

OPTION 3
Single tariff administered by a single system operator
RTO West Stage 2 “reloaded” - Draft 6

Overview

RTO West proposes to create a single system operator for the Northwest that operates under one tariff for all users of the system. RTO West proposes to accomplish this by collapsing multiple operating entities into a single control area. An independent Board of Trustees that is free from influence by any market participant will govern RTO West. RTO West will have the authority and responsibility for operating the electrical grid reliably, efficiently and in a way that allows the best use of the region’s transmission grid for the greatest benefit of the region. RTO West’s independent, big picture view of the overall system should enhance reliability, manage congestion on the system in a least-cost way, create fair and open access to the transmission system, allow for changes in how transmission service is charged without significant cost-shifting, and use information from grid users to identify needs on the system. It will have the tools to get the necessary infrastructure identified, constructed and financed.

RTO West is a comprehensive and integrated solution to transmission problems in the Northwest. RTO West will improve efficiency for all users of the system by using mechanisms that allow users to understand the cost consequences of their decisions to use the grid. This will allow the RTO to optimize the use of the region’s grid and to identify and construct only the needed grid improvements that are the least-cost way of solving problems.

RTO West creates a system that integrates and aligns accountability with decision-making and responsibility on the grid. RTO West aligns the incentives for sound grid management with the tools necessary to assure such and makes RTO West fully accountable to do it.

The independent board is accountable to all users of the system, not just certain users. In addition, RTO West is looking at adding provisions to give states more input into RTO West decision making. These features make RTO West fully accountable to the region. RTO West’s operating tools force those that impose costs on the overall system to pay them and identifies those who benefit from system expansion as being those who are responsible to pay. RTO West retains backstop authority to require changes in operations and investment in infrastructure for reliable grid operations. It allows for full cost recovery with the authority to intercede should cost recovery fall below what is needed to cover the fixed cost of the transmission system.

RTO West is not yet completed. RTO West “reloaded” will be the next iteration of the RTO West proposal. The “reloaded” sections will include changes that the region agrees are necessary to improve the proposal—coming from the RRG process; items that have yet to be accepted or completed and filed, such as the facilities proposal and RTO West tariff.

Single System Operator and Single Control Area

RTO West proposes to create a single system operator encompassing the bulk transmission system in the Northwest. RTO West will operate a single control area by collapsing all of the existing control areas operated by transmission owners participating in RTO West into one control area. This single control area will have the authority to maintain the reliability, security and stability of the RTO West transmission system. It will have operating control; the ability to receive, confirm, and implement all interchange schedules; control of scheduled facility outages, and generation interconnection agreements, which will give it the ability to achieve integrated system operations.

By operating as one system, RTO West will eliminate the inefficiencies in the current system of having to schedule across multiple utility systems with multiple rules and charges. RTO West will standardize transmission use on the system and create one-stop shopping for all users of the grid. RTO West will also allow the region to capture the benefits of operating the transmission grid as an independent single entity.

The RTO operational control is designed to minimize costs by using existing control room field communications, metering and staff for most direct transmission system control.

Reloaded RTO West is looking at options for security coordination, including contracting for the security monitoring function.

Problems and Opportunities

RTO West proposes to provide security coordination for all transmission within the RTO. It will afford the region a “big picture” overview of the entire system. One control area with a one system perspective, view, and control eliminates operational disputes among existing control areas. By being independent, RTO West affords the region a major advantage to security coordination because it will be able to gather confidential operating information from users and will be better able to take actions on generators and other non-transmission owning entities because the function will be totally divorced from any market interest. This should greatly enhance the reliability and operational efficiency of the region’s grid.

Structure

RTO West proposes to create a non-profit corporation to be the system operator. This model was selected after considerable review because it best accommodated the federal BPA system and readily provided for incorporating the Canadian transmission system. The RTO West bylaws create the structure of RTO West.

Governance

RTO West will be governed by a nine-member board of trustees that will operate the RTO in accordance with its bylaws. Each trustee must be independent from any financial interests of any market participant. This independence assures that the transmission

system will operate to the overall good of the region, rather than to the economic interest of any particular market participant. The Trustees will be selected by representatives from five member classes: major transmission owners, transmission-dependent utilities, non-utility transmission users, retail customers, and state and provincial regulatory authorities, tribes and unaligned entities, such as public interest organizations. The Board, and the RTO, will be fully accountable to all users of the transmission system.

