

## **Executive Summary**

This white paper presents proposed pricing and cost recovery options for Grid West transmission and grid management services. The proposals described in this paper have been developed by the Grid West Pricing Work Group during 2005. They address pricing for new long-term transmission service offered by Grid West (service that can be provided from existing facilities as well as service that requires system upgrades or expansion), how revenues from new short-term and long-term service provided by Grid West from existing facilities will be allocated to transmission owners, and a methodology for recovering Grid West's development and operational costs.

The purpose of this white paper is to facilitate regional parties' evaluation of whether the Grid West development process should move forward from Decision Point 2.<sup>1</sup> The objective of this paper is not to offer decisive, detailed answers to every possible question concerning Grid West pricing. Rather, it is to offer a conceptual framework that demonstrates that there are workable approaches to pricing Grid West services and recovering associated costs that could be implemented if Grid West becomes operational. This white paper will have fulfilled its purpose if readers can see that there is a logic to the elements of the proposal, that they are consistent with the proposed market and operations design for Grid West, and that there are no "fatal flaws" that would render them unworkable.

An affirmative outcome at Decision Point 2 would mean that Grid West development would continue under the auspices of an elected, independent Board of Directors for Grid West, known as the "Developmental Board." In that case, this white paper would be "handed off" to the Developmental Board to serve as a conceptual resource for further work on the Grid West proposal as a whole (including pricing and cost recovery).

There are some foundational principles upon which Grid West pricing proposals are built. Understanding these principles up front will help readers better understand this white paper and the structure of the pricing proposals it describes.

First and foremost is the contribution of "legacy" transmission service rights to cost recovery for the existing transmission facilities that will be managed by Grid West. Since 2004, work on Grid West development has been guided by the "Regional Proposal."<sup>2</sup> One of the core commitments of the Regional Proposal is that existing transmission rights and obligations will be honored.

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<sup>1</sup> "Decision Point 2," scheduled for the fall of 2005, presents the question of whether to continue Grid West development by seating an independent, five-member Developmental Board of Trustees. Decision Point 2 is the second of four actions that must be taken for Grid West to become operational.

<sup>2</sup> The Regional Proposal is available on the Grid West Website at [www.gridwest.org/Doc/FinalNarrative\\_RegionalProposal\\_Dec242003.pdf](http://www.gridwest.org/Doc/FinalNarrative_RegionalProposal_Dec242003.pdf).

This core commitment has important implications for pricing. Most of the load served by the Grid West transmission owners' systems is served either through integrated utilities' use of their own systems (supplemented by long-term wheeling arrangements on adjacent systems) or through long-term transmission service agreements. Current long-term load-service accounts for the vast majority of transmission owners' cost recovery for their existing facilities. These load-serving uses are expected to remain in effect, for the most part, throughout the period covered by the proposals described in this white paper. Proposals for pricing new long-term service offered by Grid West would therefore apply only to new service Grid West is able to grant from existing facilities, and to service that is facilitated by the construction of upgrades or expansions to the existing system.

This paper is the result of the dedicated efforts of the Grid West Pricing Work Group meeting approximately every other week over a six-month period. Working within such a limited time frame, the Pricing Work Group has had to make some simplifying assumptions and limit the depth at which pricing issues are addressed. This white paper does not discuss proposed tariff terms and conditions. The Pricing Work Group has assumed that terms and conditions of Grid West's transmission service will, in general, resemble those provided in the *pro forma* Open Access Transmission Tariff (OATT) established by the Federal Energy Regulatory Commission (FERC).

This paper presents (in Section 3.4) four options for pricing new long-term service when the necessary rights (known as Injection-Withdrawal Rights or IWRs) are available from Grid West without the need for system upgrades or expansions. Option 1 would charge customers according to the location of the withdrawal point<sup>3</sup> by applying the "company rate" of the transmission owner whose system encompasses that location. Option 2 would charge customers the higher of the rate at the injection point or the withdrawal point. Option 3 would distinguish between IWRs that are confined wholly to a single transmission owner's system (in which case the company rate for that "host" system would apply) and those with an injection point on one system and a withdrawal point on another system (in which case a Grid West system average rate would apply). Option 4 proposes to auction long-term IWR pairs.

This paper also proposes (in Section 4) that the FERC concept of "or" pricing should be applied when a customer's request for long-term IWRs necessitates system upgrades or expansions. This means that the customer's cost for the new rights would either be the applicable embedded cost rate (after rolling in the costs of upgrades or expansion), or the incremental cost rate if the cost for the upgrades or expansion were higher (on a

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<sup>3</sup> As explained in Section 3.3.1 of this paper, the use of the terms withdrawal "point" or injection "point" is not intended literally. The work group responsible for developing market and operational design proposal for Grid West (the Transmission Service Liaison Group or TSLG) has not yet resolved the question of how specific the location of an injection or withdrawal "point" must be on the Grid West system.

unit basis) than the embedded cost rate. Because this white paper presents four possible options for pricing long-term service from existing facilities, the applicable embedded cost rate to which the incremental rate would be compared would vary depending on which approach Grid West implements.

This paper includes a proposal (in Section 5) for allocating to transmission owners the revenues Grid West earns from selling new IWRs (both short- and long-term). The basic concept is to allocate these revenues in proportion to transmission owners' comparative "need." Need in this context is a function of how much revenue it would take for a transmission owner to meet its annual transmission revenue requirement after accounting for the revenues that have been generated from legacy arrangements. To the extent a transmission owner experiences an under-recovery (attributable to the implementation of Grid West), the amount of that under-recovery would be recognized by Grid West as "lost revenues." Transmission owners would receive shares of Grid West's IWR revenues according to their percentages of the combined lost revenues for all transmission owners.

This paper also suggests (in Section 6) two possible methods for providing replacement revenues if there are still some transmission owners with under-recovery despite Grid West's allocation of its transmission service revenues. One option calls for Grid West to impose a schedule or usage fee (energy-based) on all users, calculated to generate sufficient revenues to make up the revenue shortfall. The other option calls for Grid West to charge transmission owners according to their peak load relative to the peak load for the entire Grid West system.

This paper describes (in Section 7) a proposed method for recovering Grid West's developmental and operating costs. Grid West would recover its operating costs (and amortize the debt associated with its development) through a Grid Management Charge. The Grid Management Charge would be assessed to all system users according to the number of megawatt-hours they schedule on the Grid West system.

Finally, because there is a minimum time period associated with the initial pricing structure Grid West implements (the Regional Proposal calls for a license-plate-type rate structure known as the "company rate approach" for a minimum period of eight years), this paper describes (in Section 8) the possible directions in which Grid West pricing might evolve after the minimum eight-year company rate period has passed.<sup>4</sup>

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<sup>4</sup> The Pricing Work Group has also developed a separate set of questions and answers to address key pricing issues about which regional parties have expressed particular interest.

## **1.0 Introduction**

The immediate issue to which this paper responds is the need for interested regional parties to have sufficient information to develop their positions concerning “Decision Point 2.” Decision Point 2 is the second of four actions that must be taken for Grid West to become operational. (Decision Point 1, which was the threshold decision about whether to adopt the Grid West Developmental Bylaws, occurred on December 9, 2004.)

Decision Point 2 is scheduled for the fall of 2005. The question the region will address at Decision Point 2 is whether to continue Grid West development by seating an independent, five-member Developmental Board of Trustees. The Developmental Board would have the authority to negotiate agreements with transmission owners for Grid West to use their facilities and also to develop proposed tariff terms for Grid West’s operational stage. If there is sufficient consensus to proceed at Decision Point 2, the Developmental Board will be responsible for the subsequent steps that will lead to Decision Point 3 (whether the Developmental Board will offer transmission agreements to the region’s transmission owners) and Decision Point 4 (whether Grid West should initiate its operational stage by adopting Operational Bylaws).

This white paper has two main purposes. The first purpose is to enable regional parties to evaluate whether they support moving forward at Decision Point 2. In this respect, the pricing proposals presented in this paper are part of a larger package with several components, including market and operational design, pricing, and preliminary analyses concerning the costs, risks, and benefits of Grid West implementation. The second purpose of this white paper is to serve as a resource for further Grid West development if the outcome of Decision Point 2 is a consensus to elect the Developmental Board and move forward.

Because the Developmental Board will be responsible for developing proposed transmission agreements and tariff provisions for Grid West’s operational stage, the Pricing Work Group expects that this white paper will be “handed off” (together with other work that has been completed by Decision Point 2) to the Developmental Board following Decision Point 2. This paper is not intended to be conclusive or binding on the Developmental Board, but rather to help the Developmental Board “hit the ground running” when it takes over the Grid West development process.

### **1.1 *Issues To Be Addressed***

As has been demonstrated repeatedly in the Grid West development process to date, experience and new information will provide fresh perspectives on previous work. The Pricing Work Group recognizes the fluidity of concepts over time as circumstances change and other elements of the Grid West proposal evolve. The Pricing Work Group does not intend that any proposals in this white paper be cast in concrete.

