

Logan Affleck
WECC liaison to SRS
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cc: Mr. Tracy Rolstad
Chair, SRS

Re: 2024 System Review Subcommittee Annual Survey

Request:

WestConnect respectfully requests that a 10-year light load, high renewable penetration case be included in the 2024 Base Case Compilation Schedule (BCCS) and that it be prepared early in the schedule.

WestConnect is one of three planning regions within the footprint of the Western Electricity Coordinating Council (WECC) with the purpose of facilitating regional planning in conformance with FERC Order 1000. The WestConnect region is defined as the combined footprints of its Transmission Owners with Load Serving Obligations (TOLSO) members, which presently includes approximately twenty entities.

The WestConnect planning process is biennial, and utilizes WECC reliability and economic models for performing regional assessments. Each planning cycle typically utilizes a 10-year heavy load model as well as a **10-year light load model**. The following table describes the WECC cases that have been used in previous study cycles:

WestConnect Study Cycle	BCCS	BCCS Approval Date	WECC Models	Approved
2024-25	2024	TBD	35HS TBD	
2022-23	2022	10/14/21	33HS 33LSP1S	9/2/22 1/28/22
2020-21	2019	8/29/2018	30HS1 30LSP1	10/11/19 11/01/19
2018-19	2017	07/18/2016	28HS1 28LSP1-S	12/01/17 11/03/17

It is our understanding that the other two regions, NorthernGrid and California ISO (CAISO) also utilize 10-year light load cases. CAISO utilized the WECC 33SLP1S in their 2023-2024 Transmission Planning Process. NorthernGrid listed a 2031 Light Spring case in their approved “Study Scope for the 2022-2023 NorthernGrid Planning Cycle”

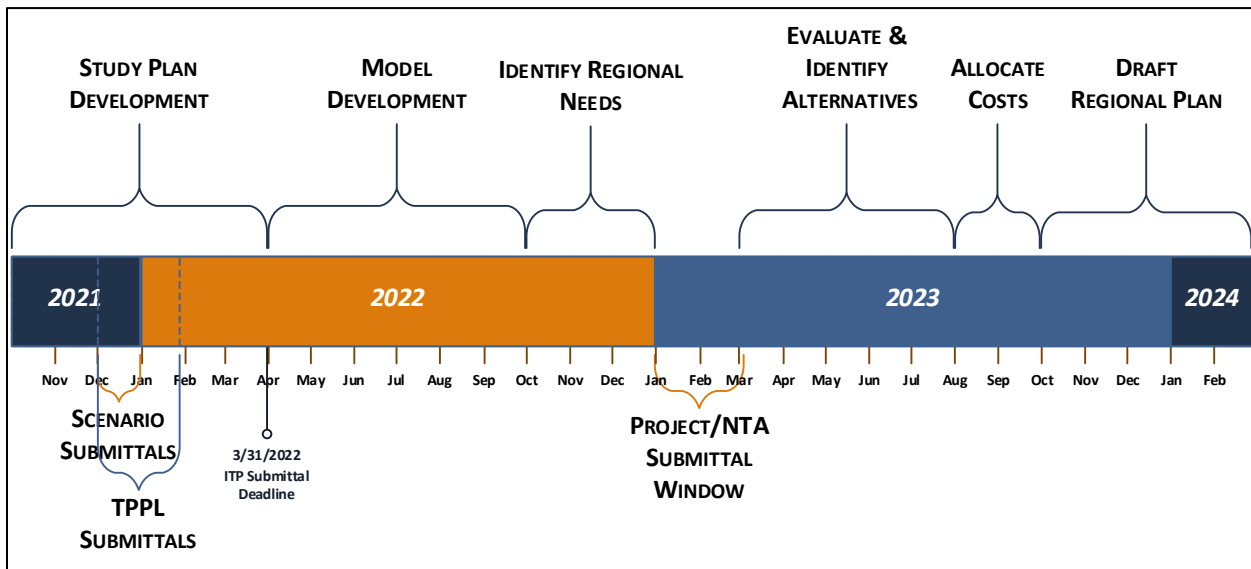
The following sections provide general information requested by the SRS, and the Case Description Form (From Attachment 1 of the Survey) is provided as well.

Case Description

Model light-load conditions, along with renewable generation resources serving a significant but realistic portion of the WECC total load. The case should include renewable resource capacity additions that are planned as well as those that may be required to meet any applicable and enacted public policy requirements for the 10-year horizon.

