WESTCONNECT REGIONAL TRANSMISSION PLANNING

COST ALLOCATION PROCEDURES V1.2

JANUARY 2023

Contents

1.0 Introduction

This document has been prepared to aid the Cost Allocation Subcommittee (CAS) and the Planning Management Committee (PMC) in determining whether a project identified by the PMC as the more efficient or cost-effective solution to an identified regional need as part of the WestConnect Regional Transmission Planning Process ("Planning Process") is eligible for regional cost allocation. This document further explains some of the more detailed processes that will be used by the CAS to allocate the costs of projects determined to be eligible for regional cost allocation to the identified beneficiaries. Prior to cost allocation methods being applied, benefits and beneficiaries will be identified.[1] This document is intended to build upon the WestConnect Regional Planning Process Business Practice Manual and to aid in the implementation of the Federal Energy Regulatory Commission (FERC)-jurisdictional Transmission Owner's (TO) transmission tariffs ("tariffs"). If any provision in this document conflicts with any provision in the tariffs, the tariffs will govern.

The following sections of this document describe WestConnect's current "Cost Allocation Procedures." These procedures and their associated assumptions were developed through open stakeholder meetings of the CAS and, as key details were developed, they were presented to the PMC for review, consideration, and approval, as necessary. Details regarding how or why certain procedures were selected is not contained herein, but can be understood by reviewing presentations, meeting notes, and other materials from past CAS and PMC meetings.

This document is intended to be a living document; the procedures included in this document are not yet complete or final. Some provisions remain to be developed. Additionally, as these procedures are further tested and reviewed, they may be modified by the CAS with review and approval from the PMC and this document will be subsequently updated.

The CAS and PMC have decided it will be necessary to ensure that any project selected as the more efficient or cost-effective solution will produce benefits in more than just a single calendar year.[2] While the PMC's work activities in this planning cycle do not contemplate developing modeling tools to cover each year of a period 10 years, or more, past a project's in-service date, the PMC and the CAS will use processes of the WestConnect region to sufficiently examine competing solutions to ensure that their benefits are not limited to the single year studied.

The WestConnect Cost Allocation Procedures document is narrowly focused on the processes for determining cost allocation eligibility and allocation of costs to identified beneficiaries. Graphics illustrating the high level cost allocation processes are included in Appendix A, Appendix B, Appendix C, and Appendix D. This document is narrowly focused on the cost allocation process, so it does not address various aspects of the Planning Process, such as regional need identification, selection of the more efficient or cost-effective alternative, or re-evaluation of regional projects.[3] Additional details on

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[1] It is expected that benefits and beneficiaries will be identified in earlier stages of the process, including needs identification and project selection.

[2] For instance, the FERC-jurisdictional TO's tariffs include a provision that one production cost principle that may be applied is "the production costs savings from a project must be present in each year from the project in-service date and extending out at least ten (10) years."

[3] In this document the term "regional project" is used as shorthand for a project that is seeking to be a solution to an identified regional need for transmission, and in particular, to a transmission project seeking cost allocation under the FERC tariffs that implement FERC Order No. 1000 in the WestConnect region. Of course, a project may be a more efficient or cost-effective solution to an identified transmission need, even though it may not be a transmission project.

these other aspects of the Planning Process can be found in the transmission tariffs of each PMC TO member, the WestConnect Regional Planning Process Business Practice Manual, the WestConnect Regional Study Plan, and other documents as they are developed to support the Planning Process.

Furthermore, this document does not address the consideration of non-transmission alternatives (NTAs), which may be otherwise evaluated through the Planning Process. This document does not consider NTAs because they are not eligible for regional cost allocation.

Finally, the WestConnect Cost Allocation Procedures do not address specifically the allocation of costs for interregional transmission projects. However, these procedures are expected to generally apply to interregional transmission projects, if selected as the more efficient or cost-effective solution to a regional transmission need, in order to subsequently determine whether the PMC will select them into the Regional Plan for purposes of cost allocation; because for an interregional project to be eligible for interregional cost allocation, the project must first have been selected for regional cost allocation by two or more relevant planning regions through their regional planning processes. The procedures for the interregional cost allocation process can be referenced in the common tariff language filed by the jurisdictional TO members of the PMC that addresses the interregional transmission coordination and cost allocation planning requirements of Order No. 1000, which generally states that each regional transmission planning group will use its own cost allocation procedures for interregional transmission projects within its region.

2.0 General Assumptions

This section describes some of the overarching assumptions that are to be used throughout the process of determining cost allocation eligibility and allocation of costs to identified beneficiaries, which is generally referred to as the WestConnect "cost allocation process."

2.1 Present Value Calculations and Discount Rate

The WestConnect Planning Process generally evaluates regional needs and projects which may meet those needs 10 years in the future. Thus, all costs considered in the cost allocation process must be discounted from the planning horizon back to the present time. All cost allocation related decisions, including calculating Benefit Cost Ratios (BCRs) and determining cost allocation assignments to individual beneficiaries, will be conducted using a present value analysis. Present value calculations will be calculated to represent the present value in the then-current year.

The discount rate used in the present value evaluations will be calculated as the simple average of each of the WestConnect Transmission Owner's with Load Serving Obligations (TOLSO's) Weighted Average Cost of Capital (WACC) rates[4]. For each specific regional transmission project, the WACC rates used in the analysis at that time should be fairly representative of the actual and reasonably projected cost of capital of the relevant entities over the relevant time horizon. The methodology for determining the discount rate and the discount rate itself may be reviewed and revised in the future, if approved by the PMC.

The inflation rate utilized in cost allocation evaluations will be based on the most recent projection of the Gross Domestic Product (GDP) Implicit Price Deflator (IPD) provided in the Energy Information

Non-transmission alternatives, though, are not eligible for cost allocation, and, therefore, are not the focus of these cost allocation procedures.

[4] Each TOLSO will provide their WACC rate; those TOLSOs that are unable to share their rates would help WestConnect use a publicly documented rate for their company.

Administration's Annual Energy Outlook. The time period used to calculate annual average inflation rate from the GDP-IPD data will be consistent with the relevant time frame used in present value calculations. The methodology for determining the inflation rate and the inflation rate itself may be reviewed and revised in the future, if approved by the PMC.

The CAS has not yet recommended how many years should be included in the present value calculations. The CAS and the PMC continue to explore the impacts of including various durations within the present value calculations. At the time a determination is made on this matter it will be incorporated into this Cost Allocation Procedures document. In the interim, the CAS will evaluate and consider the inclusion of various durations in the present value calculations. The duration of the present value calculation should be decided before initiating the cost allocation process for a given planning cycle.

2.2 Revenue Requirement Calculations

When the cost of projects identified as the more efficient or cost-effective solution to an identified regional need ("project costs") are considered for purposes of cost allocation eligibility and cost allocation to identified beneficiaries within the Planning Process, those costs will be measured as the present value of the estimated annual revenue requirement of the facility. The cost of transmission projects may be included on both the "costs" side of a BCR or on the benefit side of the BCR (e.g., the cost of local reliability upgrades that are "avoided" by a project selected as the more efficient or cost-effective solution to a regional reliability need is considered the benefit of that project). In either case, the estimated annual revenue requirements, over a number of years, rather than the capital cost of the project, is what will be considered in the cost allocation process.[5]

Revenue requirement estimations will be calculated using the Western Electricity Coordinating Council's (WECC's) Generator Capital Cost Model, which has been used to calculate annual revenue requirements and levelized costs for both transmission facilities and various generation technologies.[6] However, this spreadsheet tool may be updated or modified by WestConnect to more appropriately reflect typical revenue requirements within the region.

In order to calculate a revenue requirement, at least the following assumptions are required:

- Total system cost (e.g., capital cost),
- Ongoing costs (e.g., operations & maintenance),
- Economic life,
- Financing, tax assumptions,
- Discount rate.

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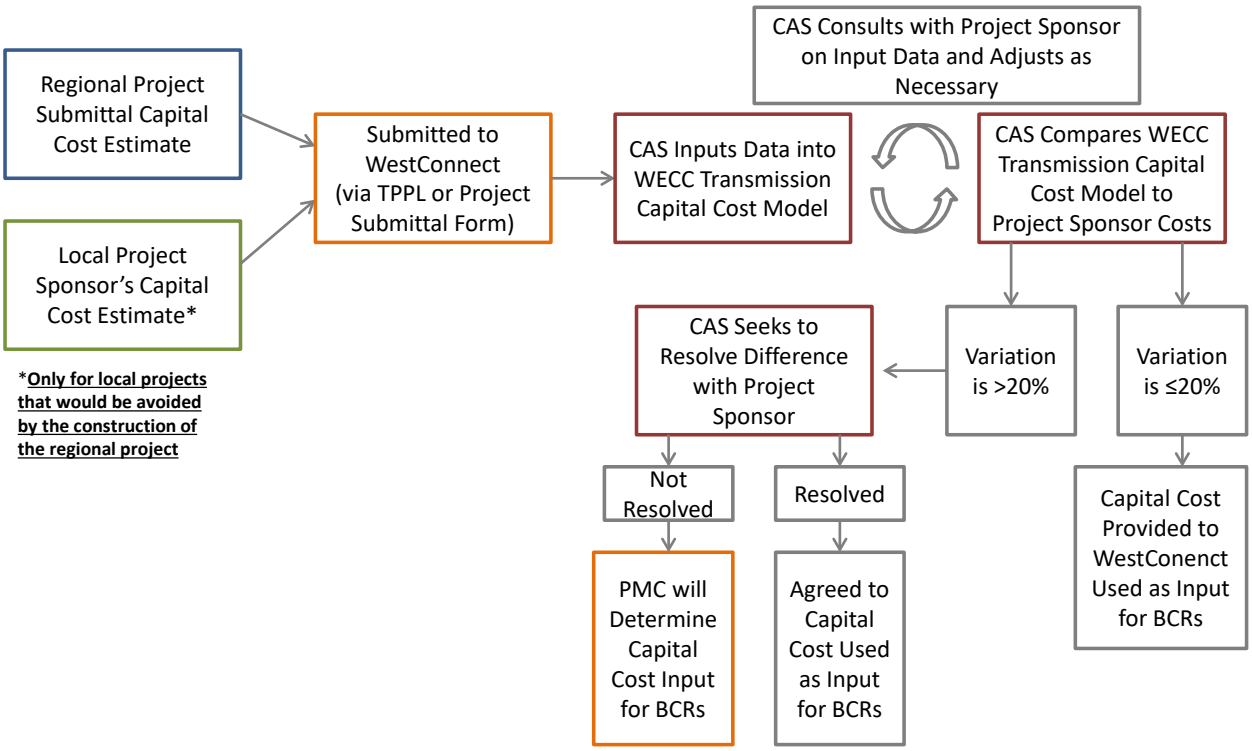
[5] WestConnect recognizes that there may be situations in which a capital cost evaluation might produce results that differ significantly from the quantification of project costs stemming from an evaluation based on annual revenue requirements. For any regional project that is shown to meet the region's BCR on the basis of the present value of the annual revenue requirements, Members may also seek a calculation on a capital cost basis so that the PMC may spot situations in which one method would lead to substantially different results.

[6] The latest version of this tool is the 2019 WECC Generator Capital Cost Model which can be found here: https://www.wecc.org/Administrative/E3_WECC_Cost_Calculator_2019-07-02_FINAL.xlsm Additional documentation on the tool is available here: https://www.wecc.org/Administrative/WECC%20Cost%20Calculator%20Readme%2020190628.docx

Total System Costs (Capital Costs)

Total system costs, or capital costs, will be collected through the Regional Project Submittal Form (for transmission project proposals submitted in response to an identified regional need) or will be provided by the applicable TO member (in the instance of an "avoided" local project). Capital costs submitted for projects proposed to meet an identified regional need and local "avoided" projects will be reviewed for their reasonableness. The process for reviewing their reasonableness is illustrated in Figure 1, below.

