ITP Evaluation Process Plan

Northwest Tie Upgrade Project

June 11, 2020

The Interregional Transmission Project (ITP) joint evaluation process provides for planning assumptions and ITP technical data coordination for the individual regional evaluations of an ITP. This evaluation process plan was developed through coordination among the relevant planning regions. Its purpose is to document the outcome of the Western Planning Region's coordination of the basic descriptions, key assumptions, milestones, and key participants in the ITP evaluation process that will be followed in the regional evaluations of the ITP.

The information that follows is specific to the ITP listed in the ITP Submittal Summary below. An ITP Evaluation Process Plan is developed for each ITP that has been properly submitted and accepted into the regional process of the Planning Regions to which it was submitted. ITP project sponsors will be provided an opportunity to review this evaluation process plan before it is finalized by the relevant planning regions who developed this evaluation process plan. Once finalized, the Western Planning Regions will post this evaluation process plan on their public websites.

ITP SUBMITTAL SUMMARY

Project Submitted To:	California ISO and WestConnect
Relevant Planning Regions[1]:	California ISO and WestConnect
Cost Allocation Requested From:	California ISO and WestConnect

The Relevant Planning Regions identified above developed and have agreed to the ITP Evaluation Process Plan.

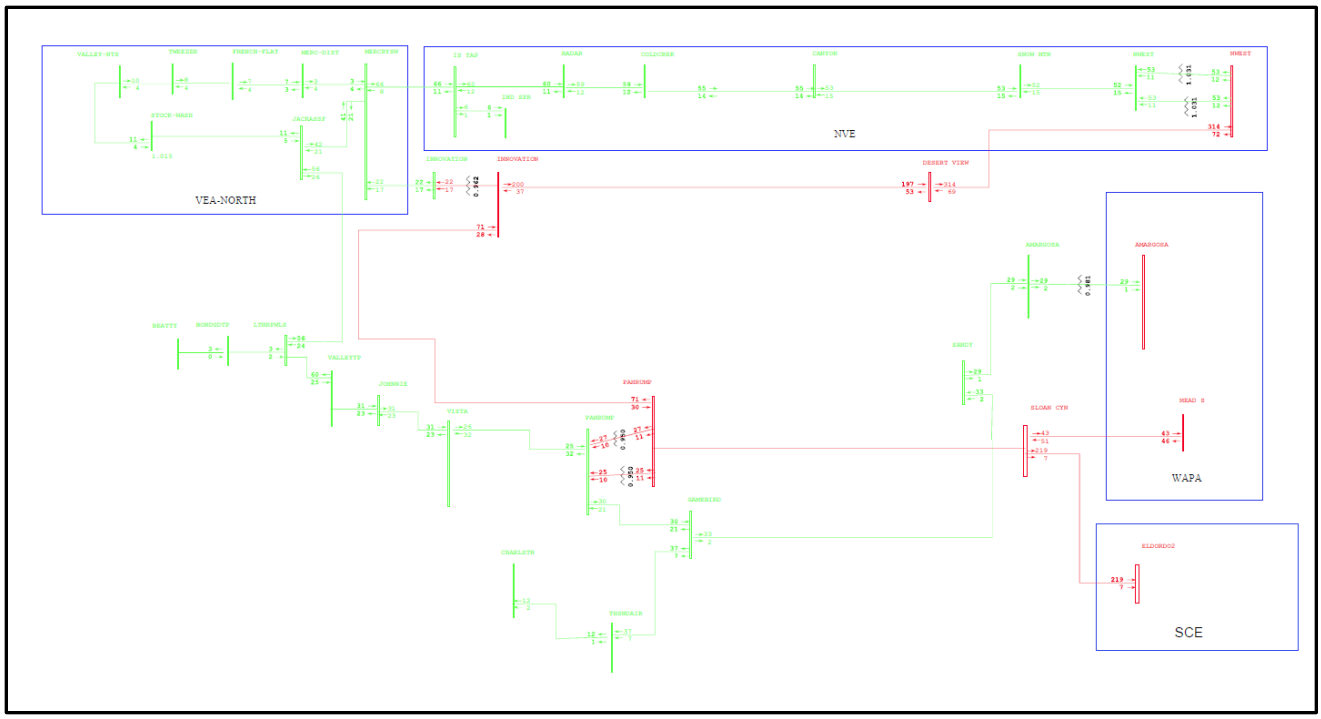
ITP SUMMARY

GridLiance West (GLW) submitted the 47-mile Northwest Tie Upgrade Project (Northwest Tie) for consideration as an Interregional Transmission Project. Northwest Tie is a proposed upgrade of an existing 138 kV transmission line located in southern Nevada (see Figure 1), connecting the GLW/Valley Electric Association (VEA) system (in the CAISO planning region) with NV Energy's existing 230/138 kV transformer bank at Northwest substation (in the WestConnect planning region). The project would include reconductoring necessary line segments and upgrading switching station equipment to allow additional flow bi-directionally on the current

[1] With respect to an ITP, a Relevant Planning Region is a Planning Region that would directly interconnect electrically with the ITP, unless and until a Relevant Planning Region determines that the ITP will not meet any of its regional transmission needs, at which time it will no longer be considered a Relevant Planning Region.