Reloaded Depending upon input from the states, there may be a need to better address the states' role in RTO West decision making.

Operational control and authority

RTO West derives its operational authority and control over systems through a contract (called the Transmission Operating Agreement (TOA)) between RTO and those utilities turning operational authority over their facilities to RTO West. The TOA specifies the terms and conditions under which the utilities agree to transfer their operational control to RTO West and the TOA gives them the necessary protections to assure they remain financially whole as a result of this transfer. There are also other provisions in the TOA to address specific statutory provisions for BPA and the Canadian assets. The TOA must also balance the need to protect these utilities legitimate interests and RTO's ability to operate independently. .

Reloaded The TOA will be revisited in conjunction with the RTO West tariff to assure a proper balance of interests..

Operational fundamentals

RTO West proposes to utilize market mechanisms to improve and ensure the efficient operation of the grid. This is a significant change from the current system of administrative curtailments of transactions on individual systems. RTO West proposes a system that accepts all schedules that are submitted as opposed to a system where only schedules with contract rights are accepted. In its place, RTO West proposes a voluntary market that all users are free to bid into, however, the RTO does not force any existing contract holder into this market. This allows RTO West to honor all transactions and facilitates the bilateral markets that presently exist in the Northwest. RTO West's market mechanism will accommodate all those wishing to use its system and will assure the RTO operates the system in the least-cost manner.

Reloaded: The TOA and the tariff treatment of generation adequacy, will be reviewed, both with respect to adequacy for reliability, and adequacy to minimize market power abuse where load pockets would make congestion management and ancillary services' markets problematic.

Access to and use of the system

Single tariff

RTO West will have exclusive authority to administer a single tariff that will control access to and use of the transmission facilities under RTO West's authority. The tariff will contain the terms and conditions that apply to all users of the RTO West system, including pricing, how congestion is managed, and how both loads and generators are to be interconnected to it. It is the "rules of the road" for all users of the system and provides users with protections that terms and conditions don't unfairly advantage any one user over any other.

Reloaded RTO West has yet to complete the work and file a tariff. FERC approved some aspects of the RTO West filing in concept, but deferred approving many aspects of the filing until it actually sees a tariff. It also deferred action on the TOA until RTO West filed a tariff so it could see what aspects of the filing were necessary in the TOA and not otherwise covered in the tariff.

Single point of access

RTO West will create a single point of access for users of the facilities operated by RTO West. It will standardize rules for those wishing to use these facilities and eliminate the multiple rules that apply to multiple systems that presently plague current users of the system.

System use

Use of the RTO West system is proposed to change from current scheduling practices, which is based on contract paths and ownership of contract path rights on individual system paths, to a system in which all users can schedule to all points on the RTO West system up to the extent that redispatch is available, regardless of rights. In order to schedule, users must submit schedules that balance loads with generation and be willing to pay for any congestion they cause on the system.

Preservation of existing transmission contracts

RTO West proposes to honor all existing transmission contracts and contract rights. These rights must be catalogued in order to determine the transmission implications of the contract. Contract holders will be given the choice of converting their contracts to be able to sell their rights in the market or continue to receive service from their existing transmission provider under the terms and conditions of their contract.

Problems and Opportunities

RTO West creates a single system of access that allows all users fair, and not unduly discriminatory access to the system and one-stop shopping for all users of the system. It will standardize access to the facilities RTO West operates through a single transmission tariff; and because it is independent of market influence, RTO West will eliminate any undue influence over access.

RTO West's access proposal will create the opportunity to rationalize transmission service requests by creating a single point of request and a single regional queue for these

requests. Transmission facilities under RTO West's authority. It will also eliminate any transactional pancaking associated with having to make multiple arrangements with multiple providers to cross multiple transmission systems. Since RTO West provides for a single system view of access and transmission availability, it will enhance access to and use of the system by being able to take advantage of the benefits that a collective system view has when compared to an individual view of transmission availability.