Requested Completion Date

It is requested that the 10-year light load case be prepared in the first quarter of 2024, or as soon as possible in 2024. The WestConnect Model Development process begins in April of even cycle years. An example timeline is shown in the figure below.



WestConnect reliability models begin with WECC powerflow models. There is an iterative process where members review and revise the WECC models to ensure base topology, interchange flows and scheduled, and other critical parameters are accurate. The process may take 3-6 months, but models must be finalized by the fourth quarter of the even year. As a result, it is strongly preferable to have a model available as soon as practical in 2024.

If you have any questions regarding this request, feel free to reach out to me.

Sincerely,

Requested by:

Name: David Wiley (on behalf of WestConnect) Organization: WestConnect
Email: David.F.Wiley@aps.com Phone: (602) 371-5997

CASE DESCRIPTION FORM**2034 LIGHT SPRING – 34LSP1S****CASE DUE DATES:**

Prefer Q1 2024, and no later than Q2 2024
(to be completed by SRS and WECC staff)

PURPOSE: Model light-load conditions, along with renewable generation resources serving a significant but realistic portion of the WECC total load. The case should include renewable resource capacity additions that are already planned and included in the 10-year future and represent likely and expected system conditions consistent with any applicable and enacted public policy requirements.

ITEMS TO BE PREPARED:

From Case (TBD – 33LSP1S is potential source)

Stability Data Master Dynamics File

Significant Changes From Existing System

LOADS:

Target 50-60% of peak summer loads in the WECC region that would occur during the spring months of March, April, and May¹.

TIME:

1200 to 1400 hours MDT.

GENERATION:

	<u>HYDRO</u>	<u>THERMAL</u>	<u>RENEWABLE</u>
Canada	--	--	--
Northwest	--	--	--
Idaho/Montana	--	--	--
Colorado/Wyoming	--	--	--
Northern California Hydro	--	--	--
Northern California	--	--	--
Southern California	--	--	--
Arizona/New Mexico/Southern Nevada	--	--	--

INTERCHANGE

	<u>CONDITION</u>	<u>TARGET</u>	<u>% RATING</u>
Northwest to British Columbia (Path 3)	--	--	--
Northwest to California/Nevada COI (Path 66)	--	--	--

¹ Different Load-Serving Entities could expect higher or lower than 50-60% of their peak summer loads. Some could expect minimum load for 12:00 to 14:00 MDT in months of March, April, and May due to significant effect of self-generation. For example, the light spring load demands in the CAISO-controlled grid are projected to be its annual minimum level due to heavy output from projected behind-the-meter solar PV self-generation. The percentages of non-coincident peak load are as low as 16%, 23%, and 14% at hour 14:00 MDT in April 2034 for PG&E, SCE, and SDG&E, respectively.

PDCI (Path 65)	--	--	--
Midway – Los Banos S-N (Path 15)	--	--	--
Idaho to Northwest (Path 14)	--	--	--
Montana to Northwest (Path 8)	--	--	--
Utah/Colorado to Southwest (Path 31, 35, 78)	--	--	--
Southwest to Calif. (EOR Path 49/WOR Path 46)	--	--/--	--/--
Intermountain to Adelanto DC (Path 27)	--	--	--
San Diego to CFE (Path 45)	--	--	--
Northern to Southern California (Path 26)	--	--	--

Case Description

- 2024 Light Spring
- Light load conditions during 1200 to 1400 MDT in spring months of March, April, and May with solar and wind serving a significant but realistic portion of the Western Interconnection total load.
- Model light-load conditions due to high impacts of self-generation, along with solar and wind serving a significant but realistic portion of the WECC total load. Most of the increase in self-generation over the 10-year forecast period is expected to come from behind-the-meter solar PV. The case should only include renewable resource capacity additions that are already planned and included in the 10-year future and represent likely and expected system conditions consistent with any applicable and enacted public policy requirements.

Requested Completion Date:

- Q1 2024

Reason for Requested Completion Date:

- WestConnect begins its Model Development process in the second quarter of even years. Therefore, it is requested that the case be finalized by the end of March 2024 in order to utilize the case for the model development process.

Loads:

- Target 50-60% of peak summer loads in the WECC region that would occur during the spring months of March, April, and May¹. Different Load-Serving Entities could expect higher or lower than 50-60% of their peak summer loads. Some could expect minimum load for 12:00 to 14:00 MDT in months of March, April, and May due to significant effect of self-generation. For example, the light spring load demands in the CAISO-controlled grid are projected to be its annual minimum level due to heavy output from projected behind-the-meter solar PV self-generation.
- 1200 to 1400 MT