdiction over any of the Parties. In addition, this Memorandum shall not bind the Parties other than as expressly set forth herein, and shall become null and void in the event the Parties enter into a more formal and binding agreement.

4.3 For the withdrawal and termination provisions of Section 4.2, the Parties shall make reasonable arrangements to satisfy their respective financial obligations entered into pursuant to this Memorandum.

IN WITNESS WHEREOF, the Parties hereto have set forth their signatures below this 5th day of December 2002.

RTO West

Wayman Robinett

WestConnect

Charles Reinhold

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Terry M Winter

SSG-WI 2002-03 Work Plan – Draft VERSION 1.1
July 19, 2002

The following outlines the major activities to be addressed by the SSG-WI during the 2002-2003 time period, through the work of its Steering Group and Work Groups:

SSG-WI Steering Group

Goal of the Steering Group –

To serve as the discussion forum for facilitating the creation of a seamless Western market and for proposing resolutions for issues associated with differences in RTO practices and procedures.

Tasks of the Steering Group:

- Develop a Memorandum of Understanding approved by RTO West, CalISO and WestConnect., addressing SSG-WI's purpose, functions and responsibilities, membership, governance, cost sharing and termination provisions.
- Develop consensus positions on interregional issues brought before the Steering Group.
- Develop a collaborative framework for participation of states, tribes, provinces and other entities in SSG-WI activities.
- Develop consensus positions to comply with any FERC requirements concerning seams issues established in Commission Orders on the RTO proposals of the California ISO, RTO West and WestConnect.

Planning WG

Goal of the Planning WG –

To provide a forum to further the development of a planning process that will result in a robust West-wide interstate transmission system that is capable of supporting a competitive and seamless West-wide wholesale electricity market.

Tasks of the Planning WG:

- Identify Congested Paths and Load and Generation scenarios and perform studies for 2008 time frame.
- Review tools available or under development to evaluate the benefits of transmission projects to expand access to electricity markets and resources.
- Determine load, generation and transmission scenarios to study in the 2013 time frame and run studies.

- As part of the above tasks, address the recommended “Next Steps” identified in the August 2001 WGA report, “Conceptual Plans for Electricity Transmission in the West”.
- Begin work on development of a transmission Vision for future development of the western transmission system.

Market Monitoring WG

Goal of the Market Monitoring WG –

To develop a workable proposal for a single West-wide Market Monitoring Entity that would monitor the California ISO, RTO West and WestConnect RTO markets and satisfy the Order 2000 market monitoring requirements for each of the western RTOs.

Tasks of the Market Monitoring WG:

- Finalize the “working document” to be considered by the three RTOs (the document will contain recommendations and, where the workgroup is not able to develop consensus, develop options and briefing materials regarding the options to be considered by the SSG-WI) – Lead responsibility is the SSG-WI MM Group.
- Negotiate “agreement in principle”; will need the commitment of the SSG-WI Policy Group to focus on market monitoring and resolve issues - Lead responsibility is the SSG-WI Steering Group.
- Schedule a public meeting to obtain stakeholder comments on the proposal.
- Finalize written agreements and filings as appropriate, develop implementation plan.

Common Systems Interface Coordination WG

Goal of the Common Systems Interface Coordination WG –

To coordinate systems for the Western Interconnection RTOs for seamless interfaces and lower costs and to assure that systems and processes have effective operability and address the complexities of each region with their unique system characteristics and environment.

Tasks of the Common Systems Interface Coordination WG:

- Develop recommendations on communications infrastructure, RTO Backup Control Centers, Single Market Interface and Shared Training.
- Develop the business processes, data flows and data content required by the business requirements and tariffs.

- Develop the information architecture, including the standards, protocols, data formats, and other design requirements.
- Develop a coordinated high level Implementation Plan for the Western Interconnection.
- Scope out a table top simulation of the proposed processes for the western RTOs.
- Participate in development of national transaction standards.

Price Reciprocity WG

Goal of the Price Reciprocity WG –

To develop a proposal to eliminate export fees at the RTO Seams

Task of the Price Reciprocity WG:

- Identify options for eliminating export fees at the RTO seams, including the use of transfer payments and tariffs.

Congestion Management Alignment WG

Goal of the Congestion Management Alignment WG –

To eliminate seams issues associated with the western RTO congestion management models by identifying and proposing solutions to those seams issues that would have a negative impact on the efficient operation of a seamless western market.

Tasks of the Congestion Management Alignment WG:

- Incorporate a new Congestion Management Alignment group under SSG-WI.
- Identify areas of required conformity in RTO Congestion Management models and report back to the Steering Group those areas that need to be addressed.
- Identify where the emerging RTO plans digress from those requirements and then determine how (if possible) to bring them back together. Any ongoing SMD activity or specific clarifications/orders from FERC also need to be incorporated into this effort.
- Provide recommendations to SSG-WI to be considered by the three RTOs for implementation during subsequent design and implementation phases to mitigate possible seams issues.

**Attachment C
to**

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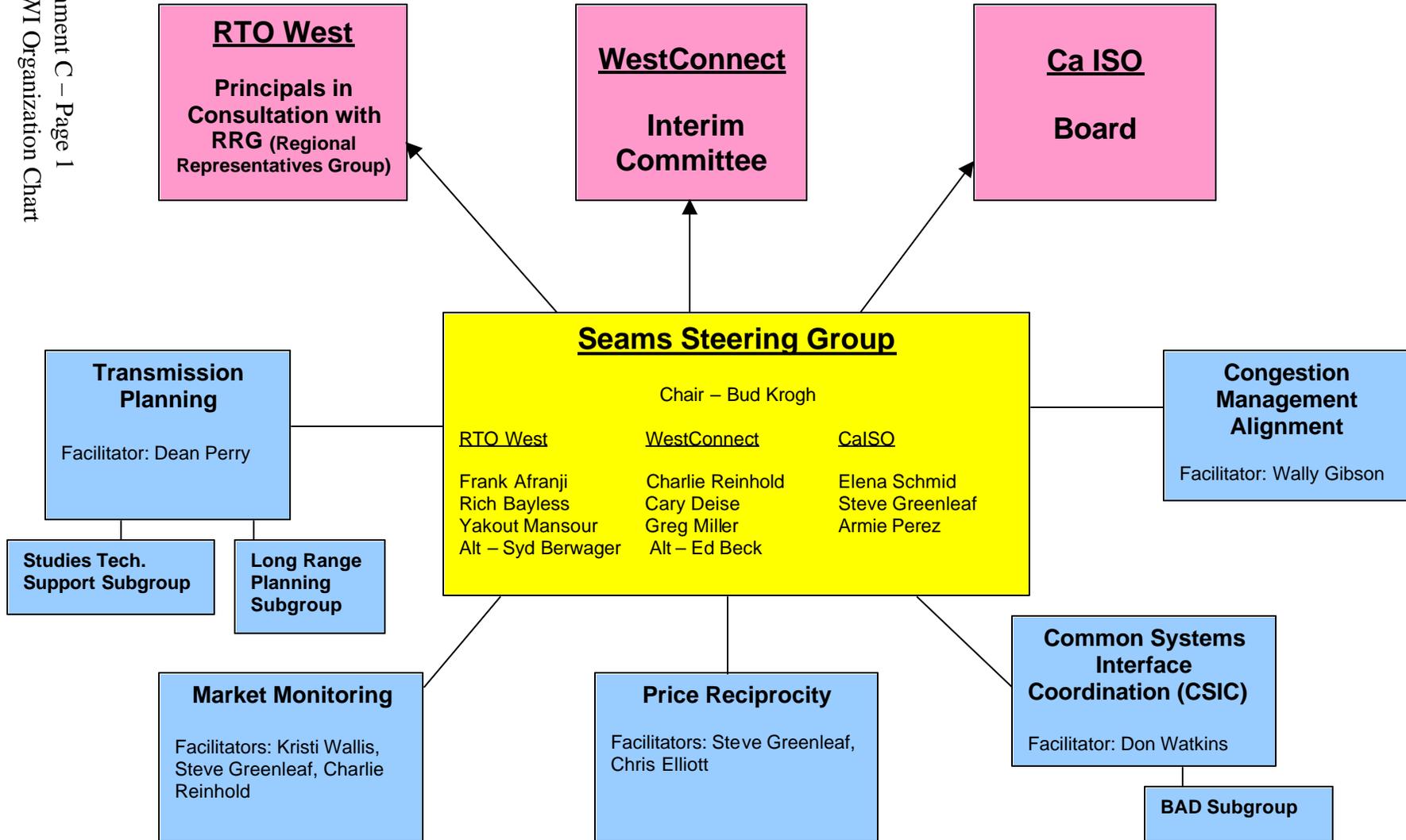
SSG-WI Organization Chart