Figure1: Overview of Capital Cost Review Process



Generally, capital costs will be verified for their reasonableness using the WECC Transmission Capital Cost Model.[7] The CAS will work with the project submitter (of both local solutions and alternatives to meet an identified regional need) to gather the necessary input data to run the Transmission Capital Cost Model. This includes consulting with the project submitter on terrain type, conductor type, transmission structure type, etc. The CAS will consult with the project submitter on these inputs, but ultimately, the CAS may use the inputs it feels are most appropriate. Once the inputs are determined and the Transmission Capital Cost Model is run, the CAS will compare the project submitter's original capital cost estimate to the figure estimated with the Transmission Capital Cost Model. If the variance in those costs is within +/- 20%, the project submitter's value may be considered reasonable by the CAS.[8] If the variance is greater than +/-20%, the CAS will work with the project submitter to understand the difference. If the CAS agrees that the difference is justified, then the project submitter's capital cost figures will be used. If the CAS does not agree with the project submitter, then the issue will be forwarded to the PMC for resolution.

[7] *The latest version of this tool, is the 2019 Transmission Capital Cost Calculator and can be found here: https://www.wecc.org/Administrative/TEPPC_TransCapCostCalculator_E3_2019_Update.xlsx .*

[8] *While the CAS has decided to use a general 20% threshold, even when a project's capital cost varies by less than 20%, the CAS and the PMC retain the discretion to review the estimate for reasonableness.*

Economic Life, Financing and Tax Assumptions

For TO member local projects that are "avoided" by the project selected as the more efficient or cost-effective solution to an identified regional need in the WestConnect region[9], the remaining assumptions that are required for the revenue requirement calculation, such as the economic life, financing, and tax assumptions will be gathered from the TO members, themselves. Such assumptions should be submitted at the time the TO member provides the local solution. These assumptions will be posted for member and stakeholder review and comment. The assumptions provided by the TO member will be posted simultaneously to any requests made for deviations of assumptions for projects selected as the more efficient or cost-effective solution to an identified regional need (as discussed below).

Generally, projects selected as the more efficient or cost-effective solution to an identified regional need within the WestConnect region will use the Independent Power Producer (IPP) financing and tax assumptions, and a 40-year economic life summarized below.[10] These assumptions are subject to modification by the PMC to better reflect the facts of the WestConnect region. Entities who submitted the project selected as the more efficient or cost-effective solution to an identified regional need through the regional project submittal window will have the opportunity to request a deviation from these default assumptions and provide rationale as to why the standard assumptions should be modified.[11] The CAS and PMC will have an opportunity to review these requests for deviations on a case-by-case basis as part of the Planning Process. The CAS will seek to reach consensus on whether or not a requested deviation should be allowed. In the event the CAS cannot reach consensus on whether or not to apply deviations, the issue will be forwarded to the PMC for resolution.

Additional information on the assumptions that will be used for the revenue requirement calculations, for both the "avoided" local projects and the projects selected as the more efficient or cost-effective solution to an identified regional need, is described in more detail in Section 3.1 and 3.2.

3.0 Cost Allocation Eligibility

To be considered for regional cost allocation, a project must first be identified as the more efficient or cost-effective solution to an identified regional transmission need in the WestConnect region. Furthermore, a project seeking cost allocation must be defined within one or more of the categories in the cost allocation methodology: reliability, economic, or public policy; and the project must meet other applicable criteria as defined within the WestConnect Regional Planning Process Business Practice Manual and jurisdictional TO member tariffs.

Once those criteria have been met, determination of cost allocation eligibility through the Planning Process is driven by the calculation of a project's BCR. A project selected as the more efficient or cost-effective solution to an identified regional need and seeking cost allocation must meet the applicable BCR to be eligible for cost allocation through the Planning Process. WestConnect plans to use a 1.25 BCR

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[9] Whether a local project is avoided by a regional project is a question of fact that is explored by the PMC with the relevant local TO members.

[10] For any project selected in the regional plan for purposes of cost allocation, developer selection for that project will occur in the subsequent transmission planning cycle. It is envisioned that, as part of WestConnect's reevaluation process, specific data inputs associated with the selected developer will be gathered, and an evaluation performed to determine if the regional project continues to warrant selection and eligibility for regional cost allocation based on specific tax, financing, and other data inputs which are representative of the selected developer's circumstances.

[11] Early in the planning process, the input assumptions in this document can undergo evaluation and debate among the PMC membership to consider whether the software tools require adjustment in order to reflect the facts of the WestConnect region. Adjustments are documented as they are identified as necessary and appropriate.

threshold for all projects seeking cost allocation that address any category of regional needs (e.g., reliability, economic, public policy, and projects determined to meet a combination of needs). [12]

Projects that meet or exceed the 1.25 BCR for each identified beneficiary, after appropriate vetting and other approval procedures, will be eligible for regional cost allocation via the process and procedures described in this document. Projects that do not meet the 1.25 BCR threshold may be identified as the more efficient or cost-effective solution, but will not be eligible for regional cost allocation through WestConnect's Planning Process. These projects may be pursued through other avenues.

The following sections describe the methods for calculating the costs and benefits that will be used in BCRs for projects meeting reliability, economic, public policy-driven needs and for those projects assessed as having a combination of benefits (i.e., meet multiple categories of need). All costs and benefits evaluated by the CAS shall be expressed in monetary value and compared on a net present value basis. Potential benefits that cannot be clearly identified and accurately modeled or expressed as a dollar value are outside of the WestConnect cost allocation process.

3.1 Calculating Costs for Regional Transmission Projects

The costs of transmission projects selected as the more efficient or cost-effective solutions to the region's identified need(s) (e.g., regional projects) and seeking cost allocation will be quantified by calculating a present value of the stream of annual revenue requirements for the transmission line. A description of the source for the various data and assumptions needed to calculate the present value of the annual revenue requirements was described previously in Section 2.1 and Section 2.2. The following table summarizes how various components of the revenue requirement will be calculated in order to derive costs to be used in the BCR:

Table 1: Components of the Cost of Projects Selected as the More Efficient of Cost-Effective Solution

Variable	Source/Process Description
Total System Cost (Capital Costs)	Project submitters will submit cost estimates using the WestConnect "Regional Project Submittal Form." Total system costs will be subject to the verification process (as described in Section 2.2), using the WECC Transmission Capital Cost Calculator.
Annual Revenue Requirement	The WECC Generator Capital Cost Model "Tx Proforma" sheet will be the starting point for calculating an estimate of annual revenue requirements. This spreadsheet tool may be modified and updated as needed to more appropriately reflect typical revenue requirements within the WestConnect region.
Financing and other Assumptions	Generally, financing, economic life and tax assumptions will be taken from the WECC Generator Capital Cost Model's "Tx Proforma" assumptions (using the IPP financing components, as outlined in Table 2). However, project submitters will have a chance to request deviations from these

[12] WestConnect's jurisdictional Transmission Owner members are discussing whether to expand their common tariff language to *make clear* how the threshold applies. It should be noted that the application of the threshold in the WestConnect Planning Process will ultimately depend on the applicable FERC-approved tariff language, as it may change from time to time. Filing FERC tariff language is the responsibility of WestConnect's FERC jurisdictional TO members and this document is not an attempt to prescribe what those entities may file.

	generic assumptions. Such deviation requests must be made to the CAS and should include appropriate justification. Additional information on this process is described in Section2.2.
Present Value	The present value will be calculated as the stream of annual revenue requirements over a number of years, beginning with the study year in question (e.g. 2032 for the 2022/23 WestConnect Study Cycle). The number of years to be utilized in the present value calculations is still under consideration by the CAS, as discussed in Section 2.1.
Discount Rate	As described in Section 2.1. the discount rate will be the simple average of WestConnect TOLSO's WACC rates.

Table 2: "Default" Economic Life, Financing, and Tax Assumptions for use in Calculating the Revenue Requirement of Projects Selected as the More Efficient or Cost-Effective Solution to an Identified Regional Need

Variable (unit)	Default Value
Fixed O&M (%/year)	2.5%
Fixed O&M Escalator (% increase/year)	2.0%
Property tax (%)	1.0%
Insurance (%)	0.5%
Economic Life (years)	40
Federal Income Tax (%)	21.0%
State Income Tax (%)	7.0%
MACRS Term (years)	15
Financed with Equity (%)	50.0%
Financed with Debt (%)	50.0%
Debt Interest Rate (%)	6.0%
Cost of Equity (%)	11.0%

Example Calculation of the Costs of a Regional Transmission Project

In the following example, the project submitter provided the total capital cost estimate in the table below, which was then verified using the process outlined in Figure 1. In this example, the project submitter did not request deviations from these generic assumptions, so they remain the same as those illustrated in Table 2 (above).

Assumptions for Calculating Costs for Regional Transmission Project Example	
Total Capital Cost ($)	$150,000,000
Ongoing Costs	
Fixed O&M Costs (%)	2.50%
Fixed O&M Costs Escalator (%/yr)	2.00%
Property Tax (%)	1.00%
Insurance (% of Cost)	0.50%
Economic Life (years)	40
Financing	
% Financed w/ Equity	50.0%
% Financed w/ Debt	50.0%
Debt Interest Rate (%)	6.0%
Cost of Equity (%)	11.0%
Income Tax Assumptions	
Income Tax - Federal (%)	21.0%
Income Tax - State (%)	7.0%
Income Tax - Effective Tax Rate (%)	*26.5%*
MACRS Term (Years)	15

Inputting these assumptions into the WECC Generator Capital Cost Model's "Tx Proforma" sheet yields the following results for annual revenue requirements:

Year 1 (2032)	Year 2 (2033)	Year 3 (2034)	Year 4 (2035)	Year 5 (2036)
$25,569,073	$25,125,823	$24,496,628	$23,908,948	$23,358,648
Year 6 (2037)	Year 7 (2038)	Year 8 (2039)	Year 9 (2040)	Year 10 (2041)
$22,842,428	$22,357,406	$21,888,181	$21,421,024	$20,955,559
Year 11 (2042)	Year 12 (2043)	Year 13 (2044)	Year 14 (2045)	Year 15 (2046)
$20,492,662	$20,031,542	$19,573,078	$19,116,479	$18,662,626
Year 16 (2047)	Year 17 (2048)	Year 18 (2049)	Year 19 (2050)	Year 20 (2051)
$18,210,731	$17,884,776	$17,684,394	$17,486,533	$17,291,242
Year 21 (2052)	Year 22 (2053)	Year 23 (2054)	Year 24 (2055)	Year 25 (2056)
$17,098,574	$16,908,580	$16,721,314	$16,536,831	$16,355,187
Year 26 (2057)	Year 27 (2058)	Year 28 (2059)	Year 29 (2060)	Year 30 (2061)
$16,176,438	$16,000,642	$15,827,858	$15,658,146	$15,491,568
Year 31 (2062)	Year 32 (2063)	Year 33 (2064)	Year 34 (2065)	Year 35 (2066)
$15,328,187	$15,168,066	$15,011,271	$14,857,868	$14,707,925
Year 36 (2067)	Year 37 (2068)	Year 38 (2069)	Year 39 (2070)	Year 40 (2071)
$14,561,512	$14,418,698	$14,279,556	$14,144,159	$14,012,582

If a 10-year "valuation" timeframe were used,[13] along with a seven percent discount rate, the total net present value at the beginning of 2022 would be: $89,650,865.[14]

3.2 Benefits for Projects Meeting Regional Reliability Needs

When a regional reliability need is identified, and after the appropriate vetting processes are undertaken, the benefits of the project selected as the more efficient or cost-effective solution to the need and seeking cost allocation will be the total costs of local reliability upgrades avoided by the selected project. The PMC's TO members will submit these local "avoided" solutions into the Planning Process.[15] The costs of "avoided" local transmission projects will be quantified by calculating a present value of the stream of annual revenue requirements for the transmission line. The following table summarizes how various components of the revenue requirement will be calculated in order to derive benefits for reliability projects to be used in the BCR:

Table 3: Components of the Total Costs of Local Reliability Upgrades Avoided by the More Efficient of Cost-Effective Solution

Variable	Source/Process Description
Total System Cost (Capital Cost)	TO members will submit cost estimates at the time the local "avoided" solution is submitted.