The areas the Pricing Work Group was asked to address between Decision Point 1 and Decision Point 2 were:

- pricing for service from transmission owners' existing facilities;
- pricing for service from new or upgraded transmission facilities; and
- pricing to recover Grid West's development and operating costs.

Section 3.4 of this paper presents four options for pricing IWRs for new long-term service when the requested IWRs are available from Grid West without the need for system upgrades or expansions. Option 1 would charge customers according to the location of the withdrawal point; Option 2 would charge customers the higher of the rate at the injection point or the withdrawal point; Option 3 would apply a single-system company rate for IWRs that are confined to one transmission owner's system and a Grid West system average rate for IWRs with an injection point on one system and a withdrawal point on another system; Option 4 proposes to auction long-term IWR pairs.

Section 4 of this paper proposes to apply the FERC concept of "or" pricing when a customer's request for long-term IWRs necessitates system upgrades or expansions.

Section 5 of this paper proposes to allocate Grid West revenues from selling new IWRs to transmission owners in proportion to their comparative "need." Need in this context is a function of how much revenue loss a transmission owner experiences due to Grid West implementation.

Section 6 of this paper suggests two possible methods for providing replacement revenues to offset any under-recovery that might remain after Grid West allocates its revenues from IWR sales. One option calls for Grid West to impose a schedule or usage fee (energy-based) on all users, calculated to generate sufficient revenues to make up the revenue shortfall. The other option calls for Grid West to charge transmission owners according to their peak load relative to the peak load for the entire Grid West system.

Section 7 of this paper offers a method for recovering Grid West's developmental and operating costs. Grid West would cover its operating costs (and amortize the debt associated with its development) through a Grid Management Charge. The Grid Management Charge would be assessed to all system users according to the number of megawatt-hours they schedule on the Grid West system.

Finally, Section 8 of this paper describes the possible directions in which Grid West pricing might evolve after the minimum eight-year period during which Grid West is required to maintain a company rate pricing structure.

## **1.2 Principles and Objectives**

Since 2004, work on Grid West development has been guided by the Regional Proposal. The Regional Proposal identified three overarching principles for Grid West development specifying that any proposal should:

- (1) be a clear improvement over the existing situation and respond to the identified problems;
- (2) be workable in itself and not create significant new problems at the same time it attempts to address old ones; and
- (3) allow further evolution of solutions to remaining problems, as well as respond to changes in circumstances, and not become an obstacle to further steps that the region supports.<sup>5</sup>

The Regional Proposal also called for

“effective ‘de-pancaking’ of the regional transmission system in two respects. The first sense in which de-pancaking occurs is that requests for transmission service are received and processed by [Grid West] to eliminate the need for multiple submissions to individual transmitters. The second form of de-pancaking is the elimination of fixed-cost-based, volumetric charges for short-term transactions.”<sup>[6]</sup>

The Regional Proposal contemplated a “license-plate” structure, which it referred to as the “company rate approach,” to eliminate multiple, volumetric fixed-cost charges for long-term service.<sup>7</sup> In keeping with the fundamental principle that existing rights and obligations for transmission service will be honored, the Regional Proposal provides that Grid West implementation will not require those with pre-existing service agreements to “convert” those contracts into some new form of service or rights.

By distilling the general guidance in the Regional Proposal, the Pricing Work Group identified the following specific principles that governed its work on Grid West pricing:

- honor existing contracts;
- provide revenue sufficiency for transmission owners;

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<sup>5</sup> See Regional Proposal dated December 24, 2003 at 4.

<sup>6</sup> Regional Proposal at 10.

<sup>7</sup> See Regional Proposal at 11.

- reduce or eliminate rate pancaking;
- avoid or minimize cost shifts;
- apply a “company rate approach” (which was later given a very precise definition in the Grid West Operational Bylaws); and
- work compatibly with the TSLG proposal for Grid West market and operational design.

## **2.0 Background Information**

### **2.1 Context—How Much Revenue Depends on New Service?**

The Regional Proposal recognized that because existing rights were to be honored, most cost recovery for the existing system would be from payments for “legacy” arrangements.<sup>8</sup> These legacy arrangements include service to native load as well as service under existing long-term transmission service agreements.

The Pricing Work Group carried forward this recognition and clarified that legacy service would also encompass the renewal of pre-existing contracts through the exercise of rollover rights and entitlement to service for load growth.<sup>9</sup> Furthermore, to reduce the potential exposure to cost-shifts and under-recovery, the pricing work group proposes that transmission owners’ use of each others’ system for load service (and the corresponding payments) be maintained as long as the company rate approach is in place. This would amount to a form of “mandatory rollover” for most long-term agreements among transmission owners, even if by their stated terms some agreements could have been allowed to expire.<sup>10</sup>

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<sup>8</sup> See Regional Proposal at 11.

<sup>9</sup> As explained further in Section 3.5.1, this means that when a legacy customer extends its contract by exercising rollover rights or increases its service on a transmission owner’s system to cover load growth, the continued or increased service would not be characterized (or priced) as “new” service from Grid West (so long as the terms in the legacy arrangements provided for rollover or load growth).

<sup>10</sup> It is expected that Grid West Transmission Agreements would provide a mechanism through which transmission owners would agree to maintain long-term wheeling rights on each others’ systems (and associated payments) as needed for load service obligations. Long-term transmission agreements between transmission owners and “third parties” (meaning transmission customers that are not Grid West transmission owners) would not be addressed through Grid West Transmission Agreements (because these third parties would not enter into Transmission Agreements with Grid West). Nevertheless, because the proposed market and operational design for Grid West relies on a physical-rights-based scheduling system, the Pricing Work Group expects that most third parties with existing transmission service rights that are needed for load service will elect to maintain and roll over their legacy rights if they are entitled to do so. Third parties maintaining their legacy rights would also maintain the associated payments, and these revenues will go directly to their legacy transmission providers and contribute to existing system cost recovery.

The role of legacy services and their corresponding payment obligations have important implications for Grid West pricing. Current long-term load-serving uses account for the vast majority of transmission owners' cost recovery for their existing facilities. These uses also take up most of the available capacity on the Grid West transmission owners' existing systems, and they are expected to continue, for the most part, throughout the minimum eight-year period during which the company rate approach is in effect.

This suggests that most new long-term service requests will require system upgrades and expansions. Long-term service requests that can be granted from existing facilities (AFC) will most likely be the exception, rather than the rule. Because most of the Grid West transmission system will be used and paid for through legacy arrangements, only a fraction of the revenues needed for overall cost recovery will depend on charges for new service from existing facilities. These factors, together with the establishment of Grid West's reconfiguration service auctions (explained further in Section 2.3) are expected to limit the potential for revenue insufficiency due to Grid West implementation.

The potential remains, nevertheless, that Grid West implementation may result in some revenue loss from existing transactions that are discontinued. For example, Grid West transmission owners will no longer provide short-term and non-firm service (although Grid West will offer new short-term service rights through its reconfiguration services market). Some long-term point-to-point arrangements that combine separate rights on multiple systems (currently subject to rate pancakes) may be discontinued if Grid West can provide comparable service at non-pancaked rates. In the absence of Grid West, the revenues associated with these transactions would have directly contributed to the embedded costs of the region's transmission systems.

The gross revenue requirement associated with the combined Grid West system (based on 2003 data) is about \$1.8 billion. This figure encompasses the facilities of all transmission owners that currently fund Grid West development (Avista Corporation, the Bonneville Power Administration, British Columbia Transmission Corporation, Idaho Power Company, Nevada Power Company, NorthWestern Energy, PacifiCorp, Portland General Electric Company, Puget Sound Energy, Inc., and Sierra Pacific Power).

Of this \$1.8 billion, the Pricing Work Group estimates that about \$100 million involves payments for short-term and non-firm service. With Grid West implementation, short-term service will be provided through the reconfiguration services market. Transmission capability that is currently used to support transmission owners' short-term and non-firm sales is expected to be available for Grid West to sell through the reconfiguration services market. While it is not clear how much revenue the reconfiguration services market will generate, a conservative assumption would be that Grid West short-term sales would generate at least half of the 2003 revenues—that is, about \$50 million. A

corresponding loss of the remaining revenues (\$50 million per year) translates into less than 3% of annual gross revenue requirements.

Estimating potential revenue loss related to expiring long-term agreements is more difficult. As explained above, mandatory rollover provisions will limit revenue loss related to long-term transmission agreements among transmission owners. Based on preliminary data and discussions concerning transmission agreements with third parties (customers that are not transmission owners), the Pricing Work Group believes that, with the exception of point-to-point agreements on the NorthWestern system (which are currently structured as year-to-year contracts), Grid West implementation will not result in significant revenue loss from expiring long-term agreements with third-parties.

**2.2 Terminology Used in this White Paper**

The table below lists (in alphabetical order) some of the most important terms used in this white paper and explains the intended meanings of those terms.