After careful study and contemplation involving stakeholders in the region, RTO West concluded that the best way to provide access to use a financial rights approach in which current contract holders are given a financial means to exempt them from any congestion charges while continuing to use prior contractual rights, and new users pay for the congestion they impose on the system unless they have acquired new financial rights. This financial rights model brings additional benefit to existing contract users by enabling them to get paid for their rights; they will be able to convert to new rights that can be sold in a secondary market to parties willing to pay for them. This allows all parties access to the transmission system, even if they don't presently own transmission rights. It sends accurate price signals to the RTO users, and allows RTO West to determine the cost of any particular constraint enabling the RTO to determine the value of fixing it. It will send the right signals to generators by helping inform their location decision, i.e., the transmission impacts associated with interconnecting new generation.

As a part of this careful study, RTO West considered a variety of financial rights models as well as physical rights models. The choice was to use a financial model to schedule from injection points to withdrawal points on the system rather than a physical rights model that would have required transmission rights on every path that a transaction would use to get from generation to load. RTO West rejected the physical flow path methodology because of its complexity, its inability to deal with flows on other systems that are simply a part of everyday use of the system, and its inability to actually allocate the current rights in the system to each flow path in the system.

This significant change from status quo was largely driven by the fundamental fact that today's contract path methodology is incompatible with physical flows on the transmission system. The contract path methodology has resulted in schedules being denied even though there has been available capacity on the system a clear degradation in efficiency. The contract path methodology suffers from other serious problems, including its lack of effectiveness, which creates a reliability threat when schedules are cut due to overload and no flows get changed. Today's contract path methodology also is an "all or nothing" system in which requests for rights are often rejected when a particular path is only fully committed a few hours of the year. Nobody on the system knows what this committed capacity is worth (or what it is worth to upgrade the capacity) because the contract path system does not allow parties to either buy it or sell it for the few hours it is constrained. These limitations cause the contract path approach to forego significant consumer benefits, not only in operating efficiency gained through redispatch and ancillary services markets, but also in the ability to assess the value of expanding the system and commit to cost effective construction.

Generator Interconnection

RTO West proposed to set generation interconnection standards for all RTO West controlled facilities and for all other facilities, standards and policies would be set by individual utilities with the availability of an RTO West dispute resolution process for resolving differences.

Reloaded Generator interconnection standards will be part of the RTO West tariff that has yet been filed. These standards will be developed for the RTO as a whole and filed as a part of the tariff. FERC policy on generator interconnection (particularly small generators) is still evolving and RTO West must settle on policies that are acceptable to the region and to FERC.

Problems and Opportunities

RTO West proposes to standardize generation interconnection transmission facilities under RTO West's authority with a generation integration agreement, which will become part of the RTO West tariff. By being independent, RTO West will eliminate any undue influence over generation interconnection.

Congestion management

RTO West proposes to use a financial approach to manage constraints on the RTO West transmission system. This congestion management system would take the incremental costs of changing generation or load to relieve constraints and use those costs to calculate prices at various locations on the RTO West transmission system. These locational prices become the basis of congestion charges that customers would pay for short-term use of the system.

Such a system allows users to see the cost consequences of their choices and allows the RTO to make decisions to clear the congestion on the system at the lowest cost. It is superior to an administrative mechanism where schedules are curtailed based on set of pre-determined rules. The RTO West congestion management system will allow the RTO to maximize the use of its transmission system and fully meet the security constraints necessary to preserve system reliability. The RTO West congestion management and scheduling process will be based on actual flows on the system and financial rights, rather than the present "contract paths" and physical rights that are becoming increasingly disconnected from actual use and power flows on the system.

RTO West will accept all schedule requests properly submitted to it and will use these requests to analyze the resulting power flows for overload problems. RTO West will then procure necessary generation increases and decreases, as well as appropriate demand response, to accommodate the schedule requests it has received while honoring transmission-loading limits. Participation in the bidding process to offer "increases" and "decreases" to RTO West will be voluntary. RTO West will then use the bids it receives to calculate locational prices, which reflect the cost of serving the next increment of load at appropriate locations. Congestion charges will be based on the spread in prices between each schedule's withdrawal and injection locations.