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SSG-WI Organization

December 6, 2002

Attachment C – Page 1
SSG-WI Organization Chart



Attachment D

to

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**Congestion Management Alignment Work Group
Seams Issues Reference List Working Draft**

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CMAWG SEAMS ISSUES REFERENCE LIST

WORKING DRAFT

The Congestion Management Alignment Work Group's highest priority task is to develop a consensus proposal concerning the "core elements" of a seamless Western electricity market. This effort will build off of the work previously done through the Western Electricity Coordinating Council (the "WECC") and will clarify which elements of the western market need only to be compatible and those that need to be standardized.

To accomplish its key task, the Congestion Management Alignment Work Group will need to perform the following high-priority technical assessments. The names are for reference only. The specific detailed issues identified in the matrix are related to these broader issues as suggested below.

In the matrix the specific issues are cross referenced to this list using the abbreviations "Fa" and "Fb" for the two categories of fundamental approach issues, "C" for consistent price issues, "M" for modeling issues and "O" for other issues.

1. Fundamental approach issues: Is a mixed model of physical and differing (options vs. obligation centered) financial rights, including their scheduling implications, manageable for both system operators and users, and does it allocate transmission efficiently?
 - a. Financial/Hedging issues: I.a.1–8 (overlap)
 - b. Scheduling issues: I.a.1-4 (overlap), I.b.6, I.b.9–12, I.b.15, I.b.21, I.d.1
2. Consistent price issues: To the extent redispatch is required or used to manage congestion, is it necessary to have a single set of congestion clearing prices across the seams so that no inter-RTO barriers to trade or arbitrage opportunities result and, if so, how can the RTOs assure it? Does this requirement extend to multiple products such as ancillary services, as well as redispatch for congestion clearing, and to both day-ahead and real-time markets?
 - a. Issues: I.b.1, I.b.4, I.b.13-14, I.c.1, I.d.1-3, I.e.2
3. Modeling issues: Is there a way to allow differing granularity for the physical system model used by each RTO for its internal and its external calculations (internal to one is external to the others) or is a single equally detailed physical model required for each RTO?
 - a. Issues: I.b.2–3, I.b.5, I.b.7–8
4. Other issues: Market design seams issues not directly related to physical vs. financial rights, consistent price issues or physical modeling issues.
 - a. Issues: I.b.16-20, I.c.2, I.d.4-5, I.e.1, II.1, XI.1

Priorities and Timelines

The first three sets of issues can be thought of as ranging from most general to most specific. The first (fundamental approach) set is the highest priority, because it determines the overall success of the Western Market Vision enunciated by SSG-WI. The second set (consistent price) focuses on one particular aspect of achieving the Western Market Vision, the consistency or manageability of prices across the RTOs, to the extent redispatch is required or used to manage congestion or for other markets, such as ancillary services. The third set (modeling) focuses still deeper on the mechanics of achieving consistency or manageability of the prices. The last set (other) deals with issues that are not directly related to congestion models.

The CMAWG initially proposes to address the issues related to the first three priorities with two task groups. The first task group will focus on stepping through detailed examples of the process of scheduling a transaction between two RTOs, one example where the traditional contract path goes through the third RTO and one where the contract path would have been between adjacent RTOs, in each case with significant loop flow. The examination will go from acquiring transmission rights, if necessary, through real time operations and settlements. The hedging and scheduling aspects of transmission rights need to be considered together. This approach will highlight problems, suggest areas that need changes from one or more RTOs and clarify where different approaches may not actually create problems. The report of this group will detail the scheduling steps and the problems raised or determined to be manageable.

The second task group will focus on developing and using a simplified model to simulate markets of the three-RTO system. It will be used to examine specific implications of the three RTOs' congestion management approaches for price calculations for redispatch and for ancillary services and the effects of any ensuing price discrepancies in whatever markets require cross-boundary pricing, as well as potential solutions to any problems that are demonstrated. It should also be able to indicate initial answers to the model granularity issues in the third priority set of issues (modeling). This group's work will complement that of the first group.

Both task groups will bring information to bear on the Priority 1 and Priority 2 issues, and the second group will address the Priority 3 issues. The two task groups will proceed in parallel and interim work documents will be posted on the SSG-WI web site and be available as progress reports. In addition, interim reports will be made to SSG-WI at the end of the first and second quarters, 2003. Following review of the second interim report by the RTOs, a consensus proposal for the core elements of a seamless Western electricity market, including supporting material, will be developed, which will have a completion target of the third quarter, 2003.

The fourth priority issues are the "Other" issues, which can be addressed in parallel to the others, and or can be sequenced starting later in the process. They are largely independent of the other three issue groupings. The last issue (XI.1), however, involves major overlaps with a number of other substantive issues, but in the context of seams with non-RTO participants. Despite efforts by the RTOs to resolve seams issues prior to implementation to avoid redundant and unnecessary expenditures, issues may also arise in the future that are caused by sequential implementation of RTO market designs, and those issues, when identified, may fall in this category. This will need special attention and may involve the WECC MIC as well as SSG-WI. The CMAWG is proposing to focus its attention first on the inter-RTO issues. The same examples for stepping through the scheduling process can later be used to examine the issues raised between the RTOs and significant non-RTO participants.

Priorities are indicated in the matrix using this scheme.

	Seams Issues to be Addressed by CMA Work Group	Issue #	Issue Resolution Schedule
<i>I. MARKET DESIGN</i>			
<i>I.a. Prior to Day Ahead</i>			
<u>Congestion Revenue Rights (CRRs) [Firm Transmission Rights (FTRs) in MD02, FTOs in RTO West]</u> Financial or Physical	Are the differences in financial models really a seams problem? That is do they create a price discontinuity or are they simply acceptable differences in congestion hedging instruments? Are all transmission rights both physical and financial required to be identical to mitigate the seams problems?	I.a.1 (Fa/b)	1
Option or Obligation	Must the offerings be identical? How can congestion management discontinuities be mitigated?	I.a.2 (Fa/b)	1
Revenue Stream/ or Offset CM Cost	Do different CM models create barriers to trade, and if so, how can these differences be mitigated?	I.a.3 (Fa/b)	1 / 2
Duration	Must the term of congestion offerings be identical? How can congestion management discontinuities be mitigated? To the extent that longer term transmission rights are needed for new construction, can agreement be reached to issue long term rights?	I.a.4 (Fa/b)	1 / 2
Primary Release Mechanism	How will rights for loop flows (non-contract flows) in other RTOs be allocated/acquired?	I.a.5 (Fa)	2
Secondary Market	There seems to be agreement here that a secondary market would be outside the RTO. If the resulting secondary market is not westwide, will coordination be needed?	I.a.6 (Fa)	2
<i>I.b. Day Ahead</i>			
<u>Energy Spot Market</u>	To the extent that at a minimum congestion redispatch occurs in an RTO (i.e. a limited energy market), can a method be developed to produce consistent prices at the boundaries? If not, can price discontinuities be tolerated or managed?	I.a.7 (Fa)	2
<u>Congestion Management Market</u> Model spatial granularity	In order to achieve a uniform set of redispatch prices, if that is necessary, do the network models have to be identical, with the exact system? Each time each one is used does it have to be synchronized with the other RTOs or is a single process required? In addition do the programs that use the models have to be identical in order to get the uniform set of redispatch prices? If models with identical levels of detail for the West are not used by all three RTOs, do the various simplifications for areas outside any given RTO create problems in achieving a uniform set of redispatch prices?	I.a.8 (Fa)	2
		I.b.1 (C)	2
		I.b.2 (M)	3
		I.b.3 (M)	3