Term	Explanation
<b>AFC</b>	<p>The term “<b>AFC</b>,” which stands for <b>available flowgate capacity</b>, has been defined as “uncommitted capacity on a flowgate (a line or set of lines with a combined rating, e.g. a “rated system path”). The committed capacity is the sum of the flow components calculated using power utilization factors (also called power distribution factors or generation shift factors) applied to committed injection-withdrawal rights. As used in this white paper with respect to proposed pricing for Grid West, AFC is used to refer to existing transmission system capacity that enables Grid West to grant customers’ requests for new IWRs.</p>

Term	Explanation
<p><b>Company Rates</b></p>	<p>The term “<b>company rates</b>” refers to a license-plate rate structure as contemplated in the Regional Proposal (which envisioned a “<b>company rate approach</b>” for Grid West pricing). Under the company rate approach, rates for service on a particular transmission owner’s system are individual to that transmission owner. The rates will be based on the costs of that transmission owner’s facilities,<sup>11</sup> and developed through the rate-setting process that applies to that transmission owner. (See Section 3.3.3 for further discussion of company rates.) The Grid West Operational Bylaws also define a “<b>departure</b>” from the company rate approach as a shift away from a license-plate rate structure or use of rates “derived from the costs of facilities of a participating transmission owner other than the participating transmission owner of the facilities from which the delivered power is withdrawn” (with limited exceptions for pre-existing arrangements such as general transfer agreements). Grid West Operational Bylaws § 7.16.3</p>
<p><b>Grid Management Charge</b></p>	<p>The Grid West “<b>Grid Management Charge</b>” (or <b>GMC</b>) refers to the charge applied to energy schedules submitted to Grid West to provide cost recovery for Grid West’s development and operating costs (discussed further in Section 7).</p>
<p><b>IWRs</b></p>	<p>The term “<b>IWR</b>” or <b>Injection-Withdrawal Right</b> has been defined by the TSLG as the right to submit a day-ahead Injection-Withdrawal Schedule. An “Injection-Withdrawal Schedule,” in turn, has been defined as “a schedule of balanced energy injections and withdrawals at specified Point(s) of Injection and Point(s) of Withdrawal on the Grid West [ ] System.” Customers that desire new service from Grid West specify their injection and withdrawal points, and if Grid West is able to satisfy the request from available capacity (AFC), Grid West grants the right. The Pricing Work Group envisions that long-term IWRs could be issued as <b>IWR pairs</b> (analogous to today’s OATT point-to-point service) or as an interrelated set of <b>network IWRs</b> (available only within a single transmission owner’s system and with restrictions on their use analogous to those applicable to today’s OATT network service).</p>

<sup>11</sup> If a particular transmission owner’s company rate will apply to its own native load service, then that transmission owner’s company rate for service to native load might also include the transmission owner’s cost for wheeling on other transmission owner’s system (to the extent the wheeling is for native load service).

Term	Explanation
<p><b>Legacy Services</b></p>	<p>Terms such as “<b>legacy services</b>,” “<b>legacy arrangements</b>,” and “<b>legacy rights</b>” refer to the committed uses of Grid West transmission owners’ systems that will carry over into Grid West’s operational stage. Examples of legacy services include:</p> <ul style="list-style-type: none"> <li>• a transmission owner’s use of its own transmission system to fulfill its native load service obligations (<b>including load growth</b>) and;</li> <li>• rights of customers with pre-existing long-term transmission service agreements (<b>including rollover</b> and <b>service for load growth</b> if these rights are granted in the legacy agreements).<sup>12</sup></li> </ul> <p>Customers with legacy rights would continue to receive service in exchange for payment as required by the legacy agreements. Payments from “<b>legacy customers</b>” to their “<b>legacy transmission providers</b>” are referred to as “<b>legacy payments</b>” or “<b>payments for legacy service.</b>”</p>
<p><b>Lost Revenues</b></p>	<p>The term “<b>lost revenues</b>” refers to contributions to the system costs of a Grid West transmission owner (or multiple transmission owners) that are discontinued because of Grid West implementation. For example, once Grid West begins operations, it will be the sole provider of new transmission service using the systems of the Grid West transmission owners (both long-term and short-term). The revenues that transmission owners would have earned in the past by selling these new services on their own systems have become “lost revenues” as a result of this shift. “Lost revenues” are not intended to cover all potential causes of transmission owner under-recovery (as further explained in Section 6.1).</p>

<sup>12</sup> The Pricing Work Group anticipates that while existing rights (including rollover rights) will be honored as part of Grid West implementation, the responsibility for administering legacy service may shift from the legacy provider to Grid West when the rollover term begins. Payments for the rolled over legacy service would continue to flow directly to the legacy transmission provider, but the legacy customer would be taking service under Grid West terms and conditions and would submit schedules directly to Grid West.

Term	Explanation
<b>Mandatory Rollover</b>	This white paper uses the term “ <b>mandatory rollover</b> ” to refer to the proposed requirement that Grid West transmission owners’ rights to use each others’ systems for load service (and the corresponding payments) be maintained during the period in which the company rate approach is in effect.
<b>New Service</b>	<p>For purposes of the pricing proposals discussed in this white paper, the term “<b>new service</b>” refers to either (a) service to a customer that has no pre-existing (legacy) rights to use the Grid West transmission system or (b) incremental service to a customer that enables the customer to receive service to which the customer is not entitled under its legacy arrangements. Rollover rights and service for load growth (when granted in the legacy agreements) would not constitute new service.</p> <p>In this white paper, the terms “<b>new service</b>” and “<b>new rights</b>” are used interchangeably because the means by which eligible customers obtain new service is by purchasing new long-term or short-term service rights (IWRs) from Grid West.</p>
<b>OATT</b>	The term “ <b>OATT</b> ” refers to the FERC <i>pro forma</i> Open Access Transmission Tariff. While this white paper does not specify any proposed tariff terms and conditions for Grid West service, the Pricing Work Group has assumed that terms and conditions for Grid West’s transmission service will, in general, resemble those provided in the OATT.
<b>Regional Proposal</b>	The “ <b>Regional Proposal</b> ,” which was completed on December 24, 2003, is the foundational document that has guided work on Grid West development since January 2004. <sup>13</sup> The Regional Proposal was developed by the Grid West Regional Representatives Group (or RRG) based on RRG consensus concerning the regional <b>transmission problems and opportunities</b> that warranted the region’s attention. <sup>14</sup>

<sup>13</sup> The Regional Proposal is available on the Grid West Website at [www.gridwest.org/Doc/FinalNarrative\\_RegionalProposal\\_Dec242003.pdf](http://www.gridwest.org/Doc/FinalNarrative_RegionalProposal_Dec242003.pdf).

<sup>14</sup> The RRG document summarizing the transmission problems and opportunities the RRG identified through its work in 2003 is available on the Grid West Website at [www.gridwest.org/Doc/Reference\\_Document\\_Sept52003.pdf](http://www.gridwest.org/Doc/Reference_Document_Sept52003.pdf).

Term	Explanation
<p><b>Replacement Revenues</b></p>	<p>The term “<b>replacement revenues</b>” refers to potential charges that Grid West could, if necessary, impose on transmission system users or transmission owners’ loads to offset transmission owners’ lost revenues (provided that the revenue loss is caused by Grid West implementation, as noted in the explanation of the term “lost revenues” above). Proposed mechanisms for obtaining replacement revenues are discussed in Section 6.</p>
<p><b>Rollover</b></p>	<p>The concept of “<b>rollover</b>” is used in this paper to refer to a customer’s exercise of rights to extend the term of its legacy arrangements rather than allowing these rights to expire (so that the customer continues to make payments under the legacy agreement in exchange for continuing to receive the service granted under the legacy agreement). The rollover of a legacy arrangement, which would not be deemed to constitute new service from Grid West, is to be contrasted with a customer’s choice to permit the <b>expiration</b> or <b>termination</b> of a legacy transmission service agreement by electing <b>NOT</b> to exercise its rollover rights. Rollover, and how it relates to understanding the concept of new Grid West service, is discussed further in Section 3.5.1.</p>
<p><b>RRG</b></p>	<p>The <b>Regional Representatives Group</b> or <b>RRG</b> is the forum for stakeholder participation in shaping how Grid West will function during its operational stage and what kinds of services it will provide. The RRG encompasses parties representing transmission owners, transmission-dependent utilities, generators, power marketers, end-use consumers, state and provincial regulators, tribal interests, and environmental and energy-related public interest groups.</p>
<p><b>TSLG</b></p>	<p>The <b>Transmission Service Liaison Group</b> or <b>TSLG</b> is the work group responsible for developing market and operational design proposals for Grid West.</p>

### **2.3 Key Features of Grid West Proposed Market and Operational Design**

#### *Overview*

As explained in Section 1.2 above, the Pricing Work Group viewed compatibility with Grid West's proposed market and operational design as fundamental to its work on pricing. In effect, the proposal elements that had already been established by the Grid West TSLG operated as constraints on pricing proposals. An appreciation of the rudiments of Grid West's proposed market and operational design is therefore helpful for understanding the pricing proposals in this paper and placing them in proper context.<sup>15</sup>

If the Grid West development process is successful and Grid West becomes an operational organization, Grid West will implement a system-wide flow-based physical rights approach for managing congestion. This approach will require that any schedule for transferring power through the system be accompanied by an appropriate transmission right (either a legacy right issued or held by a Grid West transmission owner or a new IWR issued by Grid West). Every injection point and withdrawal point used for scheduling will be validated against the user's set of rights.