[13] Note that the CAS has not yet recommended how many years should be included in the present value calculations. So this example, using 10-years is purely illustrative.

[14] Calculated using the "XNPV" function in Microsoft Excel and assuming valuation of the revenue requirement at the beginning of each year.

[15] WestConnect has discussed the possibility that a TO member may not submit a local solution to a regional reliability need. These solutions are necessary for consideration of the more efficient or cost-effective solution and for regional cost allocation purposes. If such a solution is not submitted by a TO member, it will need to be addressed by the PMC in order for the Regional Planning Process to move forward.

	Total system costs will be subject to the verification process (as described in Section 2.2), using the WECC Transmission Capital Cost Calculator.
Annual Revenue Requirement	The WECC Generator Capital Cost Model "Tx Proforma" sheet will be the starting point for calculating an estimate of annual revenue requirements. This spreadsheet tool may be modified and updated as needed to more appropriately reflect typical revenue requirements within the WestConnect region.
Financing and other Assumptions	Generally, financing, economic life and tax assumptions will be provided by the TO members at the time the local solution is submitted into the WestConnect Planning Process. These assumptions will be posted for CAS comment and review. Additional information on this process is described in Section 2.2.
Present Value	The present value will be calculated as the stream of annual revenue requirements over a number of years, beginning with the study year in question (e.g. 2032 for the 2022/23 WestConnect Study Cycle). The number of years to be utilized in the present value calculations is still under consideration by the CAS, as discussed in Section 2.1.
Discount Rate	As described in Section 2.1, the discount rate will be the simple average of WestConnect TOLSO's WACC rates.

Example Calculation of the Benefits of a Project Addressing a Regional Reliability Need

In the following example, assume that the project selected as the more efficient or cost-effective solution to an identified regional reliability need avoided the need for construction of two local reliability solutions. The first solution avoided had a capital cost of $250 million and the second had a capital cost of $150 million. Both capital cost estimates which were verified using the process outlined in Figure 1.

The financing, economic life, and tax assumptions in the table below can be assumed to have been submitted by the TO members and reviewed by the CAS for their appropriateness.

Assumptions for Example of Calculating Benefits of Projects Meeting Regional Reliability Needs		
	Avoided Project #1	**Avoided Project #2**
Total Capital Cost ($)	$250,000,000	$150,000,000
Ongoing Costs		
Fixed O&M Costs (%)	2.50%	2.50%
Fixed O&M Costs Escalator (%/yr)	2.00%	2.00%
Property Tax (%)	0.90%	1.10%
Insurance (% of Cost)	0.50%	0.50%
Economic Life (years)	40	40

Financing		
% Financed w/ Equity	40.0%	55.0%
% Financed w/ Debt	60.0%	45.0%
Debt Interest Rate (%)	5.3%	6.0%
Cost of Equity (%)	9.83%	9.98%
Income Tax Assumptions		
Income Tax - Federal (%)	21.0%	21.0%
Income Tax - State (%)	6.0%	8.0%
Income Tax - Effective Tax Rate (%)	*25.7%*	*27.3%*
MACRS Term (Years)	15	15

Inputting these assumptions into the WECC Generator Capital Cost Model's "Tx Proforma" sheet yields the following results for annual revenue requirements for project #1:

Year 1 (2032)	Year 2 (2033)	Year 3 (2034)	Year 4 (2035)	Year 5 (2036)
$37,337,274	$36,768,002	$35,956,378	$35,199,685	$34,492,530
Year 6 (2037)	Year 7 (2038)	Year 8 (2039)	Year 9 (2040)	Year 10 (2041)
$33,830,616	$33,210,189	$32,611,137	$32,015,532	$31,422,896
Year 11 (2042)	Year 12 (2043)	Year 13 (2044)	Year 14 (2045)	Year 15 (2046)
$30,834,391	$30,248,997	$29,667,879	$29,090,020	$28,516,587
Year 16 (2047)	Year 17 (2048)	Year 18 (2049)	Year 19 (2050)	Year 20 (2051)
$27,946,568	$27,542,013	$27,302,457	$27,067,102	$26,836,032
Year 21 (2052)	Year 22 (2053)	Year 23 (2054)	Year 24 (2055)	Year 25 (2056)
$26,609,333	$26,387,091	$26,169,396	$25,956,339	$25,748,013
Year 26 (2057)	Year 27 (2058)	Year 28 (2059)	Year 29 (2060)	Year 30 (2061)
$25,544,512	$25,345,933	$25,152,374	$24,963,936	$24,780,721
Year 31 (2062)	Year 32 (2063)	Year 33 (2064)	Year 34 (2065)	Year 35 (2066)
$24,602,834	$24,430,380	$24,263,470	$24,102,212	$23,946,722
Year 36 (2067)	Year 37 (2068)	Year 38 (2069)	Year 39 (2070)	Year 40 (2071)
$23,797,114	$23,653,505	$23,516,016	$23,384,769	$23,259,889

If a 10-year "valuation" timeframe[16] and seven percent discount rate were used the total net present value at the beginning of 2022 would be: $132,311,736.[17]

Inputting the assumptions into the WECC Generator Capital Cost Model's "Tx Proforma" sheet yields the following results for annual revenue requirements for project #2:

[16] Note that the CAS has not yet recommended how many years should be included in the present value calculations. Therefore this example using 10 years is purely illustrative.

[17] Calculated using the "XNPV" function in Microsoft Excel and assuming valuation of the revenue requirement at the beginning of each year.

Year 1 (2032)	Year 2 (2033)	Year 3 (2034)	Year 4 (2035)	Year 5 (2036)
$25,368,426	$24,929,481	$24,303,309	$23,718,923	$23,172,159
Year 6 (2037)	Year 7 (2038)	Year 8 (2039)	Year 9 (2040)	Year 10 (2041)
$22,659,695	$22,178,627	$21,713,451	$21,250,342	$20,788,923
Year 11 (2042)	Year 12 (2043)	Year 13 (2044)	Year 14 (2045)	Year 15 (2046)
$20,330,075	$19,873,000	$19,418,584	$18,966,031	$18,516,226
Year 16 (2047)	Year 17 (2048)	Year 18 (2049)	Year 19 (2050)	Year 20 (2051)
$18,068,377	$17,747,310	$17,552,656	$17,360,522	$17,170,959
Year 21 (2052)	Year 22 (2053)	Year 23 (2054)	Year 24 (2055)	Year 25 (2056)
$16,984,019	$16,799,753	$16,618,215	$16,439,460	$16,263,543
Year 26 (2057)	Year 27 (2058)	Year 28 (2059)	Year 29 (2060)	Year 30 (2061)
$16,090,522	$15,920,453	$15,753,397	$15,589,413	$15,428,563
Year 31 (2062)	Year 32 (2063)	Year 33 (2064)	Year 34 (2065)	Year 35 (2066)
$15,270,910	$15,116,517	$14,965,449	$14,817,774	$14,673,559
Year 36 (2067)	Year 37 (2068)	Year 38 (2069)	Year 39 (2070)	Year 40 (2071)
$14,532,873	$14,395,787	$14,262,373	$14,132,703	$14,006,854

If a 10-year "valuation" timeframe[18] and seven percent discount rate were used the total net present value at the beginning of 2022 would be: $88,940,330[19] for project #2.

In this example, the total benefits associated with the project identified as the more efficient or cost-effective solution to the identified regional reliability need would be $221,252,066 ($132,311,736 + $88,940,330).

3.3 Benefits for Projects Meeting Regional Economic Needs

When a regional economic need is identified, and after the appropriate vetting processes are undertaken, the benefits of the project selected as the more efficient or cost-effective solution to the economic need and seeking cost allocation will be quantified in order to calculate the project's BCR. To be eligible for regional cost allocation, the project selected to meet the economic need must have a 1.25 BCR on average across all reasonable sensitivities studied.[20] Additionally, these projects must have at least a 1.0 BCR in all reasonable sensitivities evaluated[21]. The benefits quantified for these projects in order to calculate a BCR for purposes of determining cost allocation eligibility will be:

a. The present value of production cost savings across PMC TO members affected by the congestion, and

b. Any additional value associated with "reductions in reserve sharing" that is not already captured in production cost savings.

[18] Note that the CAS has not yet recommended how many years should be included in the present value calculations. So this example using 10-years is purely illustrative.

[19] Calculated using the "XNPV" function in Microsoft Excel and assuming valuation of the revenue requirement at the beginning of each year.

[20] Note that the current tariffs refer to reasonable "scenarios." As WestConnect's planning process has developed the use of the term scenario has taken on a different meaning than the way the term is used in the tariffs. To avoid confusion, this document refers to the review of different assumptions, for purposes of cost allocation, as "sensitivities."

[21] The treatment of the uncertainty inherent in the planning process shall include sensitivity analyses to ensure that the benefits will actually be received by beneficiaries with relative certainty.

The following sections describe each of these benefit categories, including how the benefits of each category will be quantified, in more detail.

3.3.1 Production Cost Savings

Production cost savings are considered an economic benefit capable of contributing to the determination that a project is economically justified for regional cost allocation. Production costs are determined by performing a production cost simulation to model the effect of the transmission project on production costs and congestion, then conducting post-model run vetting of the output of the production cost model simulation to identify adjustments that may be necessary to reflect the WestConnect region.[22] Production cost savings for a specific project that is being evaluated for regional cost allocation eligibility are calculated as the reduction in production costs between a production cost simulation with the project included compared to a simulation without the project.[23]

Production cost savings will be measured as the present value of production cost savings over a period of time.[24] The data required to quantify production cost savings includes the following:

Table 4: Components of Production Cost Savings

Variable	Source/Process Description
Production Cost Savings in the Study Year	Quantified as the difference in Adjusted Production Cost (APC) savings for the PMC TO members affected by congestion from the simulation with the more efficient or cost-effective project included as compared to a simulation without the project included. Additional details on the APC calculation are provided in Section 3.3.
Production Cost Savings in Years Beyond the Study Year	The PMC has yet to determine how production cost savings for years beyond the study year (e.g. 2033+ for the 2022/23 Study Cycle) will be quantified. Such a determination will be made through the WestConnect planning process and will include consideration of the cost allocation standards in the tariffs.
Present Value	The present value of the production cost savings will be evaluated over a number of years, beginning with the study year in question (e.g. 2032for the 2022/23 WestConnect Study Cycle). The number of years to be utilized in the present value calculations is still under consideration by the CAS, as discussed in Section 2.1.
Discount Rate	As described in Section 2.1. the discount rate will be the simple average of WestConnect TOLSO's WACC rates.

[22] Additional information on the production cost model simulation specifics can be found in WestConnect's Regional Study Plan and other documentation and are not repeated herein.

[23] The PMC will review and evaluate the output of the production cost model and may make adjustments as necessary to reflect the WestConnect region. It must be determined that the economic benefits will be achieved with relative certainty to the identified beneficiaries.

[24] At present, the production cost model under development by the PMC is populated with a significant amount of generic production cost data. It is expected that before the PMC were to select a project in a Regional Plan for purposes of cost allocation, as part of the process, there will be an opportunity for consideration of the use of proprietary data, and the tradeoffs of using such data, along with any confidentiality measures that would be necessary.

Adjusted Production Cost (APC) Savings

The APC calculation will be used as the metric for calculating each TO member's production costs and also for measuring changes in production costs between various production cost model (PCM) simulations. WestConnect's APC calculation will account for ownership percentages of generation units and incorporate known, long-term agreements for Power Purchase Agreements (PPAs), as long as that information is submitted into the Planning Process. The APC calculation is intended to best represent, given the use of a PCM, the actual changes in the variable cost of serving load for each PMC TO member.

The APC calculation, and its various components, will be subject to significant review and vetting by the PMC TO members and other PMC members, subject to any necessary confidentiality measures as part of the WestConnect Planning Process.[25] The APC calculation may be updated or modified, as appropriate, through the Planning Process to best reflect the production costs savings that would be realized for each TO member as a result of adding the more efficient or cost-effective transmission solution to an identified regional need to the WestConnect footprint. Additionally, efforts will be made to ensure the APC calculation accurately reflects the WestConnect region, including considering methods for ensuring that the underlying PCM data used in the APC calculation does not force a generating unit to be turned on to make a third-party sale, if that practice is not expected to occur for that unit. The APC calculation, and the sources for various components of that calculation, is described in more detail below.