Rather than requiring rights to use or schedule on the transmission system, RTO West will offer two ways that customers can hedge themselves financially against congestion charges: Financial Transmission Options (or “FTOs”), and Catalogued Transmission Rights (or “CTRs”). Customers who do not have FTOs or CTRs will nevertheless be able to submit schedule requests, however, they will have to pay whatever congestion charges apply.

FTOs are tradable financial hedges that provide customers with credits that offset the congestion charges incurred by their schedules. The credit value generated by a particular FTO may be used to offset congestion charges resulting from any schedules a customer has submitted during the hour specified in the FTO. This portability assures that FTOs can and will be traded freely in secondary markets, which creates liquidity for those wishing to buy and sell these rights. FTOs will be created by RTO West from three sources: (1) capacity within the existing system that may become available by being able to look system-wide, (2) voluntary conversion of pre-existing contracts, and (3) system expansion, which creates new capacity.

CTRs are the catalogued rights that will enable RTO West to honor pre-existing contracts and load service obligations and exempt these rights holder from exposure to congestion charges. RTO West will manage pre-existing obligations on an aggregate basis using the transmission assets each transmission owner has provided to support its obligations. This will enable RTO West to take advantage of flexibility and diversity within and between separate transmission systems in ways that individual transmission owners could not.

RTO West will have both the obligation and the authority to ensure that all aspects of its market design and operations are and continue to be workable and consistent with regional needs. At the end of three years of commercial operation, the Board will have an obligation to conduct a thorough, formal evaluation of RTO West’s congestion management system.

Reloaded The RTO West congestion management proposal was not fully developed to the point it could be filed as part of a tariff. The work on the congestion management model needs to be completed and filed as a part of the RTO West tariff. It also needs to be reviewed in the context of the other congestion management systems proposed by the Cal ISO and WestConnect to see whether or not it creates seams with these RTOs. Also, cataloging the existing obligations along with associated transmission assets needs to be completed to assure preservation of existing rights.

Problems and Opportunities

RTO West’s proposed congestion management system eliminates several major problems that plague current management of congestion on the system today. RTO West allows all parties to schedule, whether they own rights or not, but requires them to pay the congestion costs they impose on the system should the system need adjustment to honor schedules. It moves congestion management away from an administrative mechanism of schedule curtailment based on rights on individual systems, to a market mechanism of purchasing congestion redispatch. Issuing new rights is based on an independent “big

picture” look at available capacity on the entire system. This “big picture” look at capacity will allow the RTO to use all of the available capacity on a combined system basis, even that portion of available capacity that is presently masked by the multi-system, contract path methodology. The RTO West model eliminates the mismatch that the current system of contract rights causes because the contracts are totally divorced from actual flows on the system. It uses the system capabilities to handle actual flows as the basis for determining the security constraints on the system. These actual constraints dictate the total amount of transactions the system is physically able to carry. Under the RTO West proposal, schedules are not curtailed because of unavailable capacity and those willing to adjust their schedules can do so and get paid for doing it. Overall, the RTO West system eliminates the biggest impediment to efficiently using the system by allowing the presently unused capacity on the system to be utilized and by economically allocating available capacity to those that value it most.

The RTO West congestion management model has the further advantages of identifying the costs that congestion causes on the system, allowing users to see these costs, informing decisions and, then allocates them to those that cause them. Thus, the RTO West congestion management proposal, informs decisions about dispatch and, by improving use of the existing system, will lower the costs of expanding the system because some upgrades that were thought necessary under the current system may well be unnecessary with better system utilization. For those investments that are necessary, the RTO’s congestion management system will clearly identify what the cost of the congestion is and the benefit or value to the system for fixing the problem, which will lead to the lowest cost solutions to solving congestion on the system. It fully integrates the planning for the system with its actual use and needs. The RTO West congestion management will also provide the right “price” signals to help generators make the best decisions about where to construct new generating facilities.