When eligible customers request new long-term transmission service rights (which Grid West would issue in the form of IWRs) or seek to obtain short-term service rights through the Grid West reconfiguration service market (described further below), Grid West will assess whether the system has the available capacity (AFC) necessary to grant the requested IWRs. Each IWR issued by Grid West will be based on use of the combined capacity of the Grid West transmission system necessary to connect the point of injection to the point of withdrawal. Before issuing new IWRs, Grid West will analyze, on a system-wide basis, how power flows will be affected by the IWR that has been requested and will issue the IWR only if it concludes that the customer's use of the IWR to schedule power on the Grid West system will not violate operational criteria.

Existing (legacy) transmission rights are protected and unchanged by the Grid West proposal. This is possible because IWRs are a flow-based extension of the pre-existing physical transmission rights issued today. Consequently, those holding pre-existing transmission rights will not need to "convert" them into another form. Grid West will inventory existing system obligations, reserving the capacity needed to cover their injection and withdrawal impacts on the Grid West system.

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<sup>15</sup> The purpose of this white paper is to explain pricing proposals structured to mesh with the Grid West market and operational design. To assist readers with background knowledge concerning pricing proposals developed for the RTO West Stage 2 FERC filing, there is a brief comparison table included as Attachment 1 to this paper.

One of the most significant commercial improvements Grid West will offer over today's service structure is a reconfiguration service. Through Grid West's reconfiguration service (which will enable eligible customers to obtain IWRs with durations of less than one year through an auction process), customers holding transmission rights issued under legacy arrangements will be able to offer them to other eligible customers (if the legacy terms permit resale). Grid West will also be able to satisfy requests for additional short-term service by issuing new IWRs from AFC.

The benefit of Grid West's reconfiguration capability is that it will eliminate the need for an identical match between the buyers' and sellers' injection and withdrawal points. Using its flow-based methodology, Grid West will analyze, on a system-wide basis, the impact that IWRs released to the auction would have on the system. Grid West will simultaneously determine which bids can be satisfied using uncommitted system capacity and capacity released by rights holders.<sup>16</sup>

Because Grid West's analysis focuses on how flowgates are affected by various IWR releases and requests (and many different sets of injection and withdrawal points rely on common flowgates), Grid West can "reconfigure" capacity needed to support one set of rights into the ability to grant a different set of rights. This is possible only because Grid West manages the system as a single "gatekeeper" for issuing new transmission rights and applies its flow-based methodology on a system-wide basis. When Grid West begins to operate the reconfiguration services auction, trades will no longer require a one-to-one match of injection points and withdrawal points.

#### *Through and Exports Transactions*

The Grid West physical-rights based approach to scheduling and congestion management is important for pricing. An issue that is of particular interest to many parties is its relevance to through and export transactions.

The Grid West market and operational design requires that all system users have or obtain (and pay for) physical rights before they submit energy schedules to Grid West. This means that users carrying out through and export transactions will contribute to the embedded system costs along with all other users—through payment for the necessary physical rights. These rights could be in one of three forms:

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<sup>16</sup> Revenues from new IWRs Grid West issues in the reconfiguration services market will fall into two different categories. Revenues derived from capacity that is released by rights holders will go to the parties that offered the rights into the market. Revenues derived from AFC Grid West is able to offer into the reconfiguration services market will go initially to Grid West, and then be allocated to transmission owners (as further explained in Section 5). See "Transmission Rights Reconfiguration White Paper" at 12, 17. [www.gridwest.org/Doc/P2-TSLG-Papers\\_Release-Drafts\\_12May05-2.pdf](http://www.gridwest.org/Doc/P2-TSLG-Papers_Release-Drafts_12May05-2.pdf).

- legacy rights that enable them to schedule the transaction—for which they have paid and must continue to pay an embedded system cost-based rate;
- new short-term rights purchased through the Grid West reconfiguration service—and if these rights use AFC, the resulting revenues will go to Grid West initially, and then to the transmission owners (as further explained in Section 5);<sup>17</sup>
- new long-term rights purchased from Grid West—and if the new long-term rights are available from AFC, the purchaser will be charged an embedded cost rate (or possibly an auction-based charge, if the option described in Section 3.4.4 is adopted) and the resulting revenues will contribute to system cost recovery.

Because through and export transactions will necessarily contribute to existing system costs through payment for physical rights, the Pricing Work Group does not believe that it is necessary or appropriate to propose a separate, additional charge for exports, and has not done so. In a sense, there *is* an export charge, but it is built into what parties pay for physical rights that enable them to schedule these transactions.

### **3.0 Sources for Recovering Costs of Existing Facilities**

#### **3.1 Overview**

One way to think of cost recovery for existing Grid West transmission facilities is to view it as a pie made up of three sources of revenues. The first source is payment from legacy services. As noted in Section 2.1, this source accounts for most system use as well as most of the revenue needed to pay for existing facilities. The second source is payments for new rights that use the existing system (sold by Grid West from AFC). These payments could derive either from short-term IWRs purchased in the reconfiguration auction or from long-term IWRs granted by Grid West in response to new long-term service requests. The third source is conditional—that is, it would be deployed only if the revenues from legacy payments and AFC sales were not sufficient to meet the transmission owners' revenue requirements. If a third source of revenue were needed, Grid West could use either of the mechanisms proposed in Section 6.2 to generate the necessary “replacement revenues.”

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<sup>17</sup> While charges for new rights in the reconfiguration services market are not cost-based (and so one cannot predict exactly what parties seeking rights to carry out through and export transactions will pay), the Pricing Work Group believes that it is reasonable to assume that in an auction mechanism, highly valued rights, such as those that will enable exports to California through facilities at the California-Oregon border, will generate meaningful revenues that will contribute to system cost recovery.

### **3.2 Legacy Services and Payments**

Current long-term load-serving uses (legacy arrangements) take up most of the capacity on the existing transmission system and provide most of the cost recovery for those facilities. This will continue with the implementation of Grid West because existing rights will be honored.

These legacy arrangements include a transmission owner's use of its own system to serve native load as well as service under existing long-term transmission service agreements. Legacy service would also encompass a transmission owner's increased use of its own system to meet native load growth, as well as renewal of pre-existing contracts through the exercise of rollover rights and increased network service to meet network customers' load growth.

Even though a certain proportion of the long-term contracts transmission owners and customers currently use for load service might expire after Grid West begins operations, the Pricing Work Group does not expect this possibility to result in significant revenue losses for a number of reasons.

First of all, as the RRG recognized in its "problems and opportunities" document,<sup>18</sup> and the TSLG also recognized,<sup>19</sup> on most parts of the system there is more demand for new service than existing facilities can accommodate. Under the physical-rights-scheduling system proposed for Grid West, those with existing rights would risk service denial if they allowed their rights to expire (because of other service requests waiting to make use of the capacity that would be freed up by the expiration). For this reason, the Pricing Work Group believes that most holders with existing transmission service rights will elect to maintain and roll over their legacy rights if they are entitled to do so. In exchange for maintaining their rights, legacy customers will have to continue to pay for those rights, and the revenues will go to their legacy transmission providers and contribute to existing system cost recovery.

Also, to reduce potential exposure to cost-shifts and under-recovery (and to reflect the extent to which the broader system supports individual transmission owners' service to load), the Pricing Work Group proposes that Grid West transmission owners would maintain in place their rights to use each others' systems for load service obligations. This means that transmission owners would be subject to a form of "mandatory rollover" for most of their long-term agreements with other transmission owners, which would also maintain the corresponding revenue contributions.

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<sup>18</sup> See footnote 14.

<sup>19</sup> "Market and Operational Design Overview Paper" at 6; 11-12.  
[www.gridwest.org/Doc/MO\\_Overview\\_Paper\\_V1-0.pdf](http://www.gridwest.org/Doc/MO_Overview_Paper_V1-0.pdf)

### **3.3 Understanding New Long-Term Service from Grid West**

#### **3.3.1 Short Explanation of What “New Service” Means**

The Pricing Work Group proposes that the concept of new service would apply to those situations in which a customer seeks rights on the transmission system beyond those that the customer currently holds. Thus, if an eligible customer has no pre-existing rights to use the system, all service that customer obtains from Grid West would constitute new service, and would be priced accordingly.<sup>20</sup> If a customer holding pre-existing rights on the Grid West system wishes to obtain service not granted under its legacy arrangements, the incremental service purchased from Grid West will also be new service (and the customer could continue to retain and use its pre-existing rights in combination with the new service).

All new service from Grid West will require the purchase of IWRs (either through the reconfiguration services or through long-term service requests). It is important to note here that the TSLG’s market and operational design work has not yet specified the “granularity” of injection and withdrawal “points.” These points will have to be adequately defined to indicate their impact on flowgates, but not so specific as to undermine depth in the IWR auctions. This is an area to be addressed in future TSLG work.

Section 3.5 provides a more detailed explanation of new service, together with a table of illustrative examples.

