

RTO West RRG Congestion Management Group

**Straw Proposal and
Discussion of Issues**

A. Introduction

The RRG Congestion Management Group (RRG-CMG) was initiated at the October 9, 2003 RRG Meeting to consider congestion management issues, particularly those issues where there have been significant differences among the parties. At its first meeting on October 16, 2003, a concept was sketched out that may bridge the gaps among the parties regarding the first steps to be taken to achieve increased usage of the Northwest's transmission system through improved congestion management. A straw proposal based on this concept was probed and amplified during discussions held October 23, 2003. This document outlines the resulting straw proposal for RRG consideration with a brief discussion of major issues debated in its development. A list is also provided of issues which will require further investigation if this approach is pursued.

B. Caveats

The straw proposal and discussion contained in this document are provided for the purpose of advancing dialogue at the RRG. They are not intended as a verbatim transcript of anyone's remarks, nor are they intended to suggest that any particular representative or entity at the RRG-CMG meeting agreed with or endorsed either the straw proposal in its current form or the views described in the discussion summaries. The straw proposal intended is a starting point for further discussion. It focuses primarily on the framework for a day-ahead process. As noted in Section F below (Issues for Further Discussion), there are many issues yet to be resolved. These include a method of granting of new long-term rights and procedures recognizing legacy rights that permit schedule changes close to real-time in granting additional day-ahead service requests.

C. A Starting Point Straw Proposal

This following straw proposal is based on the RRG-CMG discussions held October 16 and 23, 2003. Since the proposal is a synthesis of a number of different participant comments, it is offered as a possible starting point for developing the first steps to implement improved congestion management of the Northwest's combined transmission systems.

While potentially promising, this straw proposal is only a conceptual framework. Further development will be required before the parties will be able to fully judge its acceptability. In general, however, the RRG-CMG participants felt when future steps are taken, they should meet the following criteria:

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1. Workability. At each transition to a methodology, the proposed changes must work as a system, i.e., they need to be tested to insure that new processes are internally consistent, mesh with other continuing practices, do not create gaming or similar problems, etc.
2. Improvement. The proposed changes are an improvement on the then current processes.
3. Optionality. Future options for evolution of transmission system controls and markets should not be foreclosed by the proposed changes.

Some of the RRG-CMG participants, feel strongly that a defined end-state will be required to obtain regulatory approval. They view the above criteria as guidance for moving from status quo to the end state, while acknowledging that the initial expected end-state may be redefined or modified over time.

D. The Straw Proposal's Features

The straw proposal is built around a layered approach to daily operations. Schedules based on existing contract rights are put in place and then requests for additional service are considered using an inc/dec market to enable such usage. The key features of the proposal are as follows:

1. Preservation of Existing Rights. Existing contracts are preserved in their current form; they are not contractually restated on an injection/withdrawal basis.
2. Control Areas. Control area consolidation is not required, although control areas may consolidate on their own, if they find it beneficial.
3. Independent Administrator. An independent administrator (IA) is created that consolidates OASIS, posts ATC, accepts and evaluates additional transmission service requests, contracts with Security Coordinator, etc. The IA is not a transmission or energy service provider, but a facilitator of service provided by others.
4. Day-Ahead Process.
 - a. *Step One – Contractual Feasibility*: Schedules based on current transmission service contracts are submitted, as they have been in the past, to the contractual transmission provider. The transmission provider checks submitted schedules for conformance with relevant contracts.

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- b. *Step Two – Control Area Feasibility:* Transmission providers evaluate received schedules for simultaneous feasibility with regard to their own control area facilities as they have in the past. The transmission provider adjusts its own preferred dispatch, if necessary, to honor contractual transmission commitments.
 - c. *Step Three – Hand-off to IA.* Transmission providers submit their combined schedules (both their own and contract usage) to the IA, providing net injections and withdrawals by location (generation and loads) to facilitate IA power flow analysis. The combined schedules submitted by the transmission providers are called the “Legacy Block” schedules.
 - d. *Step Four – Additional Requests for Service.* The IA takes requests for additional transmission schedules in the form of injection/ withdrawal bids and takes voluntary bids to provide inc/dec redispatch.
 - e. *Step Five – Combined System Feasibility:* The IA runs a power flow analysis to determine which additional schedules and transaction requests can be accepted, using bids received and an inc/dec market if necessary to enable provision of requested services. Submission of bids in this market is voluntary. The IA maximizes the value of the service provided to transmission system users within the system’s limits. Where pre-existing contracts permit schedule adjustments close to real-time , head-room will have to be provided between the planned day-ahead usage and the full reliability limits of the system.
5. Real-Time Operation. The IA sends the resulting combined schedules to each control area for execution in real-time. Each control area’s net interchange will include the additional transactions arranged through the IA.
6. Long-Term Rights. Long-term transmission requests are combined into a single queue for evaluation by the IA. While the basis for evaluating new requests needs additional discussion, long-term right requests may be evaluated by the IA using a single Northwest system view and an expected loading forecast based on injections and withdrawals. The IA’s analysis would be coordinated with the affected transmission providers. The nature of new rights has also yet to be determined, although some options are discussed below. The new rights issued should not be allowed to negatively impact existing rights, unless new right holders pay for or provide necessary

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mitigation, i.e., new construction, dispatchable assets, conditional service, etc.