Cost for taking transmission service from RTO West

RTO West proposes to eliminate the present system of multiple charges for using each utility system that a transaction crosses (pancaked rates) and replacing it with a single charge for using the entire RTO West system. RTO proposes to charge users a fee (company rate) based on the location of the load that is taking the service from RTO West. The charges will vary with location, depending on the transmission system that directly serves the load. For loads outside the RTO West system, the RTO proposes to charge an export fee to capture revenues from loads outside of the RTO system. The RTO West pricing proposal is called a license plate rate structure because it is similar to charges for licensing cars in different states, where, regardless of the state of license or its cost, the license plate allows users to drive in all states. RTO West selected this proposal after careful study and concluded that it provided a better way to collect revenues to pay for the embedded cost of the system and still allow the RTO to minimize any potential cost shifts associated with modifying the current rate structure. RTO West also looked at charging a single “postage stamp” rate for the entire RTO West system, but rejected it because of the significant cost shifts associated with that proposal.

Avoid unnecessary cost shifts

RTO West will operate under current “company rates” for a transition period of eight years to prevent any cost shifting during that period. In order to preserve the current allocation of cost responsibilities during the transition period the RTO West utilities will make transfer payments among themselves to “true up” cash flows that historically have existed among them. RTO West also proposes a Replacement Revenue Pool during the transition rate period that will compensate existing transmission owners for non-firm and short-term firm service revenue that goes away when rate pancaking is eliminated. This replacement pool mechanism is intended to make transmission owners whole during the transition period and further reduce any cost shifting.

Honor existing transmission service agreements

Should a wholesale customer decide it doesn’t want to convert its service to RTO West service, it may continue to take service from its existing transmission provider. It is not required to “convert” its existing service contract to RTO service. Customers electing to continue to take current service from their transmission provider will continue to pay their existing utility, which will typically be their scheduling coordinator. All other users of the RTO West system and those deciding to convert to RTO West service will take “transmission use service” from RTO West, which is the license plate rate.

Other charges

The license plate rate charges, in concert with payments for non-converted service recover the majority of embedded costs associated with the transmission grid in the Northwest. The revenue recovery from these charges will be supplemented with revenue produced from the export rate and the replacement pool mechanism in order to ensure full recovery of embedded costs. A separate volumetric charge called a “grid management charge” will be levied on all users of the RTO West grid to recover the start-up and operating costs. Other volumetric charges such as ancillary services, losses and congestion management are specifically designed not to collect embedded costs.

Reloaded RTO West has yet to submit its rate filing that will refine the concepts of the RTO West pricing proposal into a tariff for all users of the system. It has not defined the actual revenue amounts it seeks to recover from each of the specific charges to go into actual tariffs. Finally, RTO West is working with the other RTOs in the West to explore possibilities of eliminating export fees by substituting some type of pricing reciprocity among the RTOs.

Problems and Opportunities

RTO West’s pricing proposal eliminates rate pancakes for crossing multiple transmission systems, but does so in a way that avoids any significant cost shifting. The proposal eliminates the inefficiencies and inequities that can result from pancaked rates. It better aligns the costs to users of the system with the actual costs they impose for using it. It also encourages economic transactions throughout the RTO West market by eliminating the fixed costs charges that bear no relationship to costs the transaction imposes on the system. This change would allow the region to best achieve delivered generation for the lowest overall system cost.

Planning and Expansion

RTO West proposes a comprehensive planning process for all “RTO West Controlled” facilities, but proposes to share some of the planning responsibilities with local utilities for other facilities that provide wholesale transmission service. The RTO West planning process would be a planning process open to stakeholders, which seeks to identify and implement least-cost solutions to transmission problems, allows consideration of non-transmission alternatives, and contains a subscription process to encourage market participants to help finance needed projects. The RTO West planning process also has a backstop mechanism to get certain projects constructed under certain conditions and to align the costs and benefits should the RTO determine there are market failures and certain projects should be constructed given certain criteria. The planning process builds on and uses the information that the RTO gathers by operating its congestion management system.

Reloaded RTO West will revise its planning process to give the RTO appropriate responsibility for both transmission planning and expansion in its region. RTO West will have planning authority for the controlled transmission facilities within its boundaries and will revisit this authority as it pertains to other facilities as part of its planning processes. RTO West will also work with the states, other RTOs and other stakeholders in the West to develop a comprehensive transmission plan for the seams between the RTOs in the western interconnection. Development of a single Interconnection and Transmission Service Queue within RTO West would simplify the process that requestors go through to request service and the subsequent response by affected PTOs.