Innovation-to-Northwest 138 kV system. Specifically, the proposed project includes rebuilding 47 miles of the Mercury – Northwest 138 kV line, including seven one-position, one-breaker substation crossing switches, and disconnect switches and jumper upgrade at Mercury Switching Station on the Innovation – Mercury 138 kV line. The Indian Springs – Mercury 138 kV segment of this project is a part of Western Electricity Coordinating Council (WECC) Path 81 – Southern Nevada Transmission Interface (SNTI). According to GLW, the project is expected to be in-service by 05/31/2024.

Figure 1: Northwest Tie Upgrade Project Overview
(Source: GLW 2020 ITP Submittal Attachment with bus numbers removed)



ITP EVALUATION BY RELEVANT PLANNING REGIONS

WestConnect is the Planning Region that will lead the coordination among the Relevant Planning Regions involved in this evaluation process. In this capacity, WestConnect will organize and facilitate interregional coordination meetings related to this ITP and document meeting action items and outcomes. For information regarding each Relevant Planning Region's ITP evaluation process, please contact that Planning Region directly.

The following is a summary of each Relevant Planning Region's evaluation process that will be followed to assess the ITP in its regional planning process. Please refer to each Planning Region's current study plan and/or Business Practice Manual for more details regarding its regional transmission planning process.

California ISO

The California ISO will consider the project based on the final 2020-2021 Study Plan[2] and will 'include' it as a potential mitigation option to address relevant reliability, economic, and/or public policy needs that are identified in the ISO's 2020-2021 planning process.

[2] http://www.caiso.com/Documents/Final2020-2021StudyPlan.pdf

The project sponsor states that the proposed project will increase reliability by adding transmission capacity which eliminates transmission line congestion concerns on the Innovation – Mercury – Northwest 138 kV line. The line congestion concerns were identified by the project sponsor and the CAISO in the 2019-2020 TPP. In addition, the proposed project is needed to relieve the identified congestion concerns by adding beneficial transmission capacity to facilitate the delivery of renewable energy.

The project sponsor further states that their production cost modeling (PCM) showed that economic benefits of the Northwest Tie Upgrade would accrue through reduced congestion for the year 2029 with CAISO TPP modifications including the approved Gamebird transformer upgrade as well as the GLW-proposed Pahrump to Sloan Canyon 230 kV upgrade in place. IRP renewable buildout incorporated CEC bus placement and CAISO interconnection queue data. CAISO load was based on CPUC forecast for SERVM, and other Load based on WECC TEPPC/ADS.