E. Discussion of the Straw Proposal

In debating the elements of this straw proposal, the RRG-CMG participants encountered issues that bear further explanation. In some cases, a tentative conclusion was reached. In other cases, issues were clarified, but resolution of those matters was left for later work.

For the first step of the day-ahead process (*Step One – Contractual Feasibility*), consideration was given to the alternative of having the IA check contractual contract compliance directly rather than having that done by the originating transmission provider. Two difficulties were noted with this approach. First, it requires the creation of a detailed inventory of transmission rights akin to the cataloguing process that a number of parties wish to avoid at the outset. Second, if the IA judges the submission to be outside the rights, the problem must be referred to the transmission provider for resolution. That could set up a cycling of requests between the IA, the transmission provider, and the contract right holder. The general conclusion of the group was to avoid these problems at the outset.

A key question for Steps Two through Four of the day-ahead process, is the determination of the physical feasibility of schedules. After a lengthy discussion, the participants realized that judging the physical feasibility of the existing uses alone, without consideration of additional transmission requests, may result in unnecessary rejection of schedules. The simultaneous processing of added service requests, the inc/dec market and pre-existing right schedules may result in a combined schedule that is physically feasible in total, even if evaluation of only the pre-existing contract uses would yield an infeasible combined schedule. As a result, the physical feasibility should be evaluated by the IA on a combined, single system basis using all requests, bids and other tools at its disposal. This approach seems to resolve two concerns raised by piecewise evaluation.

- First, the new “day-ahead auction service” will effectively replace daily short-term firm, hourly short-term and non-firmservices. However, a number of contracts provide for only part of a “transmission path” that is traditionally used from source to load. For instance a party may have purchased rights for only the segments of the path where congestion occurs and relied upon non-firm or short-term firm usage for the rest of the path, because such non-firm or short-term firm is always available “against the prevailing flow” or because of system topology. Evaluation on a “held rights only” basis will produce an incorrect view of today’s reasonably expected usage of the transmission system.
- Second, if the pre-existing right usage submitted by individual control areas reveals a problem when they are combined that cannot be seen by the

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individual transmission providers, what should be done about it? This kind of problem occurs today, but it is never seen day-ahead. Instead, the problem shows up in real-time, and the party with an overloaded line has to deal with resolution of the problem.¹ Futile efforts to “hunt for the loop-flow-guilty” have been unsuccessful for thirty years, because every user is simultaneously a beneficiary and a benefactor of the common system created by interconnection. In evaluating future service requests, the IA’s single system view will uncover such problems incrementally before new service is granted. However, unwinding the past is a practical impossibility. A solution suggested by some of the group is to accept these problems as givens to be borne as common costs when they occur.

The IA facilitated inc/dec market uses voluntary bids that come from users of the transmission system. These are either bids to increase (inc) or decrease (dec) generation. A dec bid from a generator is an offer to replace its generation with a cheaper source elsewhere in the system. Bids may also be submitted by dispatchable load; these are considered as inc bids since they are equivalent to increasing generation. The problems with the California Market Separation Rule were reviewed to understand why it is best to allow acceptance of inc bids independent of dec bids instead of forcing matches within a portfolio.² However, as the IA seeks to maximize the value for system uses, it may arrange trades between willing buyers and sellers that go beyond just making transmission available. This appeared to be acceptable to those participating in the RRG-CMG meetings, as long as the IA is not taking any position in the power market. A key point for future discussion will be determining a way to avoid having the IA take title to power as it facilitates the inc/dec market to increase transmission system usage. At least for the time being, the RRG-CMG participants anticipate that the inc/dec market would operate on a pay-as-bid basis, however further discussion of the merits of pay-as-bid versus clearing-price markets is anticipated. Since bids accepted are firming transmission rights for others, acceptance of bids binds the parties to perform, i.e., bids should not be treated as options.

The nature of future long-term transmission rights was also discussed, but no conclusions were reached by the RRG-CMG participants. Caution was expressed that new rights created should neither hinder moving to a system financial transmission rights in the future nor degrade existing rights. At the same time, requests for long-term rights must be dealt addressed both now and in the immediate future. Some of the options for future consideration mentioned in discussion were:

¹ The control area with an overloaded facility uses the Unsheduled Flow Mitigation Procedure if the facility in question is a qualified path – partial accommodation, phase shifter operation and schedule cuts. The first step causes the owner of the facility in question to redispatch while the last step forces broader redispatch across the WECC.

² Schedules for transmission use would still be balanced at the time of submission to the transmission provider for the Legacy Block or to the IA for added service.