	Seams Issues to be Addressed by CMA Work Group	Issue #	Issue Resolution Schedule
	To what extent do RTOs need to see other RTOs' scheduling information?	I.b.4 (C)	2
Model objective function	To the extent that at a minimum congestion redispatch occurs in an RTO (i.e. a limited energy market), can a method be developed to produce consistent day ahead prices at the boundaries?	I.b.5 (M)	3
	Who coordinates the scheduling constraints (i.e., security constrained dispatch) on paths that cross RTO boundaries to ensure that inter-RTO schedules do not exceed reliability standards?	I.b.6 (Fb)	2
	What is the effect of linking energy and ancillary service markets in the optimizations on model coordination issues?	I.b.7 (M)	3
	Does the use of both AC and DC OPFs introduce compatibility problems?	I.b.8 (M)	3
Schedule Components	Do differences in the scheduling requirements (e.g., requirements for balanced schedules) between RTOs create seams problems for inter-RTO schedules? If so, can these problems be mitigated?	I.b.9 (Fb)	1/2
	Will different RTO congestion management systems enhance opportunities for gaming or affect generation dispatch efficiency?	I.b.10 (Fb)	2
Other Scheduling Requirements	Can tools be developed for scheduling submission that assist the user in meeting any differences in protocols between RTOs?	I.b.11 (Fb)	2
	Should the time intervals and submission times be synchronized to mitigate obstacles to inter-RTO trade?	I.b.12 (Fb)	2
Congestion Prices	To the extent that at a minimum congestion redispatch occurs in an RTO (i.e. a limited energy market), can a method be developed to produce consistent prices at the boundaries that send the same signal to the market? If not, can price discontinuities be tolerated or managed?	I.b.13 (C)	2
<u>Ancillary Service Market Services</u>	Can a "best practice" model for definition and acquisition of ancillary services products be developed to produce consistent prices at the RTO boundaries?	I.b.14 (C)	2
	How does bidding of ancillary services between or among RTOs affect the scheduling and dispatch obligations within the RTOs? Can this kind of trade between RTOs be accommodated? Does trade of these services between RTOs have implications for either the "exporting" or "importing" RTO's ability to meet reliability criteria?	I.b.15 (Fb)	2
	When ancillary services are provided from within one RTO for another RTO, does the providing RTO recognize them as obligations within the seller's RTO?	I.b.16 (O)	4
	How can AS bids be coordinated across three markets to avoid both double counting and inefficient limitations on bids?	I.b.17 (O)	4
	Does the RTO of the A/S seller recognize the transmission	I.b.18	4

	Seams Issues to be Addressed by CMA Work Group	Issue #	Issue Resolution Schedule
	capacity reservation required to enable the reserves to respond for outages in the RTO of the buyer?	(O)	
Acquisition Mechanism	All three propose auctions: Do the auctions have be identical? Is it possible to use price exchange (say as imputed bids) in connection with interactive calculation to minimize the spread between the A/S auctions?	I.b.19 (O)	4
<u>Centralized Unit Commitment.</u>	Does unit commitment need to be standardized? Is this an area where each RTO can have its own method, which matches its resource mix and system responsiveness? (Rapid response of hydro gen. versus lead time requirements for thermal gen.)	I.b.20 (O)	4
<u>Release of Unused Transmission Capacity after Close of DA Markets</u>	Does a recallable physical right conflict with a redispatch set in a day-ahead clearing process?	I.b.21 (Fb)	1
<i>I.c. Hour Ahead</i>			
Timing	How are boundary prices to be synchronized between RTO's if only one RTO has a hour ahead process? Is it necessary to align hour ahead markets?	I.c.1 (C)	2
Energy Market	How does hour-ahead market integrate with neighbors who do not have hour-ahead process?	I.c.2 (O)	4
Congestion Management Market	[Same as for energy market].		
Ancillary Services Market	[Same as for energy market].		
<i>I.d. Real Time</i>			
Model spatial granularity	[Same set of issues as Day Ahead]		
Model objective function	Is it necessary to align real time markets? If so, can a method be developed to produce consistent real-time prices at the boundaries? (avoid an price discontinuity due to separate calculation of prices with different information.)	I.d.1 (C)	1/2
Dispatch interval	How much would a common dispatch interval mitigate against price discontinuities at boundaries?	I.d.2 (C)	2
Imbalance Price	Can a method be developed to produce consistent real-time prices at the boundaries? (avoid an price discontinuity due to separate calculation of prices with different information.) If not, can discontinuities be tolerated or managed? [This may be more of a settlements issue than a consistency issue.]	I.d.3 (C)	2
Penalties	Do penalties need to be the same in each RTO?	I.d.4 (O)	4
	Will inconsistent imbalance penalty practices hamper non-dispatchable resource sales across RTO boundaries?	I.d.5 (O)	4

	Seams Issues to be Addressed by CMA Work Group	Issue #	Issue Resolution Schedule
<i>I.e. Post Real-Time</i>			
<u>Settlement</u> Stages	Do settlement systems have to be common as long as price discontinuities at the boundaries are managed?	I.e.1 (O)	4
	How are inter-RTO settlements managed? (Includes the revenue adequacy issues related to achieving consistent prices.)	I.e.2 (C)	2
<i>II. DEMAND RESPONSE PARTICIPATION</i>			
	How does bidding or demand-side response between or among RTOs affect the scheduling and dispatch of obligations within the RTOs? Can these kinds of trades between RTOs be accommodated? Does trade of these services between RTOs have implications for either the exporting" or "importing" RTO's ability to meet reliability criteria? (Title to power needs to be established.)	II.1 (O)	4
<i>X. Resource Adequacy</i>			
	Note: RTO West and WestConnect are not currently proposing a resource adequacy requirement independent of the requirement for balanced schedules.		
<u>Resource Adequacy Assessment</u>	If there is an RTO capacity requirement for all RTOs, how will double-counting across RTOs be avoided?	X.1 (O)	Delayed pending state discussions on adequacy
<u>Resource Adequacy Resolution</u>	If there is an RTO capacity requirement for all RTOs, do different resource adequacy approaches result in different penalty structures and if so, does this create problems, e.g., opportunities for arbitrage?		Delayed pending state discussions on adequacy
<i>XI. Seams Between RTO Participants and Non-Participants</i>			
	Many, but not all, of the above general seams issues related to scheduling, redispatch, etc are duplicated between RTO and adjacent non-participants to the extent the latter can and do operate under existing WECC practices.	XI.1 (O)	May be delayed to completion of inter-RTO issues

Attachment E
to
Report of the California ISO, the RTO West Filing Utilities,
and the WestConnect Applicants Concerning Activities of
the Seams Steering Group - Western Interconnection

SSG-WI Transmission Planning Status Report

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SSG-WI Transmission Planning

Status Report

Development of a Western Interconnection Transmission Planning Process

December 18, 2002

SSG-WI organized a Transmission Planning Work Group (PWG) in the spring of 2002 to develop a western interconnection regional transmission planning process. This process is to be implemented prior to the Western RTOs becoming operational. Through an open stakeholder process the PWG has achieved a number of accomplishments to date including:

- Development of a Work Scope, approved by the SSG-WI Steering Group;
- Development of a functioning, open PWG organization;
- Development of an Implementation Plan outlining the initial work efforts, goals and objectives of the PWG;
- Initiation of a historical path flow congestion study for major transmission paths in the western interconnection;
- Initiation of a Planning Study to identify potential areas of future path congestion;
- Development (currently in draft form) of the SSG-WI Planning Process, indicating relationships to the planning functions of other western groups.

The SSG-WI Planning Process outlined below is a draft proposal currently under discussion and development by the PWG.