WestConnect

WestConnect's 2020-21 Regional Study Plan was approved by its Planning Management Committee (PMC) in March of 2020.[3] The study plan describes the system assessments WestConnect will use to determine if there are any regional reliability, economic, or public policy-driven transmission needs. The models for these assessments are built and vetted during Q2 and Q3 of 2020. If regional needs are identified during Q4 of 2020, WestConnect will solicit alternatives (transmission or non-transmission alternatives (NTAs)) from WestConnect members and stakeholders to determine if they have the potential to meet the identified regional needs. If an ITP proponent desires to have their project evaluated as a solution to any identified regional need, they must re-submit their project during this solicitation period (Q5) and complete any outstanding submittal requirements. In late-Q5 and Q6 of the 2020-21 planning cycle, WestConnect will evaluate all properly submitted alternatives to determine whether any meet the identified regional needs, and will determine which alternatives provide the more efficient or cost-effective solution. The more efficient or cost-effective regional projects will be selected and identified in the WestConnect Regional Transmission Plan. Any regional or interregional alternatives that were submitted for the purposes of cost allocation and selected into the Regional Transmission Plan as the more efficient or cost-effective alternative to an identified regional need will then be evaluated for eligibility for regional cost allocation, and subsequently, for interregional cost allocation.[4]

WestConnect regional needs assessments are performed using Base Cases as identified in the regional study plan. Base Cases are intended to represent "business as usual," "current trends," or the "expected future". WestConnect may also conduct information-only scenario studies that look at alternate but plausible futures. In the event regional transmission issues are observed in the assessments of the scenario studies, these issues do not constitute a "regional need", will not result in changes to the WestConnect Regional Transmission Plan and will not result in Order 1000 regional cost allocation. The WestConnect PMC has ultimate authority to determine how to treat regional transmission issues that are identified in the information-only scenario studies. They will determine whether an issue identified in a scenario —whether it be reliability, economic, or public-policy based—constitutes additional investigation by the Planning Subcommittee.

Northwest Tie Project representatives and other stakeholders are encouraged to participate in the development of the base cases to be studied in WestConnect's 2020-21 Planning Cycle. These studies, as outlined in Figure 2, will form the basis for any regional needs that ultimately may lead to ITP project evaluations in 2021. Stakeholders are also encouraged to participate in the development of the scenarios identified in WestConnect's 2020-21 Study Plan. These studies are also outlined in Figure 2.

[3] https://doc.westconnect.com/Documents.aspx?NID=18668&dl=1

[4] Please see the WestConnect Business Practice Manual for more information on cost allocation eligibility.

Figure 2: WestConnect 2020-21 Transmission Assessment Summary

10-Year Base Cases (2030)	10-Year Scenarios (2030)
Heavy Summer Power Flow (reliability) Light Spring Power Flow (reliability) Production Cost Model Base Case (economic)	Committed Uses Study (economic) New Mexico Export Stress Study (reliability)
May result in the identification of regional needs, requires solicitation for alternatives to satisfy identified needs	Informational studies that will not result in the identification of regional needs. Alternative collection and evaluation is optional and is not subject to regional cost allocation

DATA AND STUDY METHODOLOGIES

The coordinated ITP evaluation process strives for consistent planning assumptions and technical data among the Planning Regions evaluating the ITP. Below, the Relevant Planning Regions have summarized the types of studies that will be conducted that are relevant to the Northwest Tie Project evaluation in each Planning Region. Methodologies for coordinating planning assumptions across the Relevant Planning Region processes are also described.

Figure 3: Relevant Planning Region Study Summary Matrix

Planning Study	California ISO	WestConnect
Economic/Production Cost Model	Using the California ISO PCM Base Case, based on the WECC 2030 Anchor Data Set (ADS), GridView will be used to perform production cost simulation. All model information will be shared with WestConnect.	A Regional Economic Needs Assessment will be performed on the WestConnect 2030 Production Cost Model (PCM) Base Case (based on the WestConnect 2028 PCM Base Case and information from the WECC 2028 and 2030 Anchor Datasets [5]
Reliability/Power Flow Assessment	The GE PSLF will be used to perform steady state and as needed, transient analysis using the WECC 2030 ADS and 2030 LSP1 base cases.	A Regional Reliability Needs Assessment will be performed on WestConnect 2030 Heavy Summer and Light Spring cases, which are based off the WECC 2030 HS1 ADS and 2030 LSP1 base cases [6]

[5] WestConnect ITP Project evaluation is subject to a number of factors, the first and most critical being the identification of regional needs as a part of the 2020-21 Base Case transmission needs assessments.