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- Priority Blocks – a schedule rejection priority stack, with service being contingent either on any constraint between a set of injection/ withdrawal points or perhaps contingent on the availability of a specific flowgate(s).
- Contingent Firm
- Percentage Firm – available for a given number of hours per year and either curtailed or subject to redispatch cost during remaining hours.
- Redispatch Firmed – re-dispatched when necessary, with the added costs somehow folded into tariff price for that class of service.
- Open-Season Auction – a long term auction of ATC beyond existing rights or subscription for participant funded construction of new facilities.

There was some discussion of the possibility of expanding the transmission auction from just day-ahead to longer terms or perhaps to shorter terms, such as a few hours ahead of real-time. The thought was that if the day-ahead worked well, the IA might expand the approach. Such considerations are not part of the straw proposal, but may be extensions from it.

In the same light, possible consolidation of control areas was discussed. The straw proposal permits this to occur but does not require such consolidation. A key consideration in such a consolidation will be the need for a real-time balancing market and for an ancillary services market or an agreement between the parties that provides for these service for at least the consolidated control area. Some participants cautioned that difficulties can occur when separate markets operate within the same physical area. Past experience in other regions indicates potential difficulties and problems. Unnecessary duplication of staff and facilities was also raised as a point to be considered. Consolidation of control areas is another of the matters the RRG-CMG left for more detailed consideration later.

F. Issues for Further Discussion

The following is an un-prioritized list of issues that need to be considered in further work on the straw proposal. The list is not exhaustive, but rather indicates concerns raised to date in RRG-CMG Meetings. Other issues may well arise as details are added to the straw proposal.

1. Is it feasible to operate a redispatch market on top of the Legacy Block?
 - a. Can the existing uses (Legacy Block) be left alone or kept close to status quo while granting new long-term rights on a different basis?

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- b. How are the Legacy Block rights defined? Existing point-to-point contracts, network service contracts and network service to native load?
 - c. Are problems created by the inconsistency between physical rights held on a contract path basis for the Legacy Block versus physical injection/withdrawal granted under the new methodology?
 - d. How will Legacy Block contract flexibility be handled into real time?
 - i. How much headroom should be reserved. How is it estimated?
 - ii. How will the IA determine the amount of ATC to be sold in Day Ahead?
 - iii. Concern was raised by some participants that loss of flexibility is a large problem because of the present lack of liquid ancillary services and reserve markets. A method with financial rights and liquid markets could replace and compensate for loss of flexibility, but stopping at an option short would be problematic.
 - e. How are the possible Legacy Block oversubscription problems addressed. A concern has been expressed that if simultaneous feasibility determination of both Legacy Block and added requests occurs, care must be taken that Legacy Block problems not be paid for by incremental users.
2. Will short-term revenue adequately compensate transmission owners when day-ahead transmission service is sold in lieu of the payment of short-term firm and non-firm rates under current practice?
3. What happens if there isn't enough capacity to accommodate schedules for the Legacy Block schedules even with operation of the inc/dec market? If not, curtailments may be required, however the responsibility between the IA and the transmission providers will need to be determined to result in a final feasible set of schedules.
4. What kinds of additional long term rights should be offered?
- a. How are new services priced and how is cost recovery addressed?

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- b. Should long term services be priced using Company Rates (load-based) so that only transaction fees are charged, with a common or system-wide OATT and system-wide business practices?
 - c. Under what tariff(s) are the new services to be priced and evaluated? Individual provider tariffs proportionally assigned? A regional tariff?
 - d. How are embedded cost to be recovered and allocated?
 - e. How are commitments made by the IA for use on transmission providers' system? Is it a joint process? What are the details?
5. What is the nature of the IA to Control Area Interface?
- a. What is the relationship between the IA and the Security Coordinator? How will that evolve?
 - b. Can an IA model work if operational functions remains with the transmission providers?
 - c. What are the duties of the control area operators in real-time?
 - d. How are the transmission providers going to handle flows associated with IA facilitated transactions, if they don't have additional physical resources?
6. The details of the inc/dec market operation must be developed:
- a. Further discussion is needed on the IA's optimization target, i.e., maximize value to users.
 - b. Cost recovery and allocation associated with an IA operated inc/dec market.
 - c. Who pays for the differential in the inc/dec market? Given simultaneous feasibility determination, how are the cost separated between common costs to uplift or new services provided?
 - d. Does it make sense to have some kind of cash reserves as a balancing account? This may have some tax implications.
 - e. Will the market use "as-bid" or "market clearing" for determining prices?

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7. If control areas consolidate voluntarily:
 - a. How will a hybrid operating system work with some functions centralized and others decentralized?
 - b. It is likely that a balancing market will be needed to enable control area operation.
 - i. Will an undesirable arbitrage develop between a voluntary, as-bid day-ahead inc/dec market and a real-time, market clearing price balancing market?
 - ii. Is there a duplication of effort in having an IA for day-ahead and a separate independent real-time operator for consolidated control areas?
8. How will losses be handled?