SSG-WI Planning Goals and Objectives

1. The goal of the SSG-WI planning function is to facilitate a competitive and reliable regional power market by providing information on transmission infrastructure additions that would produce a robust transmission system. A robust transmission system is one that can accommodate an efficient and competitive exchange of electric power among industry participants to enable them to serve load.
2. The SSG-WI planning function will deal with congestion issues that impact the marketing of energy between regional transmission organizations (RTOs)

and regions of the West. The study of transmission congestion within an RTO that does not impact other regions will remain the responsibility of the individual RTO. Load service/reliability planning will be the responsibility of the RTOs, PTOs and LSEs. The SSG-WI planning process will be coordinated and be compatible with the RTO planning processes, the local planning processes and the reliability planning processes of WECC.

3. The SSG-WI planning effort will focus on project needs and assume voluntary participant funding for projects. If it is determined in the future that a backstop role is necessary (beyond that of the individual RTOs), other funding mechanisms and cost allocations can then be developed.
4. Focus of expansion options for marketing analysis is beyond the time frame for currently committed projects, reaching out 5-15 years in future. The expansion options will cover possible load, transmission and resource scenarios that could occur in this timeframe. A committed project might be one in a state siting process or under construction.
5. The PWG will collect the following inputs to the planning process:
 - Historical path use;
 - Future resource/demand scenarios;
 - Production/Cost or other market analysis of these scenarios;
 - Transmission expansion plans from three RTOs (or individual TOs prior to RTO formation);
 - Local transmission expansion plans from TOs and LSEs;
 - Inter-RTO expansion plans to facilitate a competitive western interconnection energy market (reduce market power) developed by SSG-WI;
 - Higher-level transmission development concepts, guidelines and/or principles for long-range development; long-range visions for development of the western grid developed by SSG-WI and others;
 - Resource planning processes of major load-serving entities;
 - State, Provincial and Federal energy policies;
 - Demand-side management options;
 - Other inputs as necessary.

From these inputs, the PWG will produce and recommend to the Steering Group, West-wide long-range expansion scenarios that have broad benefits. Drivers of each project and sponsors, if any, will be included.

6. The PWG will evaluate transmission system implications and costs for various generation and load scenarios impacting the interconnected transmission system, for LSEs and other market participants to use in their resource planning and Least Cost Planning Process.

7. The SSG-WI will develop and recommend to the Western RTOs a Transmission Long Range Plan that is robust, embraces numerous planning variables, and provides insight and direction for interconnection expansion. The Plan will be forward looking beyond existing capabilities to portray the “next step” in system development.

SSG-WI will develop and recommend to the Western RTOs a Transmission Long Range Plan for the Western Interconnection on an annual basis.

SSG-WI Planning Process

The SSG-WI Transmission Planning Process (“Planning Process”) is a proactive, inclusive, interconnection-wide, transmission planning effort. It will address congestion issues that impact the marketing of energy between RTOs or regions. This includes the study of congested paths within a region that have an impact on the ability to market between regions. The study of transmission congestion within an RTO that does not impact marketing into other regions will remain the responsibility of the individual RTOs. The Planning Process, when linked to intra-RTO planning, will provide for a seamless transmission planning process throughout the interconnection.

Following is a description of how the Planning Process is organized, the steps that will be taken in implementing the process, and how these steps fit with individual RTO planning and expansion processes and the WECC transmission planning and path rating process. How the process is organized and the steps in the process are not static and are expected to evolve as experience is gained with interconnection-wide transmission planning.

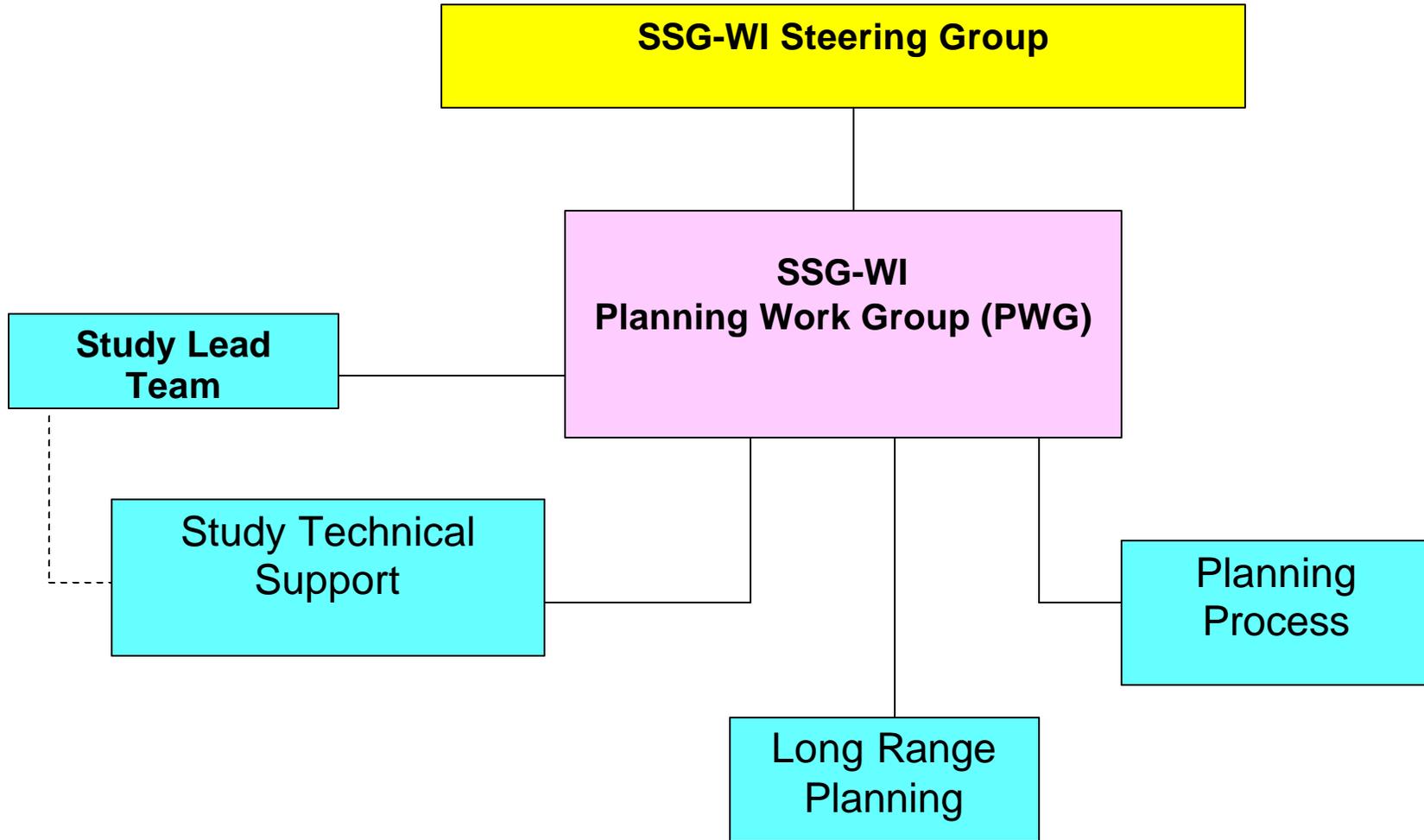
The core elements of the Planning Process are as follows.