#### **3.3.2 Overview of Process for Obtaining New Service**

As is the case today, the Grid West market and operational design contemplates that transmission service will be categorized as either short-term (service lasting less than one year) or long-term (service requested for periods of one year or longer).

Under Grid West, eligible transmission customers will obtain short-term service through the reconfiguration services. Short-term IWRs will be awarded according to an auction-based mechanism that analyzes service requests against the system-wide capacity available to provide service and grants the combination of IWRs that will generate the most revenue subject to physical feasibility limits.

Except if a long-term IWR auction mechanism is implemented, requests for new long-term IWRs will be managed by Grid West through a queuing process analogous to the

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<sup>20</sup> If a new customer were to purchase rights for service on the Grid West system through a bilateral trade with a pre-existing rights holder, the service would not be obtained directly through Grid West and therefore Grid West pricing mechanisms would not affect what the new customer paid in the bilateral trade.

current OATT procedures.<sup>21</sup> Eligible customers that wish to obtain new long-term service will apply to Grid West and identify the service they are requesting (injection and withdrawal locations and amounts, duration, network IWRs or IWR pairs, etc.). Grid West will use its flow-based methodology to evaluate the new service request in view of existing system capabilities and commitments. New service will be granted from AFC if possible; if not, Grid West will oversee the process of upgrading or expanding the system as necessary to meet the new service request.

### 3.3.3 Company Rates

Because the Regional Proposal contemplates a license-plate rate structure (referred to as the company rate approach), this white paper includes pricing options that would apply system-specific rates (company rates) to new long-term IWRs that can be granted from AFC. Company rates will be developed for each transmission owner's system based on that transmission owner's revenue requirement.<sup>22</sup> The specific rate for any given transmission owner will be developed through the rate-setting process that applies to that transmission owner.<sup>23</sup>

## **3.4 Options for Pricing New Long-Term Service from Existing Capacity**

The Pricing Work Group has developed four preliminary options for pricing new long-term service that can be granted from AFC (that is, when no expansions or upgrades are needed to provide the requested IWRs). The options described in Sections 3.4.1 through 3.4.4 represent two different approaches for pricing new long-term service from AFC: cost-based and auction-based. Each of the three cost-based approaches (Sections 3.4.1 through 3.4.3) prices IWRs using a company rate, but presents a different variation on how to develop those rates.<sup>24</sup> The auction-based approach

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<sup>21</sup> If Grid West were to implement an auction mechanism that requires a queuing process (as described under Option 4 in Section 3.4.4), the queuing process might be somewhat different than what is described here.

<sup>22</sup> Although the Pricing Work Group's general expectation is that a transmission owner's use of its own system to serve native load will be treated as legacy service, it would also be possible for a transmission owner to agree with Grid West that its native load service would be "translated" into Grid West transmission service. The company rate for service to native load in this instance would presumably include the costs of any third-party wheeling required to serve native load customers.

<sup>23</sup> The Pricing Work Group does not intend to specify at this early stage how individual transmission owners would set their particular company rates. Moreover, nothing the Pricing Work Group has proposed would prohibit an individual transmission owner from maintaining a practice of rate segmentation for uses of different parts of its system.

<sup>24</sup> To the extent that specifying different locations for an IWR's injection or withdrawal points would have significant consequences for the applicable company rate, there are some important issues related to possible "gaming" or "zone-shopping" among different transmission owners' facilities, which would need to be addressed for the cost-based pricing options. These issues would be particularly acute in cases of joint ownership of common facilities, use of common corridors, and close physical proximity of facilities owned by transmission owners with disparate company rates.

(Section 3.4.4) prices transmission capacity based upon the transmission customer's perceived value of the capacity.

Under both the cost-based approaches and the auction-based approach, prices for IWR pairs would apply to service analogous to today's OATT point-to-point service. The Pricing Work Group proposes that new long-term network IWRs would also be available under all options, and would be modeled after OATT network integration service and priced accordingly. Based on preliminary discussions with the TSLG concerning potential complications of offering new network service, this proposal assumes that new long-term network service would be limited to a "host" transmission owner's systems; it would not reach across the entire Grid West managed system.

#### 3.4.1 Option 1 – IWR Pairs Priced by Withdrawal Point

Option 1 was designed to reflect the Grid West Operational Bylaws; new long-term IWRs will be charged the company rate associated with the location of the point of withdrawal. By way of example, for an IWR that has a point of injection on a high-cost system and a point of withdrawal on a low-cost system, a customer would pay the company rate at the point of withdrawal (*i.e.*, the low-cost system). The reverse would be true if the point of withdrawal were on the high-cost system. A network IWR would be charged the network company rate for the host system.

#### 3.4.2 Option 2 – IWR Pairs Priced at Higher of Injection or Withdrawal Point

Option 2 was designed to collect more revenues in comparison to Option 1. For example, for an IWR with a point of injection on a high-cost system and a point of withdrawal on a low-cost system, a customer would pay the company rate of the high-cost system. A network IWR would be charged the network company rate for the host system.

#### 3.4.3 Option 3 – IWR Pairs Priced at Single System or System-Wide Average Rate

Option 3 was designed to reflect a mix of "local" and "long-distance" service. In other words, IWRs that are confined to a single system are contrasted with other IWRs that involve multiple systems. This approach charges the company rate for the "host" system for IWR pairs with a point of injection and a point of withdrawal on a single system.<sup>25</sup> For IWRs pairs that reach beyond a single system, the price would be the

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<sup>25</sup> Details concerning how a "single" system will be defined need further work given that some systems have service obligations that involve or cross multiple control areas and some are composed of multiple control areas. Alignment between systems and points of injection and withdrawal will also need to be addressed.

Grid West-wide system average rate. A network IWR would be charged the network company rate for the host system.

#### 3.4.4 Option 4 – IWR Pairs Priced by Auction

Option 4 would use an auction mechanism that signals the buyer's willingness to pay. A variety of auction mechanisms could be considered.<sup>26</sup> The simplest would be to extend the Grid West reconfiguration service market (which as proposed by the TSLG covers only periods of less than one year) to terms of longer than one year, such as two years, five years, or ten years. This would facilitate consistency in the way that IWRs with different durations would be priced, limiting the possibility of arbitraging company rates against auction prices in the short-term reconfiguration market. It would also provide a mechanism for trading off the value of transmission service requests with different injection and withdrawal points.

Another mechanism might involve a “matching” window during which other interested parties could submit competing transmission service requests, perhaps of different durations or IWR pairs, that would result in higher net present value of transmission revenues. Still another mechanism would be to specify the IWR pairs, perhaps defined as market hubs or other common scheduling points, and invite bids of different values and durations. The winning bid would again be the one that provided the highest net present value of transmission revenues.

#### 3.4.5 Comparison of Option Features

##### *Criteria for Comparing Pricing Options*

Starting with the guiding principles identified in Section 1.2, the Pricing Work Group developed the following suggested criteria for comparing the four long-term pricing options described above:

- providing revenue sufficiency for transmission owners;
- reducing or eliminating rate pancaking;
- avoiding or minimizing cost-shifts;
- fostering compatibility with the Grid West Operational Bylaws concept of “company rate approach”;

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<sup>26</sup> It may be appropriate to impose a floor to protect against capacity being auctioned at low prices that over the long term has value.

- relying on embedded cost or auction pricing;
- linking pricing for service from existing facilities with pricing for service that requires upgrades or expansion;
- imposing similar charges for similar usage; and
- other observations.

The discussion below examines each of the pricing options in reference to these criteria. Because all of the options are preliminary concepts presented at a high level, they will need further definition, analysis, and testing as Grid West development continues.

#### Revenue Sufficiency

**Question:** What is the likelihood that this option will need replacement revenue?

**Answer:** None of the options directly address replacement revenue, but all are likely to require at least some replacement revenues, some more and some less. Option 2 will clearly recover more revenue than Option 1, and possibly more than Option 3 as well. Option 3 may recover more than Option 1. If Option 4 were successful in maximizing transmission revenues as compared to other approaches, it would require the least replacement revenues. Option 4 is also the least-tested alternative.

#### Rate Pancaking

**Question:** Does this option reduce or eliminate rate pancaking?

**Answer:** Relative to current pricing, all options reduce or eliminate pancaking for new service.<sup>27</sup>

#### Cost Shifts

**Question:** What is the likelihood that this option will trigger cost shifts?

**Answer:** Viewed from the perspective of addressing transmission owner cost recovery, all four options are comparable because the overall pricing

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<sup>27</sup> As noted in Section 3.5.2, where new or existing long-term service involving network service is combined with an additional IWR pair to integrate a remote resource, some may argue that the result is a rate pancake because the total price paid for rights needed to serve load includes network service and the price of a long-term IWR.

design is intended to provide revenue sufficiency for all transmission owners.

Viewing the options from the perspective of different kinds of customers, the potential for “cost shifting” depends on what a customer would have otherwise done in today’s pricing environment. For those customers that tend to rely on facilities of a single transmission owner, Options 1, 2, and 3 would all result in comparable costs for new service (because the company rate of the specific transmission owner would apply). For customers that need rights spanning multiple systems, Options 1, 2, and 3 will, in most cases, yield a lower cost as compared to paying pancakes. Under Options 1 and 2, multisystem rights withdrawal points on high-cost systems would tend to cost more than the same rights would under Option 3. Option 4 is expected to best match price with the customers’ perceived value of capacity.