Problems and Opportunities

The RTO West planning process greatly enhances the ability of getting transmission infrastructure constructed, while making sure that only the needed projects are built and that they are the least-cost way of solving problems on the transmission system. RTO West will be able to take a “big picture” view of the transmission system and identify and facilitate construction of projects that benefit the entire system, that otherwise would not be constructed because of the mismatches that exist between “the system with the problem” and “the system with the solution”.

The RTO West planning process is to be designed as a non-discriminatory, proactive, least-cost, public process. One entity will be ultimately responsible for the planning and expansion of the RTO West Facilities. The output of this process should provide more useful information and transparency to stakeholders than has been available in the past. It will provide more information for decision makers, greater opportunities for innovative solutions, including non-transmission alternatives, and a greater ability for stakeholders, including the states, to shape the outcomes of the process.

The overall planning process, with price signals from the congestion management system, is designed to encourage sufficient and timely investment in the system while continuing to meet reliability standards. Price signals from the congestion management system and project cost allocation mechanisms should help encourage investment to get

needed projects constructed. The RTO West planning process provides a method to assign costs of upgrades to beneficiaries of them, and has a mechanism to secure third party investment in these upgrades. If these mechanisms fail to get facilities constructed that RTO West determines are needed, RTO West has the authority to compel construction of these facilities under certain conditions and allocate the costs to the PTO's that benefit.

Facilities included in RTO West

RTO West did not propose to give the RTO complete operational control over all of the transmission facilities within RTO West, or for all facilities that provide some type of wholesale transmission service. Rather RTO West proposed different categories of facilities for which RTO West will provide varying degrees of operational control. Those wholesale transmission services not provided for certain categories of facilities by RTO West would be provided by the local utility currently providing such services.

Reloaded RTO West will revisit the treatment of the different categories of facilities and the services offered over those facilities described in the Stage 2 proposal. RTO West will also inventory the transmission facilities within its footprint and create an inventory and rationale for categorizing each of the facilities. This inventory and rationale will be filed with FERC.

Market Monitoring and Mitigation

RTO West submitted a proposal for an interim RTO West market monitor because it was working with the other RTOs in the West to develop a single west-wide market monitor. The market monitor is to be independent from the RTO West board and would be able to report directly to FERC. Although the market monitor will not have any enforcement authority, it will carry out the responsibilities outlined in a Market Monitoring and Mitigation Plan that will be developed for RTO West markets.

Reloaded RTO West continues to work with the other RTOs in the western interconnection to develop a single west-wide market monitor. RTO West will work with FERC and the states to prospectively develop the information that the market monitor will gather from system users to do its assessments. RTO West intends to file an updated market monitoring and mitigation proposal incorporating these changes

Problems and Opportunities

The market monitor will be monitoring markets on a real-time basis and will be utilizing information from transparent markets for congestion redispatch and ancillary services. This will allow problems with exercise of market power to be identified immediately. In addition, the market monitor will be able to recommend fixes to the rules that may have allowed the abuse of power. By taking a west-wide approach to market monitoring with the other RTOs, RTO West will have a better opportunity to eliminate market power abuse that could take place throughout all the western RTOs. By having transparent,

facilitated markets for congestion redispatch and ancillary services, RTO West will greatly facilitate mitigation of opportunities for exploiting market power.

Ancillary services

Ancillary services are the services that generators provide to the transmission system to support its reliable operations. It includes such services as load following and reserves. RTO West filed a conceptual plan that included integrated markets for ancillary services and congestion management, but provided little detail to support its conceptual plan.

Reloaded RTO West will fully develop the details of its ancillary services proposal and file it as part of the FERC tariff. This tariff will provide users with the costs of certain penalties for needing these services, such as imbalance energy, and provide the terms that will allow all generators to be able to provide these services to RTO West.

Problems and Opportunities

The RTO plans to operate organized markets for ancillary services, fully integrated with the RTO congestion management system. These markets will supplement the bilateral market that already exists within parts of the region for many ancillary services. This will assure all eligible parties have adequate access to ancillary services and capable suppliers will have a non-discriminatory opportunity to sell their available services. Since the ancillary services markets will be integrated with the congestion redispatch market, transmission limits will be inherently recognized and local availability at load centers will be assured. Additional benefits associated with integrating the markets for ancillary services and congestion redispatch result from recognizing that often the same generators are capable of supplying both congestion redispatch and ancillary services, such as balancing energy. Integrating the markets expands the pool of generation available to each and enables more cost-effective choices.