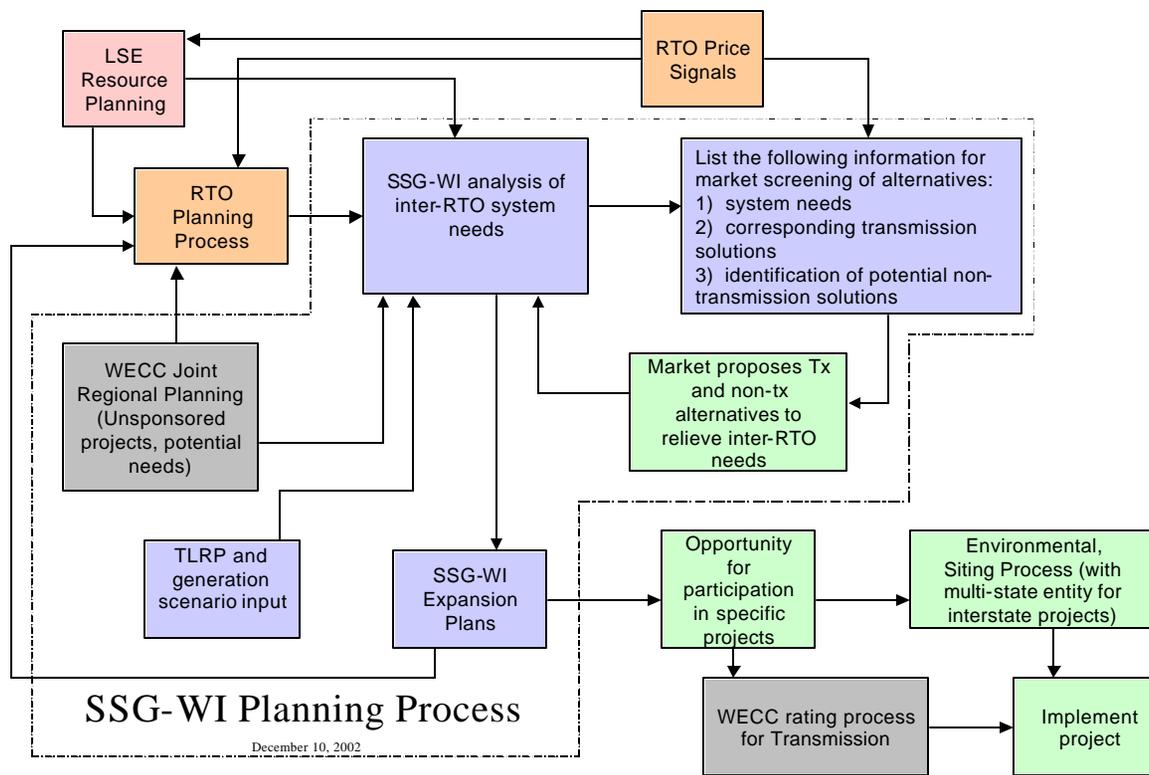
- The Planning Process is open to all stakeholders, including generators, marketers, loads, transmission owners, other formal or informal planning groups in the interconnection such as the Colorado Coordinated Planning Group, consumers, environmental interests, etc.
- Membership on the PWG is open to all interested parties. The PWG is responsible for directing the Planning Process and providing the products of the Planning Process to the Steering Group. Reports of the PWG will include majority and minority views.
- Within the PWG, there will be a Study Lead Team to direct the work of the technical study effort and ensure that study products meet the objectives and goals of the PWG. The Study Lead Team reports to, and receives guidance from, the PWG on all matters relating to study.
- A Technical Support Group will be created under the PWG to:

- a. Collect and validate all necessary study data (network, loads, and resources). This will be done by a data coordinator acting through area data collectors. The Technical Support Group will define data templates and manage study database(s) in concert with the analysis team and will make all data available to the PWG.
 - b. Advise on existing and new generation, including fuels/prime movers, costs and types, typical/actual economic and performance data, and prospective siting locations. This sub-group will provide data as requested by the data coordinator.
 - c. Advise on the existing transmission network and on proposed transmission expansions by providing information on circuit data, flowpath ratings/nomograms and advise on feasibility and security of transmission expansion options. This sub-group will provide data as requested by the data coordinator.
- The Western Electricity Coordinating Council (WECC) and the Committee on Regional Electric Power Cooperation (CREPC) will provide information and advice to and receive feedback from the Planning Process. WECC and CREPC are participants in the PWG. The PWG has an obligation to maintain liaison with WECC and CREPC and other relevant bodies in the Western Interconnection, including the Western Governors' Association. There will be continuous interaction between the planning processes within each RTO and the SSG-WI Planning Process to ensure the combined results of the planning efforts result in a seamless transmission planning effort throughout the interconnection. Individual stakeholders will provide input into the Planning Process. Other planning efforts within the interconnection will provide input to the Planning Process. This includes planning by groups such as the Colorado Coordinated Planning Group, the Northwest Power Pool, the Northwest Power Planning Council and the integrated resource plans of individual utilities. It is anticipated that workshops will be held as part of the Planning Process to solicit input and advice and to present results of analyses to interested parties. Information developed in the planning process will be available to all parties on the Internet, except where the release of information presents security or proprietary concerns.

This process outlined above and shown graphically below will evolve over time as experience is gained with interconnection-wide transmission planning.

SSG-WI Planning Work Group Organization





DRAFT
SSG-WI Transmission Planning Process

Attachment F
to
Report of the California ISO, the RTO West Filing Utilities,
and the WestConnect Applicants Concerning Activities of
the Seams Steering Group - Western Interconnection

Comprehensive Issues Lists for SSG-WI
Planning, Market Monitoring, Common Systems Interface
Coordination, and Price Reciprocity Work Groups

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**Comprehensive Issues Lists for SSG-WI
Planning, Market Monitoring, Common Systems Interface
Coordination, and Price Reciprocity Work Groups**

Planning	Pages 2 - 4
Common Systems Interface Coordination	Pages 5 - 8
Market Monitoring	Pages 9 - 10
Price Reciprocity	Pages 11 - 16

Work Group: Planning

Issue:

- a. Develop a Process to identify transmission projects that are needed for economic reasons to facilitate a competitive and seamless West-wide wholesale electricity market.**
- b. For projects that: (1) would have a direct effect on more than one RTO, (2) are developed by sponsors outside of the Planning Work Group planning process, and (3) seek cost recovery from RTO ratepayers, SSG-WI will develop a process to evaluate whether the projects are justified (necessary and cost effective).**

The SSG-WI regional planning process is designed to evaluate congestion in the Western Interconnection that may be impacting the efficiency of electricity markets across multiple RTOs and regions of the West prior to RTO formation. It will also evaluate and identify alternative methods for mitigating uneconomic congestion. The SSG-WI process assumes voluntary participant sponsorship and funding of projects from individual market participants or RTOs. The planning process also identifies the transmission system implications of various new resource scenarios. The resulting SSG-WI expansion plan is envisioned to include transmission, generation and demand side alternatives that would relieve uneconomic congestion impacting multiple RTOs.

Some SSG-WI participants believe that the planning process should be strengthened so that SSG-WI can recommend specific projects if competing alternatives are sponsored or if ratepayers are expected to pay for the project (some of the western RTOs have cost allocation procedures that spread project costs to all users of the system while other RTOs have backstop capability to compel construction and allocate costs). This strengthening of the SSG-WI planning process would entail SSG-WI recommending between transmission projects of differing capacities or different types of alternatives such as transmission, generation and demand side programs. Presently these decisions are left to the project sponsors that are funding the projects or RTOs acting in backstop roles. If SSG-WI were to do this, it would have to collect and analyze more information than is presently envisioned for market analysis, environmental impacts, cost estimates, etc. The SSG-WI would also have to adopt a process and criteria for making these recommendations. However, regardless of whether or not SSG-WI makes recommendations, it is generally agreed that the final decision on which project should be pursued will remain with the entities funding the projects.

Timeline:

This issue should be elevated to the Steering Group for resolution. The Planning Work Group will forward a suggested proposal to the Steering Group by 2nd

Quarter, 2003. The Steering Group will forward a recommendation to the RTOs by 3rd Quarter, 2003.

Issue:

Determine if and how SSG-WI will support implementation of projects recommended by the Planning WG.

The SSG-WI Planning Process relies on market participants and/or RTOs in their backstop roles to sponsor projects. SSG-WI is not a decision making body; that responsibility is left to the RTOs. As currently envisioned, the SSG-WI regional planning process will not include provisions to implement any transmission projects that others do not undertake. Should the SSG-WI process be redesigned to include an obligation for SSG-WI to support in some way the implementation of specific transmission projects that affect multiple RTOs, this could lead to a requirement for SSG-WI to perform market, environmental, cost allocation and other analysis that is not envisioned at this time for SSG-WI.