#### Operational Bylaws

**Question:** Does this idea meet the Operational Bylaws language?<sup>28</sup>

**Answer:** Only Option 1 meshes with the “Company Rate approach” concept as stated in the Grid West Operational Bylaws.

#### Short-Term Versus Long-Term Pricing

**Question:** How does this option compare with pricing near-term services, *i.e.*, the reconfiguration services market?

**Answer:** Only Option 4 relies on auction-based pricing, consistent with the reconfiguration services auction.

#### Service from AFC Versus Expansion

**Question:** How does this option compare with pricing long-term service that needs system expansion?

**Answer:** Long-term service that requires expansion is expected to be based upon “or” pricing. This means that the cost of expansion will be priced at the higher of the cost of expansion or the cost of the applicable embedded cost rate with the cost of expansion rolled in. Therefore, for Option 1, the

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<sup>28</sup> The Grid West Operational Bylaws require Grid West to maintain a “company rate approach” for a minimum of eight years following operational start-up, and they also defined what constitutes a “departure” from the company rate approach. See Operational Bylaws § 7.16.3.

embedded cost rate is the company rate associated with the point of withdrawal; for Option 2, the embedded rate is the company rate associated with the higher of the point of withdrawal or the point of injection; for Option 3, the embedded rate is the company rate for “local” service or the Grid West-wide system average rate; and, for Option 4, the embedded rate is the Grid West-side system average rate.

#### *Other Observations*

Options 1, 2 and 3 are defined by the points of injection and points of withdrawal. As noted earlier, market and operational design work has not yet specified the “granularity” of injection and withdrawal “points.” To the extent these “points” involve multiple owners’ facilities in the same location (such as the head of the Pacific Intertie, the Mid-Columbia hub, etc.), determining the applicable company rate may be complicated for the reasons discussed in footnote 24.

Option 4, auction-based pricing, is intended to satisfy two objectives: (1) maximize revenues and therefore minimize the need for replacement revenues; and (2) extend the auction-based pricing that characterizes the reconfiguration services. The Pricing Work Group recognizes that auction-based pricing is a significant departure from traditional cost-based rate-making. It may therefore be necessary to impose some restrictions, such as floor prices, to mitigate perceived risks. Also, depending on the mechanics of the auction, the need for a long-term service queue could be significantly reduced.

### **3.5 Additional Details About New Service from Grid West**

#### **3.5.1 Some Examples of What Is and Is Not New Long-Term Service**

##### *Distinguishing Legacy Service from New Service*

As explained above, the Pricing Work Group proposes that a customer’s exercise of rollover rights would not be characterized as new service (provided that the customer’s pre-existing service agreement permits rollover). The same would hold true for load growth. In the case of contract rollover, however, the responsibility for administering legacy service may shift from the legacy provider to Grid West when the rollover term begins. The legacy customer would then be taking service under Grid West terms and conditions and would submit schedules directly to Grid West, although payments for

rolled over legacy service would continue to go to the legacy provider.<sup>29</sup> A shift in administration would be more compatible with Grid West's role as the source of all new service transmission service rights (long- and short-term IWRs) and Grid West's responsibility to manage all scheduling and real-time operations for the Grid West system.

The table below provides some examples to help readers understand what is considered legacy service for pricing purposes, as distinguished from new service:

Illustrative Examples of How New Grid West Service Is Defined		
Example Description	Legacy Service	New Service
a transmission owner using its own system to <b>meet native load service</b> obligations (or to continue to satisfy pre-existing transmission service agreements)	X	
<b>load growth</b> and contract extensions ( <i>i.e.</i> , <b>rollover</b> ) under agreements that entitled the customer to obtain service for load growth or to maintain capacity reservation at end of contract term	X	
a customer <b>seeks new rights</b> to use the Grid West transmission system beyond those granted in its pre-existing transmission agreement (if any)		X
<ul style="list-style-type: none"> <li>• a customer of Utility A has pre-existing rights to network service on Utility A's system (including load growth).</li> <li>• the customer's load has grown from 60 MW to 65 MW and the customer wants to serve part of its 65-MW load from a 10-MW generator located on the system of Utility B</li> <li>• the customer maintains its network rights on the system of Utility A and can use transmission service on Utility A's system necessary to meet its full 65-MW load from resources on Utility A's system</li> <li>• BUT, to get power from the generator on Utility B's system, the customer will need to buy a new IWR for 10 MW (injection point at the generator, withdrawal point at the point of integration under the network contract with Utility A)</li> <li>• the 10-MW IWR is <b>new service</b> but continued use of network service rights on Utility A's system, including the load growth, is legacy service</li> </ul>	X	X

<sup>29</sup> If Grid West assumed responsibility for administering the rolled over legacy service, the customer might take on responsibility for paying Grid West's Grid Management Charge directly, rather than through rates charged by the legacy provider.

Illustrative Examples of How New Grid West Service Is Defined		
Example Description	Legacy Service	New Service
a customer that does not have a pre-existing right to use the Grid West transmission system requests new long-term IWRs; as explained in Section 3.5.2. below, the customer could request new service either as an IWR pair, which could have an injection and withdrawal point anywhere on the entire Grid West system, or as a network IWR, which would be limited to load service using a single transmission owner's system		X

*Voluntary Transition to Grid West-Administered Legacy Service*

The TSLG proposal for the Grid West market and operational design contemplates that Grid West would have a process for inventorying and certifying all system commitments related to legacy services.<sup>30</sup> The certification process will involve the legacy transmission provider, the transmission customer, and Grid West. Completed certification will reflect the agreement of all three parties concerning what the pre-existing agreement entitles the customer to do. If a transmission customer wishes to shift administration of its legacy service to Grid West after the certification process, this voluntary transition would be possible (even before the stated date on which the agreement would have expired or rolled over) so long as both Grid West and the legacy transmission provider consent.

The transition would substitute Grid West for the legacy provider as administrator of the legacy service (daily scheduling, etc.), although it would not shift revenues from the legacy provider to Grid West, and it would not cause the transmission customer's service to be deemed new service from Grid West. The transmission customer would continue to pay the legacy transmission provider in exchange for maintaining the legacy service rights. This is essentially the same as the provisions described earlier in this paper that call for "mandatory rollover" of long-term transmission rights and payments among transmission owners, except that transmission owners would agree to this on a global basis before Grid West begins operations, whereas for other customers this would be an optional provision.

**3.5.2 Types of New Long-Term Service**

Readers who are familiar with the current OATT understand that transmission customers can elect between two kinds of service—point-to-point and network—and that these two different kinds of service are also subject to different rates. The Pricing

<sup>30</sup> "Rights Data Management White Paper" at 2-4. [www.gridwest.org/Doc/P2-TSLG-Papers\\_Release-Drafts\\_12May05-2.pdf](http://www.gridwest.org/Doc/P2-TSLG-Papers_Release-Drafts_12May05-2.pdf).

Work Group envisions that Grid West will offer analogous services. The equivalent of today's point-to-point service would be IWR pairs, and the equivalent of today's network service would be network IWRs.

There are some important differences, however. IWR pairs could be granted anywhere on the entire Grid West transmission system (rather than on just a single transmission owner's system as is the case under the OATT today). So, for example, if a customer wanted an IWR with an injection point on the system of Utility A and a withdrawal point on the system of Utility C (with the system of Utility B in between), Grid West could grant that right (if there were sufficient AFC to do so), and the customer would pay a single rate for that IWR pair.<sup>31</sup>

The Pricing Work Group's discussions with the TSLG concerning how Grid West might offer new network service are even more preliminary, and should be explored further as Grid West development work continues. As a potential starting point, the Pricing Work Group proposes that network IWRs would bear a strong resemblance to the network integration service with which OATT transmission customers today are familiar. Network IWRs would grant service only on the system of a single transmission owner (the "host" system for the network service). Moreover, the use of network IWRs would come with restrictions very similar to those that apply to current network integration service under the OATT. Network IWRs issued by Grid West could be used for on-system load service only, and transmission usage would at all times be limited to what was needed to serve the network load on the host system (rather than being configured as a capacity reservation).

If a customer with either legacy network service or network IWRs from Grid West wished to integrate a resource outside its host system, the customer could do so by purchasing an incremental IWR pair from the remote generator location to the host system. (If the customer desired a long-term IWR, the customer would make a new long-term service request through the Grid West queuing process described in Section 3.3.2).

In the view of some parties, this approach arguably could result in rate pancakes because the total price paid for the combined "bundle" of service rights includes network service charges and the price of a long-term IWR pair.<sup>32</sup> Recognizing this, the Pricing Work Group suggests that the proposal to limit network IWRs to single systems should

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<sup>31</sup> The particular rate that would apply to the IWR pair would depend on which of the pricing options discussed in Section 3.4 Grid West chose to implement.