WestConnect APC Calculation Specifics[26]

1. Determine TO member's hourly load obligation (total of individual loads "owned" by the TO in that hour of the PCM simulation)
2. Determine TO member's hourly output from owned and contracted generation (energy dispatched by model multiplied by the percentage share of unit)
3. Calculate net hourly position by subtracting generation from load obligation (1-2)
4. Settle net hourly position
5. Sum hourly APC costs across all hours of the year

Table 5: Components of the Adjusted Production Cost Calculation

Variable	Source/Process Description
TO's hourly load obligation	TO member's hourly load obligations will initially be gathered from the PCM output. Those TO hourly load obligations are determined by a combination of hourly area-level load and the TO's load bus distribution. The APC calculation will ensure that any buses indicating negative generation are captured in each TO's hourly load obligation. The TO's hourly load obligations will be reviewed and vetted through the Planning Process.

[25] The need and scope of any confidentiality measures will depend on the type of data being reviewed and vetted and whether the data is generic or member-specific.

[26] Additional information on these calculations was presented d to the PMC in October 2016 and the presentation can be found here: https://doc.westconnect.com/Documents.aspx?NID=17413&dl=1, slides 58-68, with key slides included in Appendix E.

TO's hourly output from owned and contracted generation	The PMC will collect, from individual TO members, information on their percentage ownership of generation units as well as the percentage of other units which are under a long-term contract with the TO and are contracted to provide output to the TO in the study year (e.g., 2032 for the 2022/23 Study Cycle). These long-term contracts may include PPAs or other contractual arrangements that will be in place through at least the study year. Output for each of these units will be determined by multiplying the unit's expected output from the PCM by the TO's ownership percentage. Note that in cases where unit level data is not available, or cannot be provided for use in the WestConnect Planning Process, the CAS may use ownership percentages by plant level and will proportionally allocate output of the plant as a whole.
Net hourly position	The output from the TO member's owned and contracted generation for the hour (step #2) will be subtracted from the TO's hourly load obligations (step #1) to determine if the TO requires additional energy purchases to meet load obligations in that hour, or if the TO needs to sell energy that is being produced beyond its load obligations.
Settle the TO's hourly costs	For the TO member's owned and contracted generation, the production costs of the unit (or plant, as applicable) will be multiplied by the TO's ownership share. All the TO's owned and contracted units will be summed. The hourly net energy position will then be financially settled and added, or subtracted from the TO's production costs. When energy purchases are required, the TO's hourly net energy position will be multiplied by the load-weighted LMP at the TO's buses where the TO has load. This cost will be added to the TO's hourly production costs from owned and contracted resources. When energy sales are necessitated, the TO's hourly net energy position will be multiplied by the generation-weighted LMP of the TO's owned and contracted generation resources. These revenues will be subtracted from the TO's hourly production costs from owned and contracted resources.
Sum hourly costs across the year	The calculation will take place on an hourly basis for each hour of the year. After every hour's financial position is calculated, those costs will be summed across all hours of the study year to determine the annual APC for each TO member.

Each TO member's APC will be compared in a PCM simulation without the more efficient or cost-effective transmission project and a PCM with the project included. TO's with APC savings are those which show a lower total APC in the PCM simulation with the project included. The project's total "production cost savings" will be quantified as the sum of the individual TOLSO APC savings. Those TOs that see an increase in APC with inclusion of the project in the PCM will be overlooked. However, at the time a project is identified for potential cost allocation, the WestConnect PMC will review the APC

results to determine whether any APC increases are significant and if they indicate actual harm to one or more members of the region which require further evaluation. The nature and level of increased APC will be examined to determine whether those increases can be overlooked or if some sort of mitigation may be necessary. Details on the APC calculation, including a simplified example can be found in Appendix E.

Economic Sensitivities

The APC savings, as one of the benefits included in BCRs for projects meeting regional economic needs, will need to be quantified under a number of sensitivities.

The PMC recognizes that the results of planning studies and the calculation of benefits depend on the input assumptions used in the analysis. Because these input assumptions involve forecasts of future values, there is uncertainty concerning actual future conditions. This uncertainty can be addressed through various metrics, including sensitivity analysis. The sensitivity analyses used in BCR evaluation for regional economic projects may include, but are not limited to, consideration of changes in:

- Forecast of peak demand and energy consumption;
- Dates when proposed facilities will be in service;
- Location and mix of future generation, including retirements;
- Fuel prices;
- Discount rates; and
- Rate of inflation.

Other sensitivities have been discussed and may be included in BCR calculations, such as:

- Hurdle rates
- Hydro conditions
- Emissions costs (as applicable)
- Reserve requirements

The PMC has yet to determine which sensitivities will be performed for cost allocation purposes. The details of sensitivities performed for purposes of cost allocation analyses will be determined at a later date through the applicable WestConnect processes and will likely be informed by the sensitivities undertaken in other parts of the Planning Process (such as the identification of regional needs).

Additionally, the tariffs mention other production cost modeling principles which may be applied.[27] Efforts continue to incorporate at least some of those principles into the development of the

[27] *Common tariff language states: "The following production cost principles may be applied:*
- *The production cost savings from a project must be present in each year from the project in-service date and extending out at least ten (10) years.*
- *Cost savings must be expressed in present-value dollars and should consider the impact of various fuel cost forecasts.*
- *The production cost study must account for contracts and agreements related to the use of the transmission system (this refers to paths in systems that might be contractually limited but not reliability limited).*
- *The production cost study must account for contracts and agreements related to the access and use of generation (this refers to generators that might only use spot purchases for fuel rather than firm purchases,*

WestConnect production cost model. However, the PMC will need to further consider how, and if, those principles will be incorporated into the production cost modeling results.

3.3.2 Reductions in Reserve Sharing

Reductions in reserve sharing requirements are benefits that are capable of contributing towards determination of whether a transmission project selected as the more efficient or cost-effective solution to a regional economic need is eligible for regional cost allocation. Reserve sharing reductions should be determined by identifying a transmission project's effect on the reserve sharing requirements of individual transmission systems (e.g., individual TOs), not on the basis of the project's collective effect on a reserve sharing group.

Transmission projects may help reduce various reserve sharing requirements. One type of reserve sharing requirement that may be affected by a new transmission line that changes load or generation for individual TO's are contingency reserves (as mandated by WECC-BAL-002-2). Reductions in non-spinning reserves (i.e., Operating Reserves – Supplemental) are not expected to be captured via other analyses, but any value associated with reductions in non-spinning reserves are expected to be minimal in nature and, therefore, are not planned to be quantified for use in the BCRs. Generally, reduction in the spinning reserve portion of contingency reserves should be captured via a production cost model simulation and may be incorporated in the "production cost savings" calculation, discussed in Section 3.3a. Changes to the spinning reserve portion of the contingency reserve requirement are expected to be captured through the APC calculation. However, the CAS will continue to study this to determine if the current APC calculation (which is focused on load obligations) needs to be modified to include provisions such that it adequately captures any changes to spinning reserve obligations of each TO member.

The CAS recognizes that there may be instances where a transmission line could offer other types of reserve sharing reductions beyond those captured in the production cost model simulation.[28] In these instances, project submitters may provide information on how a particular project will provide reserve sharing benefits and can provide an estimated value of those reserve sharing benefits. The CAS will review these submissions on a case-by-case basis. If the CAS cannot come to a consensus position on the application of any value associated with additional "reductions in reserve sharing" which are not already captured in the production cost model for a particular project, the CAS will refer the issue to the PMC for resolution.[29]

3.4 Benefits for Projects Meeting Regional Public Policy Needs

When a regional public policy-driven need is identified,[30] and after the appropriate vetting processes are undertaken, the benefits of the project selected as the more efficient or cost-effective solution to the need and seeking cost allocation will be the total costs of avoided local transmission solutions to meet the same public policy requirement and, when applicable, installed cost savings associated with lower cost generation. The following subsections provide more details on each of these benefit categories

or generation that has been designated as network resources for some entities and thus cannot be accessed at will by non-owners)."

[28] For instance in other areas, transmission lines may reduce the overall planning reserve margin requirements.

[29] The CAS is also considering ways to involve the TOs affected by additional reserve sharing benefits in vetting whether additional reserve sharing benefits will be achieved.

[30] See the WestConnect 2016/17 Study Plan for more details on how a regional public policy need could be identified.

which may contribute to the determination of whether a project meeting a public policy-driven need is eligible for regional cost allocation.

3.4.1 Avoided Cost of Local Transmission Solutions to Meet the Same Public Policy Requirement

This benefit category is intended to represent the costs of TO transmission solutions that are avoided by construction of the transmission project addressing a regional public policy-driven need.[31] Although determining the costs of avoided transmission solutions may depend on the manner in which the regional public policy-driven need is identified, it is assumed that two or more local TO alternatives are required to enable compliance with the public policy requirement or mitigate the transmission issue caused as a result of compliance with the public policy requirement.

When a regional public policy-driven need is identified, and after the appropriate vetting processes are undertaken, the benefits of the project selected as the more efficient or cost-effective alternative to meet the need and seeking cost allocation will be the total costs of local transmission solutions avoided by the selected project. TO members should submit these "avoided" local solutions into the Planning Process.[32] The costs of "avoided" local transmission projects will be quantified by calculating a present value of the stream of annual revenue requirements for the transmission line. The following table provides a description of how various components of the revenue requirement will be calculated in order to derive benefits for public policy-driven projects to be used in the BCR:

Table 6: Components of the Avoided Cost of Local Transmission Solutions to Meet the Same Public Policy Requirement

Variable	Source/Process Description
Total System Cost (Capital Cost)	TO members will submit cost estimates at the time the local solution is submitted. Total system costs will be subject to the verification process (as described in Section 2.2), using the WECC Transmission Capital Cost Calculator.
Annual Revenue	The WECC Generator Capital Cost Model will be the starting point for calculating an estimate of annual revenue requirements. This spreadsheet tool may be modified and updated as needed to more appropriately reflect typical revenue requirements within the WestConnect region.
Financing and other Assumptions	Generally, financing, economic life and tax assumptions will be provided by the TO members at the time the local solution is submitted into the WestConnect Planning Process. These assumptions will be posted for member and stakeholder comment and review. Additional information on this process is described in Section 2.2.

[31] This benefit category is very similar to the benefits and cost allocation principles used for projects that meet an identified regional reliability need.

[32] WestConnect has discussed the possibility that a TO member may not submit a local solution to a regional public policy-driven need. These solutions are necessary for consideration of the more efficient or cost-effective solution and for regional cost allocation purposes. If such a solution is not submitted by a TO member, it will need to be addressed by the PMC in order for the Regional Planning Process to move forward.

Present Value	The present value will be calculated as the stream of annual revenue requirements over a number of years, beginning with the study year in question (e.g. 2032for the 2022/23 WestConnect Study Cycle). The number of years to be utilized in the present value calculations is still under consideration by the CAS, as discussed in Section 2.1.
Discount Rate	As described in Section 2.1, the discount rate will be the simple average of WestConnect TOLSO's WACC rates.

3.4.2 Installed Cost Savings of Lower Cost Generation

This benefit category is intended to capture the installation cost savings (expressed in $/kW) that could be achieved from building lower cost generation resources (e.g. renewable resources with higher capacity factors) to meet the same public policy requirements. Many components of this benefit category remain to be determined. This benefit category would only be quantified and included in BCR calculations if the following criteria are met:

1) Utilities whose public policy requirements drove the identification of a regional public policy-driven need indicate to the PMC that they plan to access different resources (specifically, the enabled resources) as a result of the transmission project selected as the more efficient or cost-effective solution to the identified need, and

2) The PMC concludes that it can effectively quantify generation installation cost savings resulting from the enabled resources in the process of implementing a BCR evaluation for a project seeking cost allocation.