Also, the proposal to consolidate control areas into a single RTO West control area will maximize the efficiency of capacity services such as reserves and load following. This efficiency gain from control area consolidation stems from the fact that as the load being followed is aggregated into larger amounts, the generation capacity dedicated to supplying normal real-time demand fluctuation (and to outage reserves) is reduced (when measured as a percent of total load). The intrinsic nature of load is that a larger aggregation is statistically smoother (due to diversity) than a smaller amount and hence requires less generation capacity to be held in reserve to track fluctuations.

Integration with other RTOs in the West

The RTO West proposal greatly reduces existing seams problems. Both the California MD02 proposal and the RTO West Stage 2 proposal are based on locational prices and financial transmission rights. It should be much easier to manage the seams between two models based on similar principals than trying to bridge the gap between physical and

financial rights. This does leave dissimilarity between RTO West and WestConnect, but the Congestion Management Alignment Working Group, which is a part of the Seams Steering Group – Western Interconnection (SSG-WI), believes it has developed a mechanism for addressing these differences. An inter-RTO settlement process would allow the RTOs to settle financially at the seams and address or eliminate loop flow on other RTO systems by creating financial mechanisms that allocates costs to RTOs that impose costs on other RTOs. This process will work most efficiently as an RTO-to-RTO settlement; without an RTO, additional seams issues are created as a result of the multiplicity of transactions between and among scheduling coordinators.

Implementation and transition

Creating RTO West is a multi-year process. It involves regulatory filings and approvals from states and FERC, satisfying federal NEPA requirements for BPA, and satisfying requirements within Canada. It involves selecting and seating the new board, transferring operational assets into the RTO, collapsing multiple control areas into a single operation and implementing the necessary systems to manage congestion and ensure the reliable operations of the system. For this reason, RTO West proposed a structured and detailed implementation plan that transitions the currently separate systems through to full-scale operations of an RTO.

Reloaded RTO West will revisit the implementation plan (one possible approach is attached). Sensible, well-defined steps are necessary to carry out such a complex operational conversion. RTO West may need to commence some level of operation prior to full implementation of markets for congestion management and ancillary services. A phased and logical approach will allow the RTO to make adjustments that are needed as it is created. It also allows adequate time to get the necessary state, Federal, and international approvals to create the RTO.

Value to the region

The value of an RTO includes near-term benefits in the form of system operations efficiencies and reliability benefits, and medium- to long-term benefits, such as improved planning and decision-making on system expansion. Although benefits will be realized while the RTO is being formed, the region will not enjoy its full value until control areas are consolidated and markets are restructured.

Near-term operational improvements will result from the RTO's regional and market perspective. System operations will be more efficient, including fuller use of existing transmission assets. This, in turn, will reduce the system's overall cost of production.

The establishment of an RTO will result in a common menu of transmission services, a common tariff, a single OASIS, and a common set of business practices that will make usage more efficient. This common platform will provide RTO West customers with "one-stop shopping", and reduce administrative costs associated with current operations.

In the medium- and long-term, an RTO will result in benefits due to a broader and less balkanized planning perspective. A regional perspective on transmission constraints will logically improve the expansion planning and decisions, and force a common approach to identifying beneficiaries and allocating costs. A common, regional approach should encourage timely identification of low-cost infrastructure alternatives.

The operation of a regional transmission system will gain the benefits of a single control area, improve outage coordination (and minimize system failure propagation), and create a common information system for security coordination. It will also better enable the establishment of regional markets, such as the ancillary service market, which will lead to more low-cost options for managing system operations.

Benefits of RTO

The benefits of RTO formation are several: greater efficiencies in generation dispatch; improved utilization of existing assets; integrated transmission planning; reliability benefits; and reduced transaction costs.