Timeline:

The Planning Work Group will forward a suggested proposal to the Steering Group by 2nd Quarter, 2003. The Steering Group will forward a recommendation to the RTOs by 3rd Quarter, 2003.

Issue:

Develop a process to resolve differences in transmission interconnections that enables parties to avoid going to the Commission under the process set forth in Sections 210 and 211 of the Federal Power Act.

Each individual RTO will have its own transmission interconnection requirements. If a line between RTOs were proposed, each RTO would apply its own interconnection requirements to determine whether to allow the interconnection. Transmission owners that are not participating in RTOs, although invited to participate in the open RTO and SSG-WI planning processes, are not bound by these RTO interconnection requirements or approval processes for interconnections to their own systems. If there are disagreements on a new interconnection, there is no process to resolve these differences short of going to FERC (210 and 211 processes) and FERC may not have jurisdiction over all affected entities. The same issue exists within RTOs for disagreements between RTOs and transmission owners that do not join the RTO.

Timeline:

The Planning Work Group will forward a suggested proposal to the Steering Group by 2nd Quarter, 2003. The Steering Group will forward a recommendation to the RTOs by 3rd Quarter, 2003.

Secondary Seams Issues

1. The planning horizon and frequency of the SSG-WI process must be coordinated with the RTO processes.
2. The number of congestion problems and solutions that SSG-WI will study within each cycle of the SSG-WI Planning Process must be determined.
3. Not all Transmission Owners' systems will be in an RTO. All interested parties are invited to participate in the SSG-WI Planning process but there is no obligation for non-RTO members to participate in this process. This could create seams issues between the SSG-WI planning process and the non-participants in the modeling studies, in the selection of viable alternatives for evaluation and potentially in developing recommended solutions. This is also an issue within each RTO.
4. How is data confidentiality protected in an open planning process? Data may need to be protected for competitive, proprietary or security reasons.

Work Group: Common Systems Interface Coordination (CSIC)

Purpose: Identify opportunities and propose solutions where common systems and processes are identified between the western RTOs. These solutions will provide for cost savings as possible, reduce or eliminate seams issues when applicable, and will be standards based as appropriate. Coordinate the standardization of business modeling and implementation methodologies. Coordinate and track an aligned implementation for the western RTOs to minimize seams issues.

Method: The meetings of CSIC will be open and proposals will be based on consensus among the stakeholders that participate in the process.

Key Present Tasks:

- Implementation Coordination
- Simulation coordination
- Business process modeling
- Propose Implementation plans for seams related systems and processes
- Look at other systems as appropriate

Sub Groups: Work groups will be established as appropriate to address specific systems and processes. Groups as of 12/2002:

- Business Architecture Development work group (BADWG)
Develop standardized business models and processes from the requirements of RTO West, WestConnect and CAISO and defined by the SSG-WI organization efforts. Coordinate with national efforts to the degree possible. This will help assure optimal development and implementation of the three RTOs in the west.
- Requirements and Protocols (RaPWG) – proposed
Take the standardized business models and processes and identify or develop the systems and data requirements and data protocols needed to implement them.
- Communications Infrastructure WG – (completed initial task)
Propose a compatible communications infrastructure to serve the three RTOs and their needed interfaces with others. This proposal will be updated as the RTOs are developed.
- OASIS (Single Market Interface) WG – (completed initial task)
Propose a commercial interface common to the three RTOs that allows for the open access transmission business of the three RTOs to be accomplished at one interface. This task will be revisited in light of recent FERC orders and other developments.

- Backup Control Center WG – (completed initial task)
Propose back-up control center implementation that will meet full requirements with cost savings by taking advantage of sharing facilities or systems between the RTOs. This task will be updated in light of developments since the initial proposal was developed.
- Training WG - – (completed initial task)
Propose efficiencies that can be gained by jointly providing training common to all three RTOs. Update as RTOs are further developed.
- Others as identified.
These will be formed to develop proposals for tasks identified for CSIC. This will likely soon include Work Groups to address Implementation Schedules and Simulation.

Issue:

Single Market Interface (OASIS)

Energy should move across the western electric grid through the western RTOs as transparently as possible without the need to use multiple interfaces with different business requirements and possible incompatibilities.

RTOs:

Each RTO will develop designs for the market that are consistent with FERC orders and aimed at minimizing the impact of the interfaces (seams) between the RTOs

Working Group: CSIC/BAD/Single Market Interface WG

Coordinate with market design work groups of the RTOs and region to collate the design elements, rules, and processes related to the market interface, develop standardized models of the processes and data, and develop the means to eliminate the need to use unique and separate interfaces at each RTO in order to use the western transmission grid.

Timeline:

This will largely follow the output of the market design efforts and take a number of months thereafter.

Issue:

Implementation coordination

Each of the RTOs is developing systems and processes for their organizations. These efforts could diverge, creating process and systems incompatibilities at the seams as well as duplication of cost and efforts. These efforts need to be coordinated and aligned to optimize the ability to do transmission business between the RTOs as each of them is involved in implementing products.

Working Group: CSIC

Identify key development stages that would create discontinuities at the seams between the RTOs if not aligned. Develop and monitor a coordinated implementation schedule of these key process and systems milestones for the western RTOs.

Identify issues and propose solutions as appropriate. Monitor the implementation of solutions.

Review projects and make recommendations to the western RTOs related to their operations to assure that duplication of cost and efforts are minimized.

Timeline:

Initial plan 2nd quarter 2003. Then regular updates (approximately monthly).

Issue:**Simulation coordination**

Lack of realistic simulations appropriate to each stage of the process could result in weak and inconsistent requirements that are likely to have gaps in coordination and process and could result in unnecessary costs due to change orders and delays.

Working Group: CSIC

Make recommendations to SSG-WI, RTO groups, and others regarding process simulations. These simulations may vary in format but will be used to test processes and requirements before systems are procured or significant resources expended. Facilitate as required.

Timeline:

Initial recommendations 2nd quarter 2003. Ongoing as processes are developed.

Issue:**Business process modeling**

Lack of standardized and consistent definitions of the business processes across the seams including defined models and data definitions will result in discontinuities or confusion in doing transmission business across the seams. This will also make it more difficult to procure the necessary software and put systems in place to implement these processes.

Working Group: BADWG

Will coordinate and make recommendations to SSG-WI, RTO groups, and others as appropriate to collect proposed business designs and processes and develop a standard modeling description of the processes to be used to develop requirements, data definition, and the basis for computer code development.

Timeline:

Initial recommendations 2nd quarter 2003. Ongoing as coordinated market designs are developed.

Issue:**Implementation plans for seams related systems and processes**

All aspects of the western RTOs are being designed but then need to be coordinated for a successful implementation and meeting the needs for all market participants.

Working Group: CSIC

Assure all intended processes that are related to the seams are understood, well defined, and have a coordinated implementation plan that assures cost effectiveness and functional seamlessness.

Timeline:

Start in 1st quarter 2003. Ongoing.

Issue:**Coordinate other systems as required for seams optimization**

Many systems planned for implementation and modification in the RTOs could take longer, cost more and work less effectively if they are done independently in each of the RTOs.

Working Group: CSIC

Assessing various schemes and systems in the western RTOs looking for efficiencies and cost effective solutions that can be gained by cooperation between the RTOs.

Timeline:

Ongoing

Work Group: Market Monitoring

Issue:

Structure of West-wide Market Monitoring Entity and Role of Individual RTO Market Monitoring Units

Will the West-wide Market Monitoring Entity (“MME”) be the primary market monitor for Western RTO markets or will the MME be an umbrella or coordinating organization that monitors for seams issues. In either case, what is the delineation of responsibilities and authority between the MME and the individual RTO market monitoring units.

Objectives:

- Provide the MME with sufficient geographic scope to be able to effectively monitor seamless West-wide markets;
- Retain current expertise and knowledge of local transmission markets irrespective of the creation of the MME;
- Maintain a close connection and relationship between the MME and individual RTO’s operations staff; and
- Be responsive to individual RTO input.
- Establish a clear process for identifying, proposing and implementing market design changes that are deemed necessary to support a seamless West-wide market.