Only if these two criteria are met, may the PMC move forward with quantifying the savings that would be associated with this benefit category for use in a BCR for a project seeking cost allocation selected to meet a public-policy driven need. In order to quantify and monetize savings associated with installed costs savings of lower cost generation resources, a number of pieces of information would be needed, including the location of resources, resource capacity, expected resource output, and installed costs of the resource. There are a number of options the PMC could consider to gather the necessary information. The specifics of these calculations will be developed, as needed, through the applicable WestConnect processes.

3.5 Benefits for Projects Assessed as Having a Combination of Benefits

If a project seeking cost allocation is determined to be the more efficient or cost-effective solution to one or more of the identified regional needs but cannot pass the cost allocation BCR threshold using a single category of benefits alone (reliability, economic, or public policy), the PMC may consider the sum of the benefits from each applicable benefit category. In order for a transmission project to be assessed as having a combination of benefits, and have multiple benefit categories included in the BCR, at a minimum the following prerequisites must be met.

1) Multiple categories of regional needs must be identified during the planning cycle; and

2) Application of the "combination of benefits" approach must be considered through the WestConnect stakeholder process; and

3) The PMC must approve consideration of the project as having a "combination of benefits."

If these prerequisites are met for a project which is selected as the more efficient or cost-effective solution to an identified regional need, and the project is seeking cost allocation, and the project is assessed as having a "combination of benefits," the benefits included in a BCR calculation for purposes of determining cost allocation eligibility will be only those categories of benefits associated with the type of regional need the project in question has met (e.g., reliability, economic, public policy).

Table 6: Benefit Types for Consideration in a Combination of Benefits BCR

Type(s) of Regional Need(s) Identified	Eligible for Combination of Benefits Consideration?	Include Reliability Benefits in BCR Calculation?	Include Economic Benefits in BCR Calculation?	Include Public Policy Benefits in BCR Calculation?
Reliability only	No	Yes	No	No
Economic only	No	No	Yes	No
Public Policy only	No	No	No	Yes
Reliability and economic	Yes, if other criteria are achieved	Yes	Yes	No
Reliability and public policy	Yes, if other criteria are achieved	Yes	No	Yes
Economic and public policy	Yes, if other criteria are achieved	No	Yes	Yes
Reliability, economic and public policy	Yes, if other criteria are achieved	Yes	Yes	Yes

4.0 Cost Allocation Assignment

Cost allocation will be performed by the CAS on projects the PMC determines to be a more efficient or cost-effective solution to an identified regional need, for which the project has sought regional cost allocation, and has been determined to meet the necessary criteria to be eligible for regional cost allocation (see Section 3.0). Having passed these thresholds, such projects will be referred to as having been "selected for the purposes of cost allocation." In performing regional cost allocation assignments on these projects, the PMC, with input from the CAS, will allocate project costs roughly commensurate with estimated benefits and according to the cost allocation equations and guidance provided in the

tariffs as outlined in the subsequent sections. As stipulated in the tariffs, WestConnect will also undergo a project reevaluation process until certain criteria are met. Reevaluation, as it relates to the cost allocation process, will be addressed in Section 6.0 once details of that process are better developed.

4.1 Cost Allocation for Projects Selected to Meeting Regional Reliability Needs

Costs for projects meeting an identified regional reliability need and selected for purposes of cost allocation will be allocated to a TO member based on their need for system reliability improvements, and only when a system reliability improvement is required for that TO member to comply with the NERC TPL standards. The cost allocation methodology for projects meeting regional reliability needs and selected for the purposes of cost allocation is based on the costs that each TO member system would have been otherwise required to incur on an individual basis to comply with the reliability standards.

Regional Reliability Cost Allocation Equation

The costs for projects meeting an identified regional reliability need and selected for purposes of cost allocation ("regional reliability projects") shall be allocated according to the equation below:

(A ÷ B) × C = D

A = The cost of an individual TO member's local reliability upgrades necessary to avoid construction of the regional reliability project in the relevant TO member's retail distribution service territory or footprint

B = The total cost of all local reliability upgrades in the retail distribution service territories or footprints of all the TO member's contributing to regional reliability need necessary to avoid construction of the regional reliability project

C = The total cost of the regional reliability project

D = The individual cost allocation to the relevant TO member's retail distribution service territory or footprint

The manner in which the PMC applies this methodology to allocate costs for a given regional reliability project will be described in the Regional Plan.

Regional Reliability Cost Allocation Example

If in response to an identified regional reliability need, Company 1 proposes a local reliability project that costs $250 million, under the present value revenue requirement calculation described in this document, and Company 2 proposes a local reliability project that costs $150 million, but a $200 million regional project was selected for purposes of cost allocation as the most efficient or cost-effective solution to meet both companies' reliability needs, then costs could be allocated as follows:

- Company 1 Allocation: 250 ÷ (250 + 150) × 200 = $125 million (62.5%)
- Company 2 Allocation: 150 ÷ (250 + 150) × 200 = $75 million (37.5%)

4.2 Cost Allocation for Projects Selected to Meet Regional Economic Needs

Cost allocation assignments for projects selected for the purposes of cost allocation to meet a regional economic need will be based on the pro rata share of economic benefits calculated for each TO member's system. The economic benefits calculated in order to assign costs to beneficiaries of projects determined to meet an identified regional economic need and selected for purposes of cost allocation are outlined in Section 3.3 and include:

a. The present value of production cost savings across PMC TO members affected by the congestion, and

b. Any additional value associated with "reductions in reserve sharing" that is not already captured in production cost savings.

The cost of any project with an average BCR of 1.25 or greater[33] will be divided among the TO members that show a benefit based on the amount of benefits, as outlined above, calculated for each TO.[34]

Economic Cost Allocation Equation

The costs for projects meeting an identified regional economic need and selected for purposes of cost allocation ("regional economic projects") shall be allocated according to the equation below:

(A ÷ B) × C = D

A = The total projected present value of economic benefits for the relevant TO

B = The total projected present value of economic benefits for the entire project

C = The total cost of the regional economic project

D = The individual cost allocation to the relevant TO

Any TO member with economic benefits less than or equal to one percent of the total project benefits shall be excluded from the cost allocation. In this case, the benefits will be re-allocated to all other identified beneficiaries in proportion to each entity's share of the total project benefits.

The manner in which the PMC applies this methodology to allocate costs for a given regional economic project will be described in the Regional Plan.

Economic Cost Allocation Example

If the present value of the revenue requirement of a project is $100 million, and the present value of the economic benefits of the same project (which consist solely of production cost savings) are $150 million on average in all reasonable economic sensitivities studied. The cost of the project will then be allocated to the entities that have been identified to benefit, based on the

[33] Following the PMC's review of the production cost modeling output and determination of whether the resulting output meets the tariff standards.

[34] For a project selected as a more efficient or cost-effective solution to a regional economic need to be selected for regional cost allocation, it must have a BCR greater than 1.0 under each reasonable sensitivity and an average BCR of at least 1.25 for all reasonable sensitivities evaluated.

extent of each entity's economic benefits relative to the total project benefits. This will ensure that each entity allocated cost has a BCR ratio equal to the total BCR. For example:

A project with $150 million in present value economic benefit and $100 million in present value costs.

- Company 1 has $90 million in present value benefits
- Company 2 has $60 million in present value benefits

COMPANY	BCR	ALLOCATION
Company 1	90 ÷ 60 = 1.5	(90 ÷ 150) × 100 = $60 million (60%)
Company 2	60 ÷ 40 = 1.5	(60 ÷ 150) × 100 = $40 million (40%)

4.3 Cost Allocation for Projects Selected to Meet Regional Public Policy-Driven Needs

The costs of projects selected as the more efficient or cost-effective solution to an identified regional transmission need driven by public policy requirements, and further selected for purposes of cost allocation will be shared proportionally among the entities that access the resources enabled by the project to meet their public policy requirements. The entities identified as beneficiaries for the purposes of cost allocation assignment are those that will access the resources enabled by the project in order to meet their public policy requirement.[35]

The treatment of cost allocation for regional public policy-driven needs is different that the treatment of cost allocation for projects identified to address regional reliability needs, with projects seeking to satisfy an identified public policy-driven need having costs allocated to WestConnect TOs based on the MW of public policy resources that are enabled by that project for that TO. The difference in treatment is rooted in consideration of state and federal jurisdiction and a recognition that resource selection decisions are not FERC jurisdictional. The use of "MW-enabled" as the basis for cost allocation addresses a potential situation in which a regional transmission line that would connect multiple WestConnect TOs to a new renewable generation resource may not enable renewable resources to flow to all of the relevant TOs because not all of the TOs may select that generation resource in their resource portfolios. Therefore, the tariff requires the identification of beneficiaries of these projects to be those entities that will access the resources enabled by the project in order to meet their public policy requirements.[36]

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[35] If an entity accesses resources that were enabled by a prior public policy project, that entity must either share its relative share of the costs of that public policy project or acquire sufficient transmission service rights to move the resource to its load with the determination left up to the entity(ies) that were originally allocated the cost for the public policy project.

[36] The WestConnect cost allocation process helps ensure WestConnect TOs are not allocated costs in instances where the TO will not access resources from a proposed solution to a regional public policy-driven transmission solution. For example, assume that the PMC identified a regional public policy-driven transmission need. The more efficient or cost-effective solution is identified as a regional transmission project costing $100 million. That regional solution would avoid Company 1's $50 million solution, Company 2's $75 million solution, and Company 3's $100 million solution. However, also assume that Company 2's public policy need will be satisfied through a different generation resource, which is approved by Company 2's regulators as part of its public policy compliance activities. Because Company 2 will

This addresses the possibility that a solution identified as the more efficient or cost-effective solution, which may "avoid" (theoretically) the need for a local solution of one TO may not, in fact, avoid the local project because the TO will not access the resource(s) to achieve its public policy requirements.

Public Policy Cost Allocation Equation

The costs for projects meeting an identified regional transmission need driven by public policy requirements and selected for purposes of cost allocation ("regional public policy projects") shall be allocated according to the equation below:

(A ÷ B) × C = D

A = The number of megawatts of public policy resources enabled by the regional public policy project for the entity in question

B = The total number of megawatts of public policy resources enabled by the regional public policy project

C = The total regional public policy project cost

D = The cost for the regional public policy project allocated to the entity in question

The manner in which the PMC applies this methodology to allocate costs for a given regional public policy project will be described in the Regional Plan.

Public Policy Cost Allocation Example Illustrating Use of MW Enabled

Comparison of Using Avoided Costs versus MWs Enabled in the Cost Allocation Evaluation

Assume that there was a regional reliability need, and Company 1 and Company 2 submitted solutions. Company 1's solution was a $50 million present value project, and Company 2's was $100 million present value. The more efficient or cost-effective regional solution that was submitted and selected for purposes of cost allocation was a $100 million present value project. The BCR for the project would be 1.5, making the project eligible for regional cost allocation. Company 1 would be allocated $33.3 million (33.3 percent) of the cost and Company 2 would be allocated about $66.6 million (66.6 percent) of the cost, because a regional reliability project is allocated based solely on the costs of the local "avoided" solutions.

However, when a regional project is seeking to satisfy an identified public policy-driven need, costs are allocated based on the MW of public policy resources that are enabled, as discussed above. Assume now that there was a regional public policy-driven need, and Company 1 and Company 2 submitted solutions. Again, as above, Company 1's solution was a $50 million present value project which would enable it to secure 300 MW of public policy resource. And again Company 2's solution was $100 million present value, which enabled it to access 100 MW of public policy resources. The more efficient or cost-effective regional solution that was submitted and selected for purposes of cost allocation was a $100 million present value project, which enables Company 1 to access the same 300 MW of public policy resources and Company 2 the same 100 MW of public policy resources as the local solutions. The BCR for the project would be 1.5 ($150 million in avoided cost benefits and $100 million in costs). However, the BCR for each Company would be different than for the project overall due to the use of "MW enabled" for cost allocation to each beneficiary.

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not access the renewable resources enabled by the regional transmission project, Company 2 would have been enabled 0 MW and would not be an identified beneficiary. Costs for Company 1 and Company 3 will be allocated based on the MW of public policy resources that are enabled for those companies.