[6] Id

Note that the Northwest Tie evaluation will be conducted by each Relevant Planning Region in accordance with its approved Order 1000 Regional Planning Process. This includes study methodologies and benefits identified in planning studies.

Data Coordination

The Relevant Planning Regions will strive to coordinate major planning assumptions through the following procedures.

Economic/Production Cost Model

The Relevant Planning Regions intend to use the WECC 2030 Anchor Data Set (ADS) as an input into their regional economic planning studies conducted in 2020 and 2021 (as applicable). The Planning Regions will strive to coordinate major updates made to the 2030 ADS as part of their regional model development efforts.

As an example, the California ISO will update the 2030 ADS to reflect their recently completed 2019-2020 Transmission Plan. NorthernGrid members are working on the 2030 ADS model with WECC staff to incorporate the 2028 ADS topology and 2020 L&R submittals in the 2030 power flow case. WestConnect members will submit to WECC their local transmission plans for 2030 for inclusion in the WECC 2030 Heavy Summer power flow base case, and subsequently the 2030 ADS. These local plans are consistent with WestConnect's 2020-21 base transmission plan.

Through this coordination of planning data and assumptions, the Relevant Regions will strive to build a consistent platform of planning assumptions for Economic/Production Cost Model evaluations of the ITP.

Reliability/Power Flow Assessment

Since each Planning Region is unique, key assumptions in load, resource generation dispatch and topology may differ. As such, each Planning Region will develop its models and data that accurately reflect their Planning Region but will seek to coordinate this information with the other Relevant Planning Regions subject to applicable confidentiality agreements. The identification of the starting WECC power flow base cases ("base cases") and significant assumptions or changes a Planning Region may make to a base case are examples of information that will be considered by each Planning Region and coordinated with the other Planning Regions. As such, the inclusion or removal of major regional transmission projects will be coordinated through existing data coordination processes, but the season or hour of study and particular system operating conditions may vary by Planning Region based on its individual regional planning scope and study plan. Project sponsor WECC Path Rating studies may be accessed from the WECC website and used to augment the assessment.

Cost Assumptions

For each Relevant Planning Region to evaluate whether the Northwest Tie is a more efficient or cost- effective alternative within their regional planning process, it is necessary to coordinate ITP cost assumptions among the Relevant Planning Regions. For planning purposes, each Relevant Planning Region's cost share of the Northwest Tie Project will be calculated based on its share of the calculated benefits provided to the Region by the Northwest Tie (as quantified per that Region's planning process).

The project cost of the Northwest Tie project, as provided in their ITP Submittal form, is provided below.

Figure 4: Northwest Tie Upgrade Project Sponsor Cost Information[7]

Project Configuration	Planning Level Cost ($)
Project cost data	$50.5 million (2020 Dollars)

After each Relevant Planning Region identifies their transmission needs and (as applicable) the benefits of the ITP, each Region's project costs for use in the determination of the more efficient or cost-effective alternatives for the region will be determined as follows:

Assumptions
Total Benefits ($) = California ISO Benefits ($) + WestConnect Benefits ($)
Project Cost ($) = Total capital cost of project, as agreed upon by Regions

Cost Calculations (for Planning Purposes)
California ISO Cost for Planning Purposes = [California ISO Benefits/Total Benefits] * Project Cost
WestConnect Cost for Planning Purposes = [WestConnect Benefits/Total Benefits] * Project Cost

Note that this information on cost assumptions applies to costs that will be used for *planning evaluation purposes*. These costs may be different than what is assumed for any relevant cost allocation procedures.

COST ALLOCATION

Interregional cost allocation may apply for the Northwest Tie for the 2020-2021 cycle.