Tasks:

The work group’s July 18th recommendations include two options for a MME that would be the primary market monitor for Western RTO markets. The work group is currently reassessing its recommendations and plan to supplement them as follows:

- i. Develop more detail regarding current structure options.
- ii. Add structure options regarding a MME that is an umbrella or coordinating entity focused on seams issues.
- iii. Develop more specifics about the role and responsibilities of individual RTO market monitoring units under each of the structure options.

Process:

Further work group discussion and development of recommendations.

Timeline: Reach Western RTO Agreement on MME by September, 2003

1st Quarter 2003:

Work Group finalizes recommendations; Steering Group considers and, with input as needed from Work Group, develops Steering Group recommendation.

2nd Quarter 2003:

Steering Group and Work Group roll-out recommendation to the West at public workshop. Individual Western RTOs consider recommendation.

3rd Quarter 2003:

Individual Western RTO decisions.

Work Group: Price Reciprocity Work Group

Issue:

Other Charges Including Charges to Recover Embedded Transmission Costs

Each of the proposed RTOs has developed and proposed to FERC a pricing methodology that, among other things, provides for the full recovery of embedded transmission costs by each of the participating transmission owners within the proposed RTO's footprint. Each of the proposed RTO's pricing proposals represents a balance of the interests and concerns within the respective region and represent, to varying degrees, changes from existing pricing methodology based on a "contract path" construct. The objective of SSG-WI's efforts is to achieve some form of "price reciprocity" that reduces barriers to interregional trading while preserving each RTO's balanced pricing proposals and their underlying objectives. The Price Reciprocity work group recognizes that solutions to seams issues being addressed by other SSG-WI work groups may influence the final recommendation on price reciprocity.

Interregional transactions may cross one or more seams between regional markets and should recognize the need for recovery of the costs of transmission provided by the underlying transmission owners within a respective RTO. However, any such cost recovery mechanism should not impose significant impediments to efficient interregional trades. Rather, it should seek to balance a multitude of objectives, such as the desire for region-wide prices, fewer transaction based charges, reduction of trade barriers, minimum cost shifting between users, simple and transparent payment mechanisms, full cost recovery, and a preferred solution based on simplicity of implementation and ongoing application.

Price Reciprocity Objectives:

Objective 1:

Identify Applicable Existing Charges and Proposed Charges Applied to Various Transactions.

Tasks: Identify within each RTO:

- A. Pre-Existing Contracts
 - 1) Access Charges
 - a) Load –Based
 - b) License Plate
 - c) Wheeling Out/Through

- 2) Administrative Charges
- 3) Losses
- 4) Congestion

New Users

- 1) Access Charges
 - a) Load-Based
 - b) License Plate
 - c) Wheeling Out/Through
- 2) Administrative Charges
- 3) Losses
- 4) Congestion

Objective 2:

Collect data and analyze the financial implications of current/proposed RTO processes for collecting revenues related to interregional transactions.

Tasks:

- A. Identify data for each RTO that includes charges associated with energy imports and exports.
 - 1) Review and consider applicability of using “pro forma” transaction data from existing studies to estimate transmission wheeling (e.g., Tabors Caramanis & Associates’ study for RTO West).
 - 2) Assess the feasibility of obtaining historical transaction data within each RTO.
 - 3) Compare data collection feasibility among RTOs to ensure comparability, (e.g., data fields are properly matched so that transactions through multiple systems are not double-counted.)
- B. Collect Data
 - 1) Identify existing embedded transmission costs and who pays under each RTO structure.
 - 2) Collect Peak Load Data for each TO and RTO.
 - 3) Collect Historical Wheeling Out/Through Volumes for each RTO.
 - 4) Collect Historical Wheeling Out/Through Revenue for each RTO.

Objective 3:

Finalize development of options for Price Reciprocity.

Tasks:

A. Identify options to be moved forward, including (but not limited to):

1) Base Case – No Change To Proposed RTO Pricing Structures

2) Reciprocal Waiver of Wheeling Charges

- a) What are necessary modifications to RTO/Transmission Owner rate recovery mechanisms to ensure total embedded costs of transmission system are recovered? (How to address revenues “lost” or foregone from waiver process is an individual RTO/Transmission Owner issue.)

3) Transfer Payment Mechanisms

- a) Can RTOs agree to a transfer payment approach for eliminating export fees?
- b) On what periodic basis should transfer payments between RTOs be made?
- c) Should RTOs be allowed to “net” transfer payments?
- d) Is a portion of the GMC collected as part of the transfer charge?
- e) Is it a one-time arrangement or are figures adjusted annually for example?
- f) Are net importers to an RTO responsible for a share of the transfer payments?
- g) Among whom are the transfer payments distributed?
- h) Should each RTO be afforded discretion as to how to allocate transfer payment revenues/charges?
 - I. If each RTO is allowed discretion on how to allocate transfer payment revenues/charges and each establishes a different

methodology, will this give rise to gaming and improper incentives?

4) West-wide Wheeling Charge

1. How should West-wide rate be structured?
 - I. Demand-based?
 - i. Coincident peak contribution
 - ii. Non-coincident peak contribution
 - II. Volumetric?
 - i. How to track/account for volumes deemed to flow on interregional grid?
 2. What facilities should constitute "interstate" grid?
 - I. Voltage-based
 - II. Functional Assessment
 3. How/Through what process should revenue requirements for "interstate" grid be determined and reviewed?
 - I. How often should revenue requirements be updated?
 - II. Should revenue requirement for "interstate" facilities be updated simultaneously or as determined by owner?
 - III. Formula rate or fixed rate?
- B. Identify necessary RTO Tariff changes under each identified option.
- C. Identify magnitude of any "cost shift" (e.g., change in collection of the costs) that will occur under the pricing reciprocity options under consideration.
- D. Identify variations of these proposals, and specify assumptions and questions within each option.

Objective 4:

Develop proposals for addressing pricing seams with and services offered to Non-Participants.

Tasks:

- A. Identify the impact on barriers to trade if large segments of the grid are not under RTO control.
 - 1) Evaluate the financial impacts if entities fail to participate and turn over operational control of their facilities to the RTOs.
 - 2) Develop criteria for resolving how non-participating entities should be eligible for any price reciprocity arrangement.
 - 3) Develop alternatives for entering into agreements with non-participating entities under current pricing policies/rules.

Objective 5:

Develop assessment criteria, consider available pricing options, and identify suggested alternative.

Tasks:

- A. Identify criteria to be used to evaluate among and between price reciprocity options. Factors including:
 - i. Eliminate Trade Barriers
 - ii. Mitigate Cost Shifting
 - iii. Provide Comparable Treatment
 - iv. Implementation Simplicity
- B. Using data collected, analyze the impact of each reciprocal pricing proposal upon potential barriers to interregional trading.
- C. Apply selection criteria to determine the preferred alternative for pricing interregional transactions.

Timeline: Develop Price Reciprocity Solution by Fourth Quarter, 2003

The Price Reciprocity work group has set an aggressive schedule to accomplish the tasks necessary to recommend a preferred alternative for achieving price reciprocity. The tasks and schedule assumes that evaluation of unanticipated arrangements would not materially affect this proposed timeline.