- Company 1 would have a benefit of $50 million in avoided costs. Company 1 accesses 300 MW of public policy resources and would be allocated costs of 75% or $75 million of the costs of the solution identified in the regional plan, because the project enables access to 300 MW, or 75%, of the total 400 MW enabled by the regional solution. Company 1's BCR would now be 0.66 ($50M/$75M).

- Company 2 would have a benefit of $100 million in avoided costs. Company 2 accesses 100 MW of public policy resources and would be allocated costs of 25% or $25 million of the costs of the solution identified in the regional plan, because the project enables access to 100 MW, or 25%, of the total 400 MW enabled by the regional solution. Company 2's BCR would now be 4.0 ($100M/$25M).

The tariff, in certain places, states that the 1.25 BCR must apply to each beneficiary, and this example demonstrates a situation in which one entity (Company 1 in the example described above) did not have 1.25 BCR. The 1.25 BCR should be applied on an individual, not aggregate, basis. In this example, the project would not be eligible for regional cost allocation because of the cost allocation to Company 1; however, the project may choose to move forward outside of the WestConnect cost allocation process.

4.4 Cost Allocation for Projects Assessed as Having a Combination of Benefits

The Planning Process and the cost allocation procedures recognize that a transmission project may meet multiple categories of needs, and therefore, result in multiple categories of benefits. For example, a project selected as the more efficient or cost-effective solution to a regional reliability need might also allow for more economic operation of the system and for compliance with public policy requirements. If a project seeking cost allocation is determined to be the more efficient or cost-effective solution to one or more of the identified regional needs but cannot pass the cost allocation threshold using a single category of benefits alone, the sum of the benefits from each benefit category associated with a regional need met by that project may be considered. Criteria that will be used to determine whether a project identified as the more efficient or cost-effective solution a regional transmission need will be assessed as having a combination of benefits is described in Section 3.5 If a project meets the applicable criteria to be assessed as having a combination of benefits, and the project passes the BCR threshold to be selected for the purposes of cost allocation, costs shall be allocated in accordance with the cost allocation procedure defined for each category of benefits considered. For each benefit category considered, the benefits provided by that category in proportion to the total project benefits shall be used to allocate a percentage of the total project costs to that category of benefits.

Combination of Benefits Cost Allocation Example

A project selected as the more efficient or cost-effective solution to one or more regional transmission needs has undergone analysis for its quantifiable benefits and cost and is determined to cost $100 million (in present value) and produce benefits to identified beneficiaries in two categories: economic benefits of $101 million present value (on average, under all economic sensitivities quantified), and public policy benefits of $70 million present value. The project failed the cost allocation BCR threshold for each category individually, but when the total benefits are combined and the project's total regional benefits are weighed against the project's total costs per beneficiary, the project can be found to meet or surpass the region's 1.25 to one BCR for each individual beneficiary.

Regional project's cost $100 million

Economic Benefits

- The regional project's total present value economic benefits: $101 million
    - Assume that Company 1 and Company 2 share economic benefits equally (50/50); therefore, project costs must be allocated equally.

COMPANY	SHARE OF ECONOMIC BENEFITS	SHARE OF PROJECT COST	BCR
Company 1	$50.5 million	$50 million (50%)	1.01
Company 2	$50.5 million	$50 million (50%)	1.01

Public Policy Benefits

- The regional project's total public policy present value benefit: $70 million
    - Assume that 60 MW of public policy resources are enabled for Company 1 and 40 MW of public policy resources are enabled for Company 2. And, for simplicity, assume that each Company's benefits are propionate to the MW of public policy resources enabled. Therefore, Company 1 avoids a local public policy-driven project that costs $42 million, under the present value revenue requirement calculation described in this document and Company 2 avoids a local public-policy driven project that costs $28 million under the present value revenue requirement calculation approach. Thus Company 1 and Company 2 split the public policy benefits 60/40, respectively; therefore, project costs are allocated according to this proportion.

COMPANY	SHARE OF PUBLIC POLICY BENEFITS	SHARE OF PROJECT COST	BCR
Company 1	$42 million (60%)	$60 million (60%)	0.7
Company 2	$28 million (40%)	$40 million (40%)	0.7

Total Project Benefits

- The Regional Project's total present value benefits: $171 million ($101 million in economic benefits plus $70 million in public policy benefits).[37]
    - Proportion of benefits attributed to economic benefits: $101 million/$171 million (59%)
        - 59% or $59 million of the region's project cost will be allocated based on economic benefits

[37] Thus the BCR for this project, when considering both the benefits associated with meeting a region economic need and a regional public policy needs 1.71 ($171 million in total benefits compared to $100 million in total costs), Thus the project would meet or exceed the 1.25 BCR threshold for cost allocation eligibility, that the region plans to use.

- Company 1 and Company 2 share economic benefits equally (50/50); therefore, 59% of the regional project costs will be allocated as follows:

COMPANY	SHARE OF PROJECT COST BASED ON ECONOMIC BENEFITS *(Economic benefits comprise 59% of the total project benefit)*
Company 1	$29.5 million, which is 50% of $59 million
Company 2	$29.5 million, which is 50% of $59 million

  - Proportion of benefits attributed to public policy benefits: $70 million/$171 million (41%)
    - 41% or $41 million of the region's project cost will be allocated based on public policy benefits
    - Company 1 and Company 1 split public policy benefits 60/40; therefore, 41% of the regional project costs will be allocated as follows:

COMPANY	SHARE OF PROJECT COST BASED ON ECONOMIC BENEFITS *(Public Policy benefits comprise 41% of the total project benefit)*
Company 1	$24.6 million (60% of $41 million)
Company 2	$16.4 million (40% of $41 million)

COMPANY	SHARE OF ECONOMIC BENEFITS	SHARE OF PUBLIC POLICY BENEFITS	COMBINED BENEFITS	SHARE OF ECONOMIC BENEFIT PROJECT COSTS	SHARE OF PUBLIC POLICY BENEFIT PROJECT COSTS	TOTAL SHARE OF PROJECT'S COST	TOTAL BCR
Company 1	$50.5 million (50%)	$42 million (60%)	$92.5 million	$29.5 million	$24.6 million	$54.1 million (54.1%)	1.71
Company 2	$50.5 million (50%)	$28 million (40%)	$78.5 million	$29.5 million	$16.4 million	$45.9 million (45.9%)	1.71

5.0 RESERVED:

6.0 RESERVED: Re-Evaluation of Regional Transmission Projects

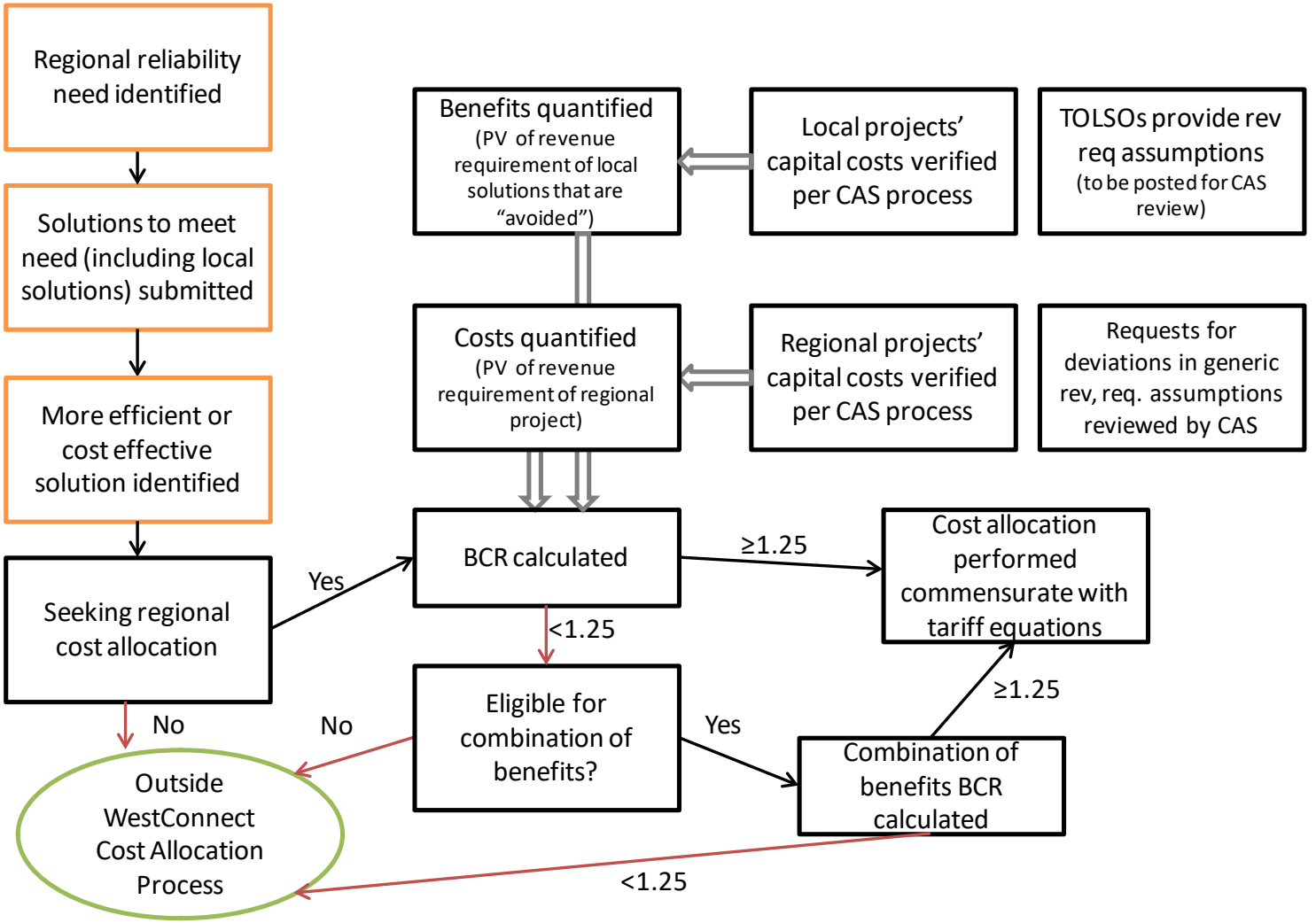
7.0 Cost Recovery

The PMC is obligated to produce a regional transmission plan ("Regional Plan") that identifies the more efficient or cost-effective solutions to the region's identified reliability, economic, or public policy-driven regional transmission needs. To the extent the PMC has selected those projects for the purposes of cost allocation, the PMC will identify the project beneficiaries and assign project costs to those beneficiaries per the cost allocation methodologies described within this document. Upon approval of the Regional Plan, the PMC will select a developer that is eligible to utilize those cost allocations in the subsequent steps of the project development process. Once the developer selection process has concluded, obligations then shift to the selected developer and the identified beneficiaries to move forward with the mechanics of project development, which may involve entering into agreements for cost recovery and sharing of transmission ownership or capacity rights, and/or filing for cost recovery under Section 205 of the Federal Power Act, as applicable. That filing would likely be supported by the materials produced by the PMC (e.g., selection of the project into the Regional Plan, cost allocation assignments, developer selection decisions). FERC, under the 205 filing and as applicable, has ultimate approval authority over cost allocation assignments and approvals for cost recovery.