<sup>32</sup> This level of pancaking may be an acceptable compromise in view of other objectives that apply to Grid West pricing, but it could also lead to a change in how load served by network service is measured; that is, the monthly load ratio share used as the billing determinant for network service could be reduced to reflect the capacity reservation associated with the IWR pair. This issue will need more discussion as the pricing proposal is further defined.

be further evaluated. If Grid West were to begin with the more limited approach, it could revisit the feasibility of offering Grid West-wide network service as it gains experience with its new flow-based commercial model and has time to evaluate whether there is significant demand for new Grid West-wide network service.

Even this initial approach is an improvement from today's situation in two respects. First, a transmission customer that wishes to integrate remote resources will have to deal with only one transmission provider for all of its service needs—Grid West. Second, no matter how many other transmission owners' systems are between the point of injection and the point of withdrawal, the transmission owner would pay only a single rate for the incremental IWR pair.<sup>33</sup>

#### **4.0 Proposal for Pricing New Long-Term Service That Requires Upgrades or Expansions**

As explained in previous sections of this paper, Grid West will issue long-term IWRs in response to service requests from eligible customers. If the requested long-term IWR(s) can be granted from AFC, then Grid West will grant the requested rights in exchange for the customer's agreement to pay the applicable rate (which could be tied to the withdrawal point, the injection point, a system average rate, or an auction price depending on which of the four options described in Section 3.4 Grid West implements).

If existing system capacity is not sufficient to grant the requested long-term IWRs, then Grid West will perform the necessary system impact and facilities studies to determine the most cost-effective way to upgrade or expand the system to meet the request.

Grid West will determine how the upgrade will affect one or more transmission owners' systems and the benefits that result from the investment. In addition, Grid West will inform the customer of any funding it must contribute for the necessary upgrades or expansion. The transmission owner(s) will arrange for or carry out the necessary upgrades and expansion and will own the resulting upgraded or expanded facilities on their system(s) (even if the customer or others contribute funding).

The customer's rate for the IWR(s) will be the higher of the incremental cost of expansion or the applicable embedded cost rate (including the cost of expansion). While traditionally this policy has reflected a corporate-average embedded cost, FERC has indicated that it would "look approvingly" on other methods, e.g., postage-stamp "or" ratemaking, zonal "or" pricing, etc. In short, whatever embedded cost Grid West chooses to use in its "or" pricing formula, it should be compatible with FERC's pricing policies.

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<sup>33</sup> The particular company rate that would apply to the IWR pair would depend on which of the pricing options described in Section 3.4 Grid West implements.

This approach tracks with FERC's long-standing expansion cost policy ("or" pricing), which is intended to send proper price signals and promote efficiency.<sup>34</sup> This policy will protect against the need for rate increases to existing customers of transmission owners whose systems are upgraded or expanded to accommodate new service requests.<sup>35</sup> In addition, this policy allows case-by-case determinations of who benefits from expansion and therefore may be used to inform cost allocation decisions.

## **5.0 Proposal for Allocating Revenues from Grid West AFC Sales**

As explained in Section 3.1, one could view revenue recovery for existing facilities as coming from three potential sources: revenues from legacy arrangements, revenues from Grid West AFC sales (long- and short-term) and, if needed, replacement revenues. This section discusses how the Pricing Work Group proposes to allocate revenues from the second source: Grid West revenues from AFC sales.

The Pricing Work Group proposes that all revenues from Grid West AFC sales (whether short- or long-term) would be placed in a "communal bucket." These communal revenues would then be allocated to transmission owners in proportion to how much "lost revenue" the transmission owner had incurred as a result of Grid West implementation.<sup>36</sup> If the AFC sales revenues were more than enough to offset all lost revenues, any excess would be allocated to transmission owners according to revenue requirement (the transmission owner's revenue requirement as a percentage of all Grid West transmission owners' revenue requirements combined).

An important exception to this general rule would apply to new long-term network IWRs sold by Grid West. Because OATT network customers are generally charged on the basis of load-ratio share, the Pricing Work Group believes that it would be most practical to direct all revenues from new long-term network IWRs to the owner of the host system on which a network IWR is granted. This would simplify pricing administration for Grid West by keeping revenues associated with new network service out of the revenue allocation equation. This represents only a preliminary view, and merits further discussion as work on Grid West pricing continues.<sup>37</sup>

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<sup>34</sup> RM95-8-000 and RM94-7-001.

<sup>35</sup> The concept of "or" pricing was introduced in FERC's Policy Statement on Pricing (Docket No. RM93-19-000) as an acceptable pricing method for expansion because it meets five specific principles: (1) transmission pricing must meet the traditional revenue requirement; (2) transmission pricing must reflect comparability; (3) transmission pricing should promote economic efficiency; (4) transmission pricing should promote fairness; and (5) transmission pricing should be practical.

<sup>36</sup> The concept of "lost revenues" is intended to cover only revenue loss attributable to the implementation of Grid West (further explained in Section 6.1).

<sup>37</sup> There has not been an opportunity for significant discussion of this issue in the Pricing Work Group, but it is possible that a similar logic would apply to IWRs pairs that are confined to a single transmission owner's system.

The tables below provide simplified examples of how this proposed allocation approach would work if Grid West’s revenues from AFC sales revenues were:

- less than aggregate transmission owners’ lost revenues;
- equal to aggregate transmission owners’ lost revenues; and
- greater than aggregate transmission owners’ lost revenues.

<b>Example 1 - Pool Less than Lost Revenues</b>								
	<table border="1"> <tr> <td>Size of Pool</td> <td>Lost Revenues</td> </tr> <tr> <td>50</td> <td>85</td> </tr> </table>		Size of Pool	Lost Revenues	50	85		
Size of Pool	Lost Revenues							
50	85							
	<b>Allocate by lost revenue up to making transmission owners whole and the excess by revenue requirement</b>							
<b>Category</b>	<b>Utility A</b>	<b>Utility B</b>	<b>Utility C</b>					
Revenue requirement	150	300	200					
Lost revenues	40	20	25					
Allocation	23.5	11.8	14.7					
Revenue after allocation	133.5	291.8	189.7					
Over as a %	0.89	0.97	0.95					
Replacement revenue needed	16.5	8.2	10.3					

<b>Example 2 - Pool Equals Lost Revenues</b>								
	<table border="1"> <tr> <td>Size of Pool</td> <td>Lost Revenues</td> </tr> <tr> <td>85</td> <td>85</td> </tr> </table>		Size of Pool	Lost Revenues	85	85		
Size of Pool	Lost Revenues							
85	85							
	<b>Allocate by lost revenue up to making transmission owners whole and the excess by revenue requirement</b>							
	<b>Utility A</b>	<b>Utility B</b>	<b>Utility C</b>					
Revenue requirement	150	300	200					
Lost revenues	40	20	25					
Allocation	40	20	25					
Revenue after allocation	150	300	200					
Over as a %	1.00	1.00	1.00					
Replacement revenue needed	0.0	0.0	0.0					

<b>Example 3 - Pool Greater Than Lost Revenues</b>			
	Size of Pool 100	Lost Revenues 85	
<b>Allocate by lost revenue up to making transmission owners whole and the excess by revenue requirement</b>			
	Utility A	Utility B	Utility C
Revenue requirement	150	300	200
Lost revenues	40	20	25
Allocation	43.5	26.9	29.6
Revenue after allocation	153.5	306.9	204.6
Over as a %	1.02	1.02	1.02
Replacement revenue needed	0.0	0.0	0.0

## 6.0 Options for Generating Replacement Revenues If Needed

### 6.1 Overview of “Lost Revenues”

The Pricing Work Group has refined the concept of “lost revenues” from approaches taken with earlier work on Grid West development. For purposes of Grid West pricing, lost revenues attributable to the implementation of Grid West would include effects of eliminating traditional short-term and non-firm transactions, de-pancaking, and shifting sales of new service from individual transmission owners to Grid West.<sup>38</sup>

Lost revenues attributable to Grid West implementation would NOT include such things as

- failure to seek appropriate retail regulatory relief;<sup>39</sup>
- failure to file updated OATT rates at FERC;

<sup>38</sup> As explained in Section 2.1 and elaborated in Section 5, the Pricing Work Group expects that at least some of the lost revenues related to legacy providers’ sales of short-term and non-firm service will be offset by AFC sales in the Grid West reconfiguration services market.

<sup>39</sup> The Pricing Work Group believes that it will be important to structure the determination of a transmission owner’s lost revenues to avoid having the region make up (through a revenue replacement mechanism) costs that regulators have not recognized.

- shortfalls not related to transmission, but rather to other elements of service provided by the transmission owner; and
- decreased earnings or increased costs resulting from normal business risks or practices.

The Pricing Work Group suggests that it will be important for the transmission rates used by transmission owners when Grid West begins operations to be up-to-date so that the initial company rates will accurately reflect current costs of service on each transmission owner's system.<sup>40</sup>

#### 6.1.1 Revenues Lost Because Transmission Owners No Longer Sell New Service

Once Grid West begins commercial operations, transmission owners will no longer sell new transmission service (neither short-term nor long-term; neither from existing capacity nor through upgrades and expansions). For short-term service, this change will result in a revenue loss on "Day 1" for those transmission owners that used to sell short-term or non-firm transmission service. For long-term service, there is no revenue loss until an existing long-term contract expires and the transmission owner is no longer in a position to "resell" the freed-up capacity. These revenue losses could be tracked on an individual transmission owner basis.