Objective 1: 1st Quarter 2003

Identify existing charges applied to various transactions

Objective 2: 2nd Quarter 2003

Collect data and analyze the financial implications on the current/proposed processes for collecting revenues related to interregional transactions

Objective 3: 3rd Quarter 2003

Finalize development of options for price reciprocity

Objective 4: 4th Quarter 2003

Develop proposals for addressing pricing seams with and services offered to non-participants

Objective 5: 4th Quarter 2003

Develop criteria to assess options – 1st Quarter 2003

Finalize assessment criteria – 2nd Quarter 2003

Consider available pricing options – 3rd Quarter 2003

Identify suggested alternative – 4th Quarter 2003

Attachment G
to
Report of the California ISO, the RTO West Filing Utilities,
and the WestConnect Applicants Concerning Activities of
the Seams Steering Group - Western Interconnection

Current Status of Market Monitoring
Work Group Recommendations

THIS ATTACHMENT IS BEING SUBMITTED FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR APPROVAL OR REJECTION BY THE COMMISSION. ANY RECOMMENDATIONS CONTAINED HEREIN ARE FOR INTERNAL WORK GROUP PURPOSES ONLY AND HAVE NOT BEEN CONSIDERED BY THE STEERING GROUP OR APPROVED BY THE CALIFORNIA ISO, THE RTO WEST FILING UTILITIES OR THE WESTCONNECT APPLICANTS. AS SUCH THEY ARE SUBJECT TO FURTHER REVIEW AND REVISION.

Draft
Current Status of
SSG-WI Market Monitoring Work Group
Recommendations

January 3, 2002

A. Structure

The SSG-WI Steering Group remains committed to creating a West-wide market monitoring function. The Steering Group (and the Western RTOs) are undecided as to whether that function should be fulfilled by a single, primary market monitor for the Western RTOs' markets or if this function can be performed by an umbrella or coordinating body that monitors for seams issues. The July 18th recommendations contain two structure options for a single, primary market monitor. The Market Monitoring Work Group will supplement the recommendations with options relating to an umbrella or coordinating body.¹

B. Independence

The West-wide market monitoring function will be independent from Market Participants. The July 18th recommendations originally provided that the West-wide market monitoring function would also be independent from the Western RTOs, however, the ultimate decision on structure may affect the nature and degree of independence. The West-wide market monitoring function will have a direct relationship with the Federal Energy Regulatory Commission (the "Commission").

C. Roles and Responsibilities

The West-wide market monitor function will:

- Monitor adequacy and effectiveness of market rules, procedures, or actions that affect the competitiveness or economic efficiency of the Western markets, identify design issues or opportunities for efficiency improvements, and work with the Western RTOs' staffs to develop and implement appropriate design modifications (the West-wide market monitor function may indicate its preference that such modifications be given expedited treatment by the Western RTOs' Boards);
- Monitor the competitive performance and efficiency of Western markets, and, when the West-wide market monitoring function has detected performance that is

¹ The July 18th recommendations assume the creation of a single, primary West-wide market monitoring entity. As noted above, the work group is adding options regarding an umbrella or coordinating organization. While the majority of the remaining recommendations would work with any of these structure options, the work group will need to evaluate whether additional modifications are appropriate.

inconsistent with an outcome of a competitive market, investigate to determine the causes of such performance (causes could include flawed market design (within or among the Western RTOs); conduct of transmission owners, the Western RTOs, or Market Participants);

- Monitor conduct of those Market Participants that can affect the outcomes of the market by behavior to look for behavior that departs significantly from the normal behavior in competitive markets;
- Monitor compliance with Commission-approved objective standards and mitigation measures; and
- Report the results of the monitoring and further investigations to the Commission and other appropriate Federal, State, Provincial, and local, tribal, Mexican state regulatory and enforcement entities.

The ultimate decision on structure may affect the extent to which the West-wide market monitoring function focuses on RTO-specific issues that are unrelated to seams issues.

D. Markets to be Monitored

The MME will monitor all markets operated and services provided by the Western RTOs. The MME may track bilateral energy or capacity markets or private transmission rights markets not operated or administered by the Western RTOs. As required by Order 2000, the MME will periodically assess the effect of these markets on the Western RTOs' markets and services, or the effects of the Western RTOs' markets and services on these markets. The ultimate decision on structure may affect the extent to which the West-wide market monitoring function focuses on RTO-specific markets that are unrelated to seamless Western markets.

E. Tools

1. Indices and Screens

The West-wide market monitoring function will develop indices and screens to help it evaluate market performance (the West-wide market monitoring function will also use its professional expertise to evaluate the market). Public input will be sought about what indices and screens might be useful, but the West-wide market monitoring function need not publicly disclose the indices and screens that it adopts. It is premature to identify or develop indices or screens at this time; the work group agrees that this should be left to the West-wide market monitoring function.

2. Objective Standards

a. Standards

If the Commission has clearly articulated objective standards to evaluate market performance and individual behavior, the West-wide market monitoring function will monitor compliance with such standards.

If the West-wide market monitoring function concludes that the use of objectives standards to identify inappropriate conduct and trigger market intervention or mitigation is appropriate, the West-wide market monitoring function can recommend such objective standards to the Western RTOs and the Commission; provided that the West-wide market monitoring function will not have authority to implement such standards absent Commission approval. It is premature to identify or develop such recommendations at this time; the work group agrees that this should be left to the West-wide market monitoring function.

b. Corrective Action

If the Commission has identified clear standards with corresponding self-executing consequences, and if the Commission has also accepted those standards and consequences in the Western RTO tariffs, the West-wide market monitoring function will monitor compliance and if standards are violated will inform the appropriate RTO staff to execute pre-approved consequences.

If the Commission has not identified self-executing consequences, the West-wide market monitoring function will report violations of standards to the Commission.

F. Data Collection and Dissemination

The West-wide market monitoring function will have timely access to all of the information possessed by the Western RTOs. The West-wide market monitoring function shall be able to request from Market Participants and the RTOs such additional information not in the RTOs' possession as may be necessary to perform its functions. If the Market Participant refuses, the West-wide market monitoring function may go to the appropriate regulatory entity to ask them to request the information upon an appropriate showing. (The Market Monitoring Work Group is considering whether to strengthen the authority of the West-wide market monitoring function to compel the production of information.)

The West-wide market monitoring function is responsible for disseminating its reports and studies. The Western RTOs are responsible for disseminating raw data as required under their tariffs, and such other non-confidential information as they determine is

appropriate. If the West-wide market monitoring function determines that the release of certain information is necessary for a Western RTO Market to function, it will make a recommendation to the Western RTOs.

The West-wide market monitoring function and RTOs shall have the same confidentiality standards, both with respect to what information is treated confidentially and the obligations of the entities to ensure that such information is treated confidentially. These standards will comply with applicable laws and regulations.

Confidentiality provisions are proposed and will be further defined regarding protection of confidential information (to the extent confidential information is provided to the Commission, the West-wide market monitoring function or the RTO will request confidential treatment; further discussion is needed about the ability of other regulatory or enforcement entities to access confidential information). The MME will notify the owner of the confidential information so that they have an opportunity to challenge the appropriateness of the request and disclosure of the information.

G. Process

Provisions will be developed to afford procedural protections to Market Participants whose conduct is being studied.

H. Relationship with State, Provincial, Mexican, Tribal, and Local Regulatory and Enforcement Entities

The work group agrees there is need for clarity on the relationship of the West-wide market monitoring function with state, provincial, Mexican, tribal, and local regulatory and enforcement entities, which clarity may result from the Commission's federal/state panels.

I. Funding

The governance structure will require fiscal accountability. The costs of the West-wide market monitoring function will be recovered from the users of the Western RTOs' transmission systems. The following general approaches should be considered:

- Allocate each of the Western RTOs one-third of the West-wide market monitoring function's costs;
- Allocate each of the Western RTOs a pro rata share of the West-wide market monitoring function's costs based upon megawatt hours of load; and
- Allocate each of the Western RTOs one-sixth of the West-wide market monitoring function's costs and allocate the remainder of costs among the Western RTOs pro rata based upon megawatt hours of load.

Each Western RTO has discretion to determine how to recover the allocated costs from its customers consistent with its pricing mechanism.

J. Transition

In order to assure a safe, reasonable, and rational transition, the West-wide market monitoring function shall be prepared to begin monitoring on Day One of the second Western RTO's commencement of operations. The West-wide market monitoring function will have its own market-monitoring plan. At this time, the work group's preferred option for the transition is, when the West-wide market monitoring function is preparing to go operational, to learn from the CA ISO's market monitor's expertise and, quite possibly, use the CA ISO's systems as a starting point.