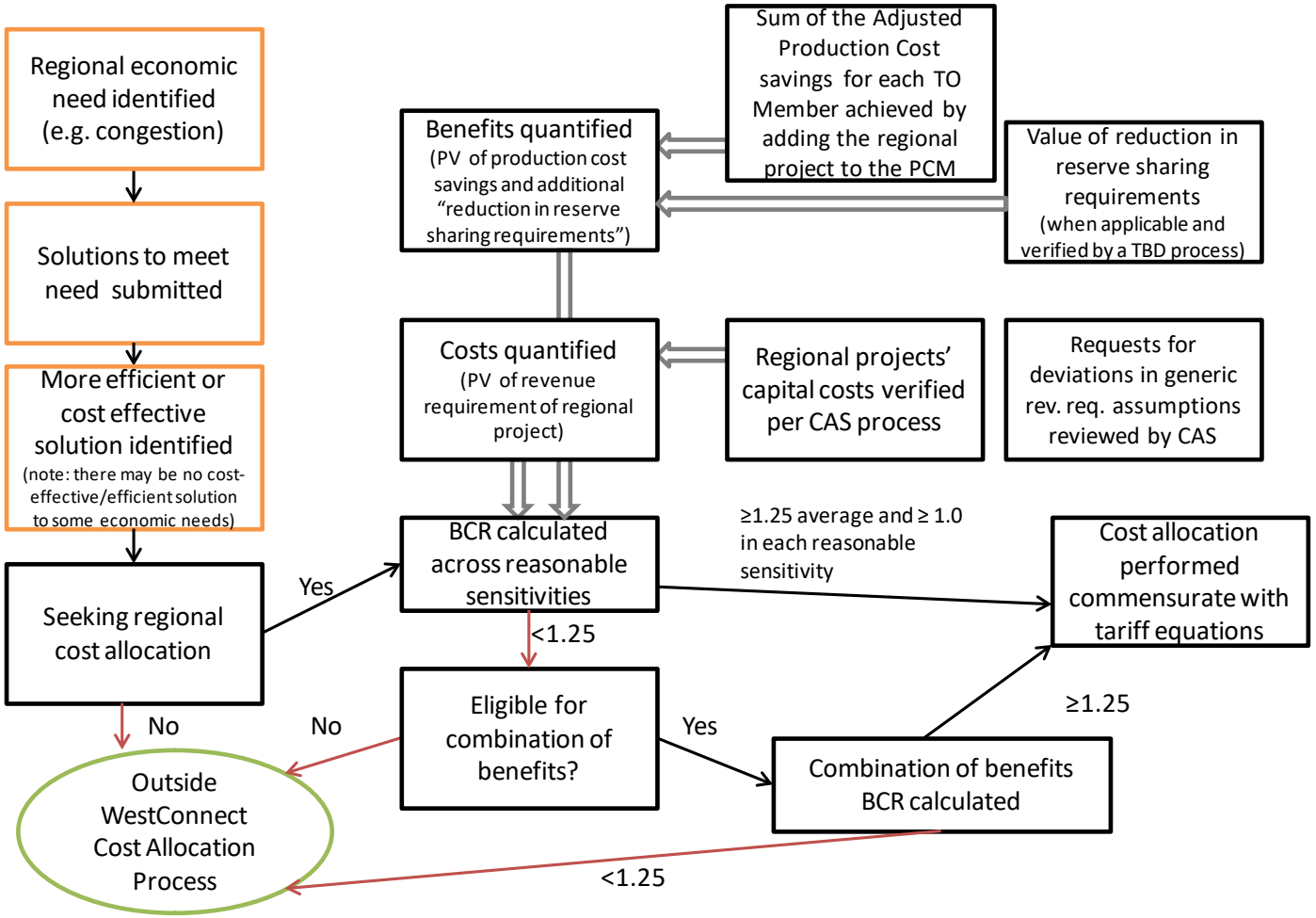
Therefore, the WestConnect cost allocation process will provide expected cost allocation information to individual beneficiaries, which may include a beneficiary's portion of total project costs, the beneficiary's portion of the present value of the revenue requirement of the regional project, and/or the beneficiary's portion of the capital costs of the regional project.

Until all of the criteria have been met to no longer obligate the PMC to reevaluate a project under the FERC tariff, the PMC may adjust its findings related to selection of a project for purposes of cost allocation, including cost allocation assignments. Any of these adjustments would affect the material supporting a project in a 205 filing (and/or may have an impact on any agreements that may have been entered into between the project beneficiaries and the selected developer, but this is outside the scope of the Planning Process).

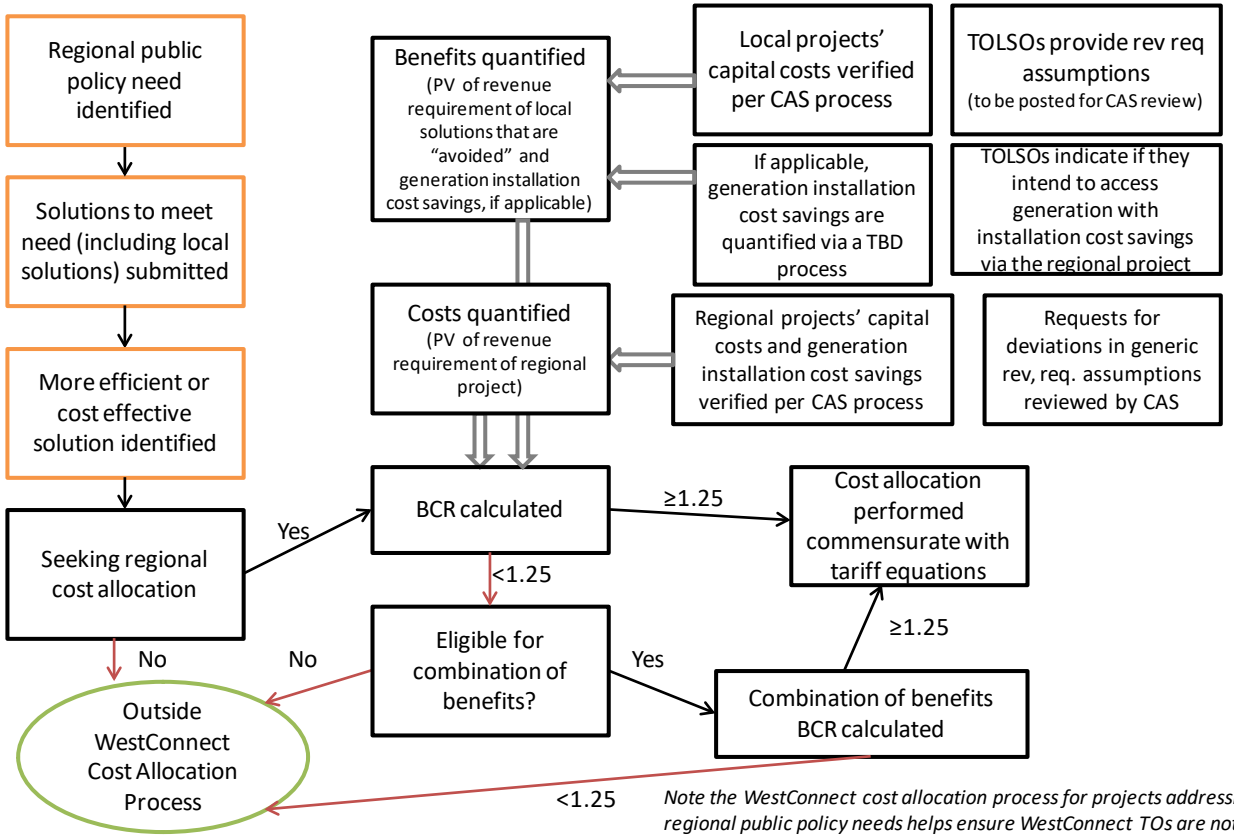
Appendix A – Diagram of Cost Allocation Process for Projects Addressing Regional Reliability Need(s)



Appendix B – Diagram of Cost Allocation Process for Projects Addressing Regional Economic Need(s)

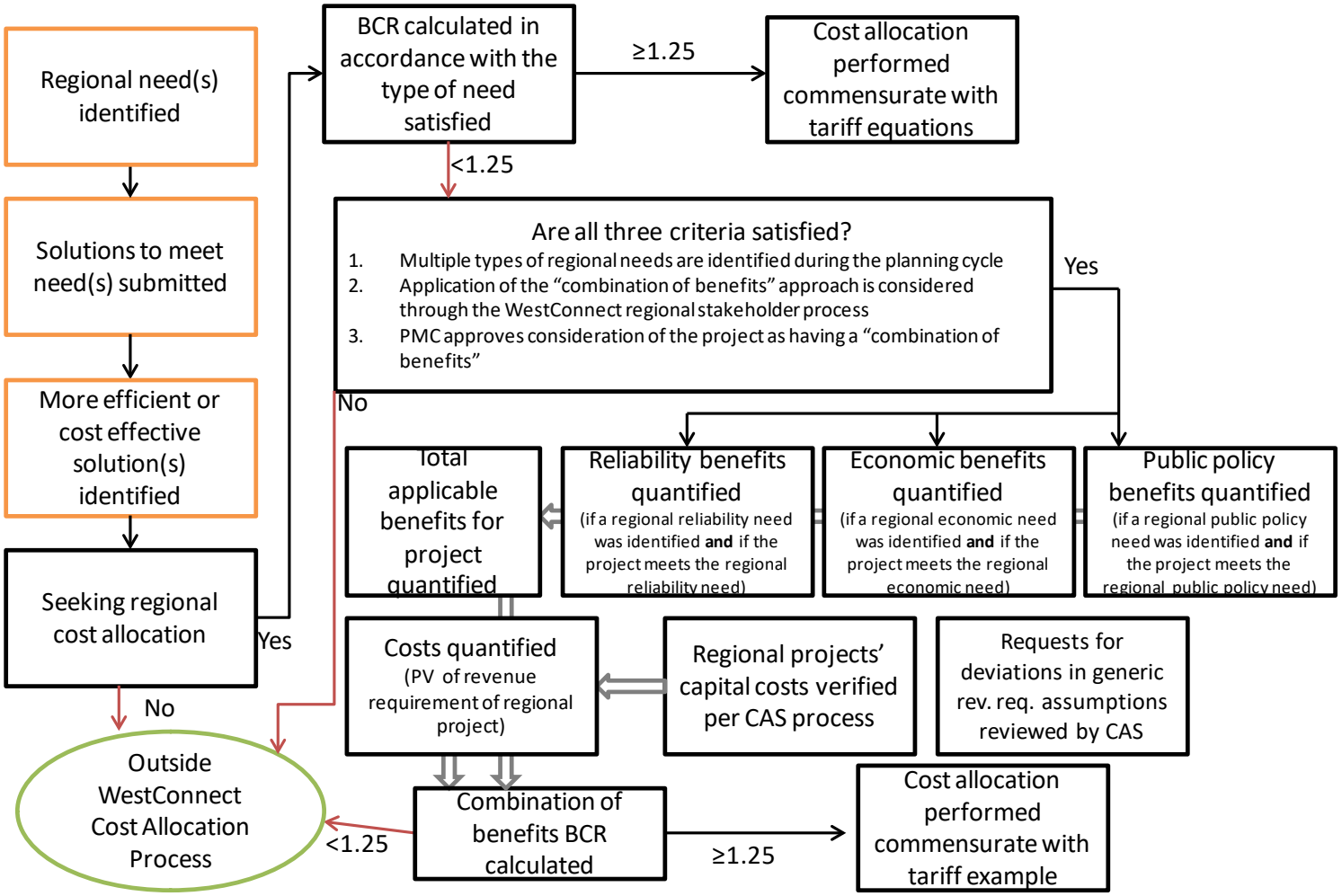


Appendix C – Diagram of Cost Allocation Process for Projects Addressing Regional Public Policy Need(s)



Note the WestConnect cost allocation process for projects addressing regional public policy needs helps ensure WestConnect TOs are not allocated costs in instances where the TO will not access resources from a proposed solution to a regional public policy-driven transmission need. TOs may not access these resources due to a lack of state approval of such resources or other resource procurement issues, which are outside the WestConnect Planning Process.