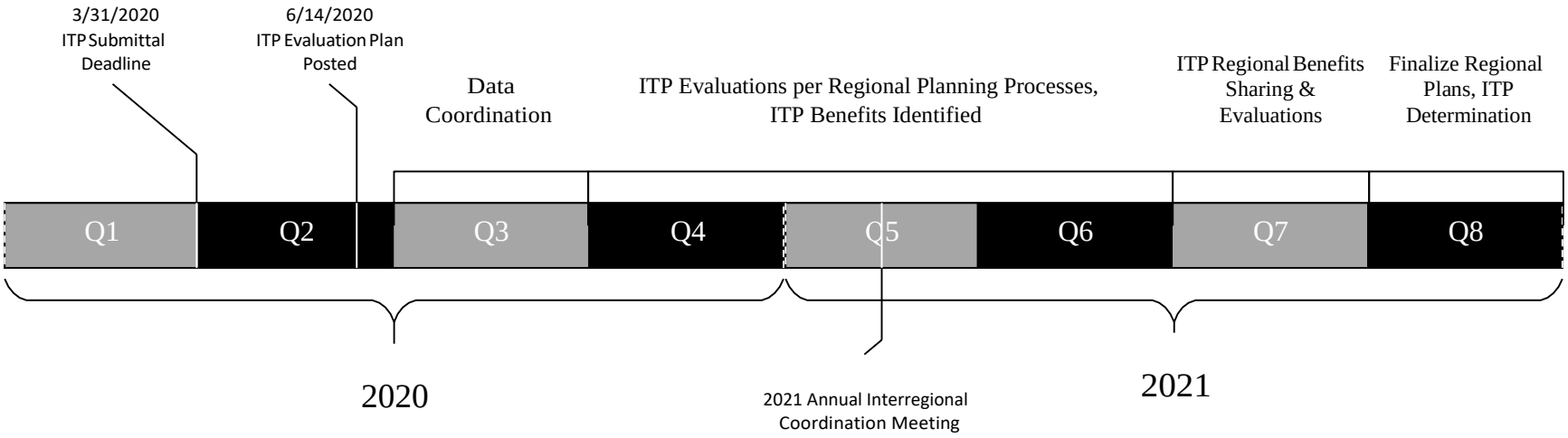
GLW requested cost allocation from California ISO and from WestConnect, and also met the necessary requirements within each respective Planning Region's regional process to be considered eligible to request cost allocation. If both California ISO and WestConnect subsequently select the Northwest Tie in their respective regional transmission plans for purposes of Interregional Cost Allocation, California ISO and WestConnect will individually apply their regional cost allocation methodology to the projected costs of the Northwest Tie project assigned to each region as described in the previous section and in accordance with each region's regional cost allocation methodology. If only one of the two Relevant Planning Regions for the Northwest Tie select the project in its regional transmission plan for purposes of Interregional Cost Allocation, and the number of Relevant Planning Regions for the Northwest Tie Upgrade Project is reduced to one, the project will no longer be eligible for interregional cost allocation.

[7] This information is contingent upon verification by the Planning Regions and may be subject to change during the ITP evaluation process

SCHEDULE AND EVALUATION MILESTONES

The ITP will be evaluated in accordance with each Relevant Planning Region's regional transmission planning process during 2020 and (as applicable) 2021. The ITP Evaluation Timeline was created to identify and coordinate key milestones within each Relevant Planning Region's process. Note that in some instances, an individual Planning Region may achieve a milestone earlier than other Regions evaluating the ITP.

Figure 6: ITP Evaluation Timeline



Meetings among the Relevant Planning Regions will be coordinated and organized by the lead Planning Region per this schedule at key milestones such as during the initial phases of the ITP evaluations and during the sharing of ITP regional benefits.

CONTACT INFORMATION

For information regarding the ITP evaluation within each Relevant Planning Region's planning process, please contact that Planning Region directly.

Planning Region:	California ISO
Name:	Gary DeShazo
Telephone:	916-802-1647
Email:	gdeshazo@caiso.com

Planning Region:	WestConnect
Name:	Heidi Pacini
Telephone:	303-229-9401
Email:	heidi@pacenergies.com