#### 6.1.2 Revenues Lost Because of "De-Pancaking"

Under the Grid West proposed market design, multisystem rights that would have been sold by multiple transmission owners at pancaked rates (a separate embedded cost for each system used) will be sold by Grid West at a single rate. Under Options 1, 2, and 3, this will result, in most cases, in lower costs to the transmission customer purchasing multisystem rights.<sup>41</sup> Although Grid West's revenues from AFC sales will be allocated back to the transmission owners, de-pancaking under Options 1, 2, and 3 will almost always result in a net loss of revenue to the affected transmission owners compared to what pancaked charges would have produced. The revenue loss under Option 4 is less certain because of the potential variability of selling prices under this untried option. There is a possibility under Option 4 that prices paid for single or multisystem rights will exceed those that would have been paid under pancaked rates. If this is true, this option would not produce any revenue loss from de-pancaking.

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<sup>40</sup> Initial company rates will be subject to change through typical rate-setting processes for each of the transmission owners.

<sup>41</sup> Under Options 1, 2, and 3, customers whose legacy service relies primarily on a single transmission owner's system would see little change to the extent any new rights they purchase remain on the same "legacy" system. Under Option 4, the magnitude of the change is uncertain because the price for new rights will be determined by auction.

As previously noted, the TSLG expects that most requests for new long-term service will require upgrades or expansions (new service and revenue loss from expiring contracts will be small in proportion to total transmission revenues). This means that, in general, new long-term service using existing facilities will not be possible unless capacity is freed up by expiration of existing contracts. Other than NorthWestern's current long-term point-to-point transmission service agreements, the Pricing Work Group expects that in most cases if a customer has the option to extend or roll over an existing agreement, the customer will do so.<sup>42</sup>

## **6.2 Options for Generating Replacement Revenues**

The concept of replacement revenues is intended to apply only if some transmission owners have remaining lost revenues despite Grid West's allocation of its transmission service revenues from AFC sales. The Pricing Work Group has developed two possible approaches for generating replacement revenues if they are needed.

### **6.2.1 Transaction-Based**

If Grid West were to impose charges for replacement revenues on a transactional basis, it would distribute the resulting costs among transmission customers according to their schedules (megawatt-hours) or actual energy usage. This is an approach that is sometimes referred to as "peanut butter" because costs are spread widely and evenly. Under a transactional approach, heavier users would contribute a larger share of replacement revenues, and off-system users would also contribute.

### **6.2.2 Load-Based**

Another approach would be for Grid West to charge transmission owners in proportion to their shares of the Grid West system-wide peak load (based on the average of 12 monthly coincident peaks (or "12 CP")). This approach would be consistent with load-based pricing. It would avoid imposing volume-based charges that might affect users' decisions to engage in energy trades with little margin to absorb additional transaction costs. In this way, a load-based charge would be more like a sunk cost. This approach would also avoid the revenue volatility associated with having to project future usage to specify a billing determinant.

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<sup>42</sup> Long-term arrangements among transmission owners (and associated payments) also will, in general, continue because of the "mandatory rollover" requirement discussed in Sections 2.1 and 3.2.

## **7.0 Proposal for Recovering Grid West Development and Operating Costs (Grid Management Charge)**

### **7.1 What Costs Are Recovered Through the GMC**

The Grid Management Charge (GMC) is a formula rate designed to recover administrative and operating costs, including start-up and development costs incurred in the establishment of Grid West. It may be appropriate to include in this category the administrative expenses associated with market monitoring, as well as planning and expansion.

Grid West will play a different role for the Consolidated Control Area (administration of reserve and energy imbalance markets)<sup>43</sup> as compared to the overall Grid West system. The Grid Management Charges derived for these two areas may therefore need to differ. Alternatively, Grid West may charge the same GMC for all transactions and then apply specific rates for the additional services that it administers for the Consolidated Control Area.

### **7.2 Schedule-Based Charge**

A GMC applied to energy schedules would cause heavier users of the system to pay a greater proportion of Grid West's administrative and operating costs. The Pricing Work Group's expectation is that Grid West's annual expenses would initially include repayment of the loans that funded Grid West development, but these debts would be amortized over a finite time period. Assuming annual expenses of, for example, \$50 million,<sup>44</sup> the GMC for the Grid West system would approximate \$0.195/MWh or 0.195 mills/kWh.<sup>45</sup>

Putting this into context, this is about one-third the level of the Scheduling Control and Dispatch charge that the Bonneville Power Administration's Transmission Business Line will be charging under its 2006 transmission rates.<sup>46</sup>

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<sup>43</sup> For a discussion of control area consolidation, please refer to "Market and Operational Design Overview Paper" at 23-24. [www.gridwest.org/Doc/MO\\_Overview\\_Paper\\_V1-0.pdf](http://www.gridwest.org/Doc/MO_Overview_Paper_V1-0.pdf)

<sup>44</sup> The use of the figure of \$50 million is for illustrative purposes and does not reflect an expectation of Grid West's actual annual operating expenses and debt service costs.

<sup>45</sup> These figures are derived from load data for 2004 (energy) for the Grid West area, which, according to Northwest Power Pool figures, approximated 256,454,840 MWh. For this calculation, system load has been used as a rough surrogate for total energy schedules. If total energy schedules on the Grid West system were to exceed this load figure, as would be expected, then the denominator for this calculation would increase and therefore the per-unit charge would be lower.

<sup>46</sup> BPA 2006 Scheduling Control and Dispatch (Hourly Rate): 0.59 mills/kWh.

## 8.0 What Happens After the Minimum Eight-Year Company Rate Approach Period

[A note to the reader: This discussion assumes that Grid West begins with something that fits the current Grid West Operational Bylaws definition of a “company rate approach,” as opposed to some form of auction-based or system-wide-average pricing.]

The Grid West Operational Bylaws require Grid West to use a “company rate approach” for at least the first eight years of commercial operation.<sup>47</sup> For purposes of this white paper, the Pricing Work Group has not limited its long-term pricing proposals to concepts that would fit completely within the confines of the Operational Bylaws language.

The Pricing Work Group also does not propose to require that long-term IWRs issued by Grid West while the company rate approach is in effect be coterminous with the initial company rate structure. Rather, the duration of new IWRs would reflect customer requests and Grid West policy on evaluating the system’s ability to support new long-term rights.

From the Pricing Work Group’s viewpoint, Grid West does not *have* to use the same form of “company rate approach” for the entire eight-year period. As long as Grid West is using some form of license-plate rate structure that meets the definition of “company rate approach” in the Operational Bylaws, then variations from the initial (“Day 1”) company rate approach would be permissible.

At the end of the eight-year period for the company rate approach, Grid West would have at least three options:

- leave its then-current company rate structure in place;
- change to another form of company rate structure; or
- depart from the “company rate approach” after complying with all “Special Issues List” requirements in the Operational Bylaws.

No matter which approach Grid West adopted, “legacy” rights would continue to be honored and Grid West would need to address any resulting transition issues. This would apply to legacy rights issued by Grid West transmission owners before Grid West began operations (except for any that had expired while the company rate approach was in effect), as well as new IWRs issued by Grid West after operational start-up.

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<sup>47</sup> See Operational Bylaws § 7.16.3.

This is not to say that the rates for legacy rights could never change. All rates would be subject to change according to the terms of the agreement or tariff under which they were issued. For example, if a customer's rate for an IWR were set according to the system cost of a single transmission owner, the transmission owner could revise the rate through its applicable rate-setting process. Similarly, if there were rates based on system-wide averages, these rates would evolve over time as the component company rates changed due to such things as

- system additions (upgrades or expansions);
- Grid West system cost allocations (if any);
- asset depreciation, etc.

## **9.0 Conclusion**

The Pricing Work Group prepared this white paper to help regional parties evaluate whether they support moving forward with the Grid West development process after Decision Point 2, and also to provide a workable conceptual framework from which the Grid West Developmental Board can build.

### Attachment 1

<b>Comparison - RTO West Stage 2 and Grid West</b>	
<b>RTO West</b>	<b>Grid West</b>
› Transmission Use Service allows all eligible users to submit schedules	› Users must have physical rights to submit schedules
› Accept all schedules and manage through redispatch	› Issue service rights up to system capability
› Service in the form of Financial Transmission Rights (congestion hedges)	› Near-term service (reconfiguration service markets)
› No long-term service using existing capacity	› Long-term service using existing capacity <ul style="list-style-type: none"> <li>• Cost-based options</li> <li>• Auction-based options</li> </ul>
› No explicit pricing proposal for long-term service requiring capacity expansion	› New long-term service requiring capacity expansion <ul style="list-style-type: none"> <li>• “or” pricing</li> </ul>
› “Backstop” cost recovery fee to assure revenue sufficiency	› Replacement revenues to assure revenue sufficiency
› Grid Management Charge	› Grid Management Charge