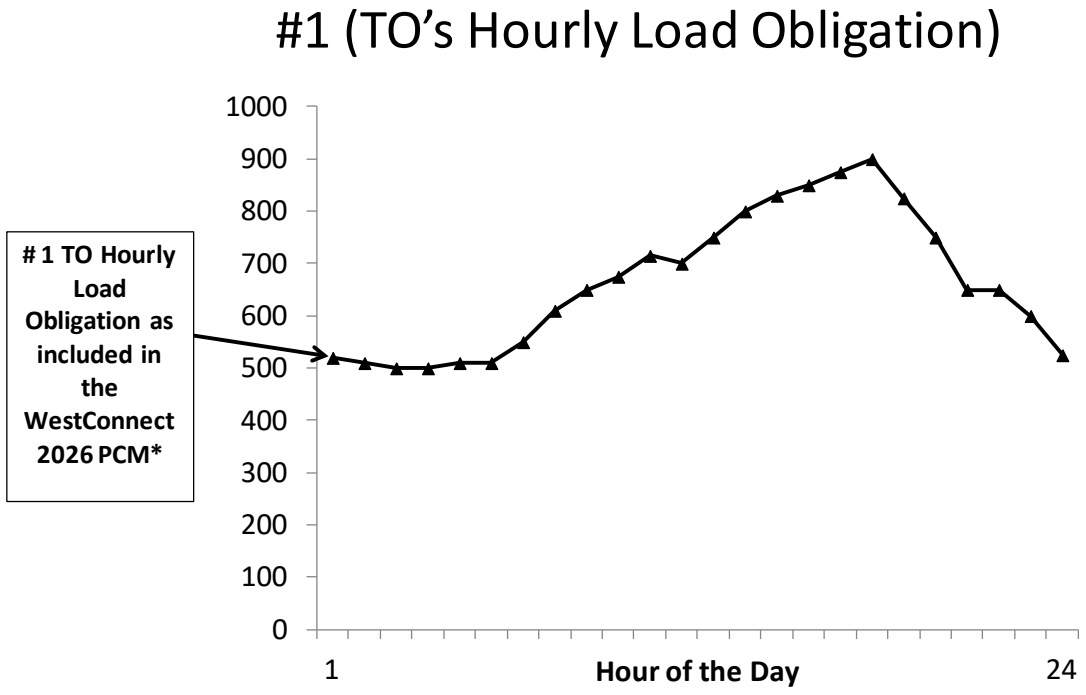
Appendix D – Diagram of Cost Allocation Process for Projects Assessed as having a Combination of Benefits



Appendix E – Illustrations of Adjusted Production Cost Calculation

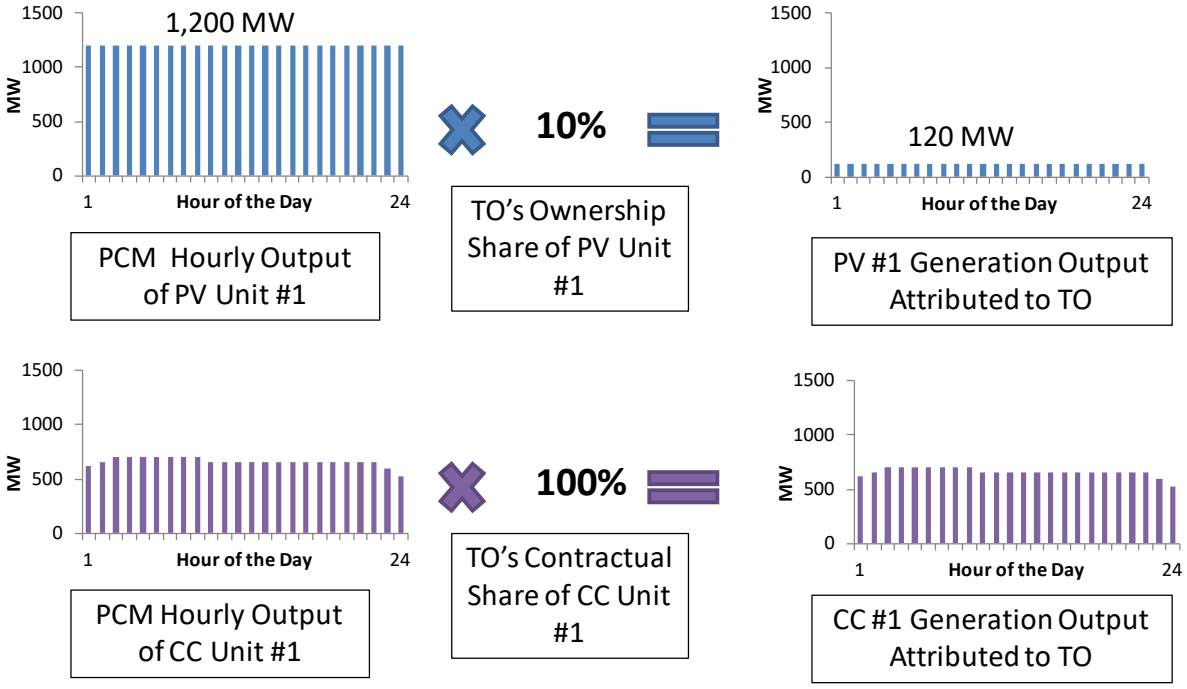
Details of the WestConnect APC Calculation

1. Determine TO's hourly load obligation
2. Calculate the hourly output of the TO's owned and long-term contracted generation
   a. Unit's hourly output (from the Production Cost Model) multiplied by the TO's ownership share (to be provided and verified by TOs)
3. Calculate the TO's net hourly energy position (#1 - #2)
4. Financially settle the TO's hourly costs to serve its load obligation
   a. Sum of the production costs of owned and contracted generation resources multiplied by TO's ownership share of each unit; plus
   b. Hourly net energy position settled as:
      a. Purchases priced at the TO's load weighted LMP
      b. Sales revenues priced as the generation weighted LMP of the TO's owned and contracted generation
5. Sum across all hours of the study year (e.g. 2026)

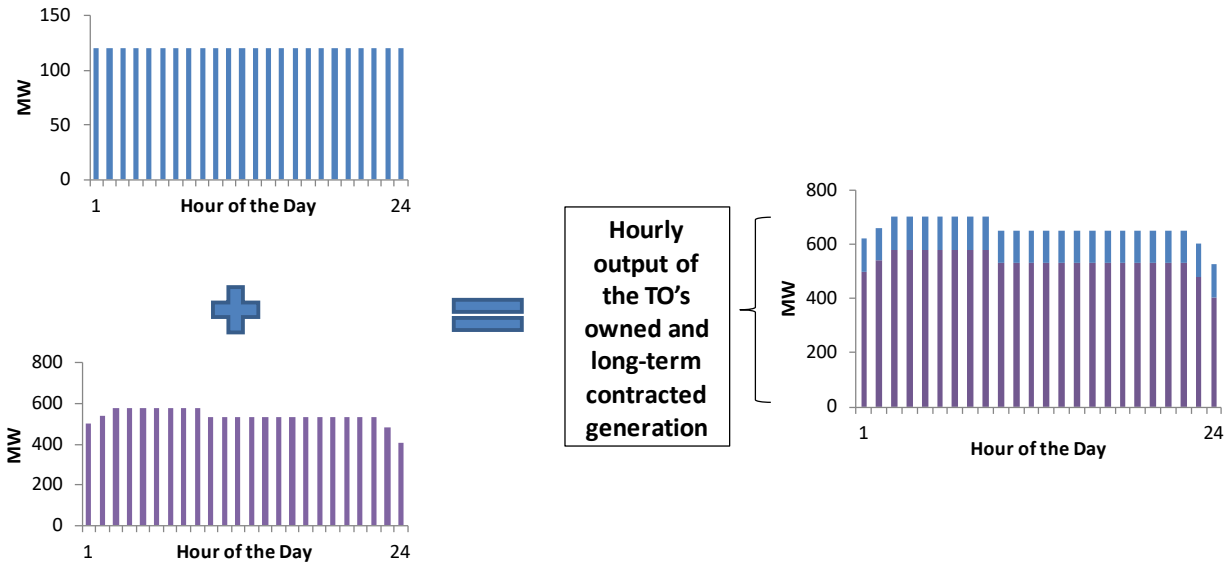


*TO-level load obligation is determined by a combination of hourly area-level load and the load bus distribution by TO, all of which can be updated as necessary based on additional information provided by participants.

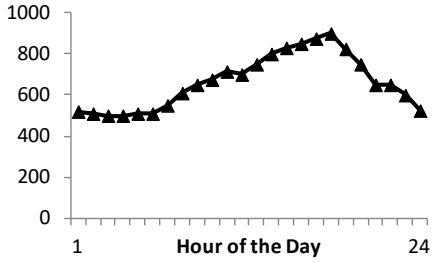
#2 (TO's Hourly Generation Output)



#2 (TO's Hourly Generation Output)

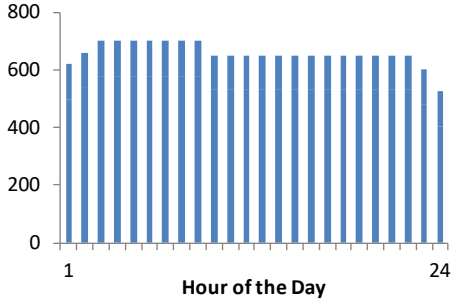


#3 (TO's Hourly Net Energy Position)

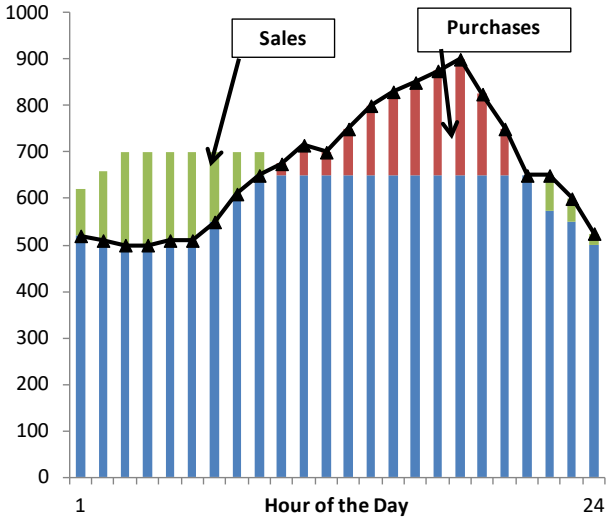


 # 1 TO Hourly Load Obligation

#2 Hourly output of the TO's owned and long-term contracted generation



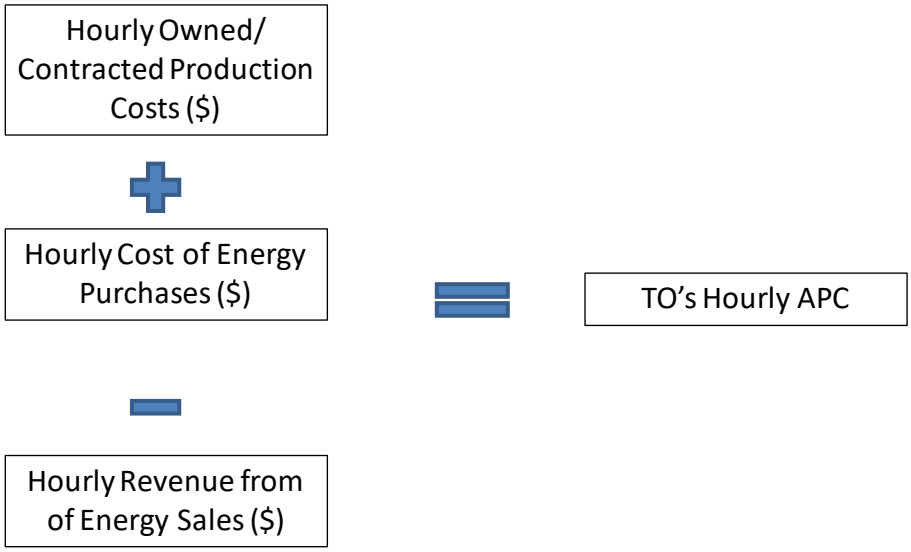
 # 3 Hourly Net Position



#4 (Financially Settle TO's Hourly Costs)

Production Costs of Generation Owned & Contracted by TO ($)	×	Ownership/ Contractual Percentage (%)	=	Hourly Owned/ Contracted Production Costs ($)
Purchases Required to Meet Load Obligations (MWh)	×	TO Load-Weighted LMP ($/MWh)	=	Hourly Cost of Energy Purchases ($)
Energy Sales of Generation Greater than Load Obligations (MWh)	×	Generation-Weighted LMP of Owned and Contracted Resources ($/MWh)	=	Hourly Revenue from of Energy Sales ($)

#4 (Financially Settle TO's Hourly Costs)



#5 (Sum all Hours)