Efficiencies in system dispatch

- Eliminating pancaked transmission rates will increase the efficiency of system dispatch to meet demand at lowest cost. Currently, additive transmission rates apply as power is moved over multiple transmission areas. This can cause lower cost, more efficient generation to become uneconomic because of compounded transmission costs;
- Eliminating pancaked loss charges is a likely result of Stage 2 reloaded, and this will increase the efficiency of dispatch. Currently, most transmission providers have tariffs that include charges for losses based on average loss factors. When transactions cross more than one control area, the loss charges are pancaked. Eliminating this pancaking, and instead charging for losses on a single, regional basis, eliminates the penalty effect of moving energy within the region;
- Sharing operating reserves across the RTO West region leads to lower operating costs as these reserves are carried on the most efficient resources over a wider region.

Improved utilization of transmission assets

- Outage planning will be better optimized to the region's benefit. Maintenance plans will be based on (1) value to the broader regional market rather than to individual control areas and (2) broader, more complete information regarding reliability impacts;
- The RTO will bring a comprehensive, regional approach to managing transmission usage. Unlike today, transmission can be made available up to the level of security constraints.
 - Transmission availability is likely to be determined more accurately, based on broader, more complete usage data and more consistent assumptions and criteria
 - There will be a reduced need to set aside transmission capacity to compensate for unknown, uncoordinated scheduling in neighboring control areas

- The new flow-based approach will replace current mechanisms where schedules are curtailed based on pre-determined rules. This change will allow operations closer to expected power flows.

Integrated transmission planning

Regional system planning can take advantage of the greater load diversity of a broader resource pool to ensure the same or higher standards of system reliability with less capital investment. Much of this coordination occurs today, but the RTO will formalize the process and better ensure that the region pursues solutions of greatest net benefit. The RTO's planning process will be designed to result in market decisions about the need for system expansion that are rational and economically sound, taking into account non-transmission alternatives. The process will have a backstop mechanism to get certain projects constructed under certain conditions.

Reliability benefits

System reliability should be enhanced as system operations are coordinated over a wider area and as system operators control more resources to respond to changing system conditions. Widespread outages will be less likely, with response times potentially reduced.

Reduced transaction costs

Transaction savings will occur as the RTO adopts a common menu of transmission services:

- A single tariff reduces costs and encourages market competitiveness;
- A single OASIS reduces costs and improves liquidity;
- Standardized business practices simplify transactions, which today may be limited because of the complexity of different systems and procedures;
- Transmission-related arbitration, mediation and litigation costs could be reduced.

Costs of RTO formation

The filing utilities will continue to incur costs to develop the RTO proposal. The utilities will also incur implementation costs, for example, metering investment and scheduling development and operating costs. On the other hand, some activities performed by the utilities today will be transferred to the RTO.

The RTO's start-up will include expenditures to:

- Recruit and establish a Board.
- Perform business and financial tasks:
 - Create a business plan, including a procurement model and financing options;
 - Secure long-term financing and possibly, a financial advisor;
 - Create a public information and communications program;
- Perform legal and regulatory tasks:
 - Secure lead counsel and develop a master plan;
 - Prepare FERC and other regulatory filings and respond to data requests;
 - Obtain applicable regional, state and local approvals – state commissions, BPA, BCUC etc.

- Develop other legal agreements – lease agreements, employment and non-disclosure agreements, contracts, etc.
- Perform operations tasks and build out:
 - Develop or procure operations systems – seams dependent and seams independent systems, workflow systems and process design.
 - Establish business infrastructure – administrative systems, PC's, LAN's, website, ISP, mail, etc.
 - Test and certify systems – systems testing, integration testing, simulations, security testing, shadow operations, NERC certification, etc.
 - Create a market monitoring unit, and develop a market monitoring plan
- Perform administrative and governance tasks:
 - Implement business workflow, procedures and processes – billing, settlements, HR, accounting, audit, reporting, risk management, treasury, etc.
 - Develop the organization – organizational design, HR strategy and policy, etc.
 - Establish facilities – define requirements, locate, lease, build out, telecommunications infrastructure, vacate temporary facilities, etc.
 - Implement stakeholder processes – phase out existing processes and create formal advisory board and integrate into governance processes

Targeted benefit/cost analyses will be conducted to inform the decision-making process as Stage 2 is reloaded. A final study will likely be prepared, with the benefit/cost approach determined collaboratively with the RRG.