

February 28, 2025

Mr. Eepsita Priye Chair, WECC Studies Subcommittee (StS) eepsita.priye@pse.com

Mr. Doug Tucker WECC Senior Staff Engineer 155 North 400 West, Suite 200 Salt Lake City, UT 84103-1114 dtucker@wecc.org

Re: Great Basin Transmission 2025 Annual Progress Report

Please find enclosed the 2025 Annual Progress Report for Great Basin Transmission, LLC (GBT). This Annual Progress Report has been prepared in accordance with the WECC Progress Report Policies and Procedures.

GBT is reporting the current progress on two segments of the Southwest Intertie Project (SWIP): SWIP-North (a new Midpoint-Robinson Summit 500 kV Line and associated system upgrades) and SWIP-South (upgrade of ON Line, the existing Robinson Summit-Harry Allen 500 kV Line). GBT is <u>not</u> requesting "waiver of significant impact" status for either of these projects; both of these projects have undergone the WECC Path Rating Process and achieved Phase 3 status.

All facility additions listed herein will be planned and operated in conformance with NERC Planning Standards and WECC System Performance Criteria. If you have any comments or questions about any of these projects, please contact me.

Sincerely,

Diwakar Tewari, P.E.

Vice President, Transmission Planning Great Basin Transmission, LLC c/o LS Power Development, LLC 16150 Main Circle Drive, Ste 310 Chesterfield, MO 63017 (916) 751-0307

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Project Name	Southwest Intertie Project – North ("SWIP-North")
Project Sponsor:	Great Basin Transmission, LLC (GBT)
Planned in-service date:	2028
Voltage (base):	500 kV
Project Description:	SWIP-North consists of a 500 kV AC transmission circuit, traversing approximately 285 miles from Idaho Power Company's Midpoint 500 kV substation (near Twin Falls, Idaho) to the Robinson Summit 500 kV substation (near Ely, Nevada) operated by NV Energy. (See also, attached one-line diagram.)  The Midpoint-Robinson Summit 500 kV line will feature 70% series compensation.
	Half of this compensation will be located near Midpoint Substation, while the other half will be located near Robinson Summit Substation.
	Each end of the line will include two shunt line reactors: $2 \times 135$ MVAR reactors at the Midpoint terminal, and $2 \times 135$ MVAR reactors at the Robinson Summit terminal (MVAR sizes expressed on a 525 kV base voltage).
	SWIP-North will also include other upgrades to existing infrastructure as described below. These upgrades will allow SWIP-North to achieve its approved path rating and will also increase the transfer limit of the existing Robinson Summit-Harry Allen 500 kV line ("ON Line") resulting in its approved path rating.
	<ul> <li>(1) ON Line upgrade</li> <li>Add 70% series compensation to the existing Robinson Summit-Harry Allen 500 kV line. This compensation will be distributed in 3 segments, with series capacitors placed at Robinson Summit, Harry Allen, and in the middle third of the circuit.</li> </ul>
	<ul> <li>(2) Other System upgrades:</li> <li>Three (3) +150 MVAR switchable shunt capacitors (on a 525 kV base) located at the Robinson Summit 500 kV bus.</li> <li>One (1) +150 MVAR shunt capacitor (on a 345 kV base) added to the Robinson Summit 345 kV bus.</li> <li>Two (2) 345/345 kV phase-shifting transformers (each with a normal rating of 600 MVA) at Robinson Summit: one connected towards Falcon, and the other towards Gonder.</li> </ul>
	This circuit represents a new interconnection between the Idaho Power and the NV Energy Balancing Area Authorities; it also represents a new interconnection between the NorthernGrid and CAISO Regional Planning Areas. The WECC Path Rating Studies established the following protected ratings for SWIP-North (path metered at the Midpoint terminal):  • 2,070 MW north-to-south (N2S)  • 1,920 MW south-to-north (S2N)

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Project Purpose:	SWIP-North (in conjunction with SWIP-South) provides an additional path to move economic energy between the northern and southern areas of WECC, helping to provide regional energy savings, reduced congestion, geographic diversity, and increased transfer capability.
Status:	Real estate secured. Federal permits secured (NEPA process complete, BLM Rights-of-Way secured); Robinson Summit expansion permitting in process. SWIP-North interconnection System Impact Studies (SIS) and Facilities studies for interconnections at Midpoint and at Robinson Summit have been performed. WECC Phase 2 Path Rating studies were completed in mid-2023 and SWIP-North was granted Phase 3 status on July 31, 2023. Commercial agreements in place with NV Energy, CAISO, Idaho Power and DOE for 100% of the bidirectional capacity. Planned start of construction by Q1 2026, planned in-service by Q2 2028.
Impact on other systems/paths:	WECC Path Rating Studies identified SWIP-North simultaneous interactions with WECC Paths 16, 32, Idaho-Northwest Upgrade w/B2H, Bridger/Anticline West, New Path C, Borah West Upgrade, and Midpoint West Upgrade.
Contact Person:	Denden Tekeste, P.E. Great Basin Transmission, LLC Phone: (619) 759-0140 dtekeste@lspower.com

Project Name	Southwest Intertie Project – South ("SWIP-South") <sup>1</sup>
Project Sponsor:	Great Basin Transmission, LLC (GBT) <sup>2</sup>
Planned in-service date:	2028 <sup>3</sup>
Voltage (base):	500 kV
Project Description:	SWIP-South is an upgraded/series-compensated version of the existing Robinson Summit-Harry Allen 500 kV line (also known as "ON Line"). The existing (uncompensated) line was energized in 2014 and traverses 231 miles between the Robinson Summit 500 kV substation (near Ely, Nevada) and Harry Allen 500 kV substation (near Las Vegas, NV). The existing line includes 2 x 90.7 MVAR reactors at each line end (expressed on a 500 kV base voltage).  The SWIP-South upgrade will add 70% series compensation to the existing Robinson Summit-Harry Allen 500 kV line. This compensation will be distributed in three
	segments, with series capacitors placed at Robinson Summit, Harry Allen, and in the middle third of the circuit at a new location to be called Burnt Springs.  The WECC Path Rating Studies established the following protected ratings for SWIP- South (path metered at the Robinson Summit terminal):  2,335 MW north-to-south (N2S) 2,245 MW south-to-north (S2N)
Project Purpose:	SWIP-South serves as a continuation of SWIP-North, supporting increased energy transfers between the northern and southern areas of WECC.
Status:	The Robinson Summit-Harry Allen 500 kV line is already in-service, known as ON Line; the majority of SWIP-South upgrades would be constructed within (or adjacent to) existing substations. System Impact Studies and regional planning analyses of SWIP-North typically also include/model SWIP-South facilities. WECC Phase 2 Path Rating studies were completed in mid-2023 and SWIP-South was granted Phase 3 status on July 31, 2023.
Impact on other systems/paths:	WECC Path Rating Studies identified SWIP-South simultaneous interactions with WECC Paths 32, 35, 78, 79, and TransWest Express TWE IPP-TWE Crystal(N) AC line.
Contact Person:	Denden Tekeste, P.E. Great Basin Transmission, LLC Phone: (619) 759-0414 dtekeste@lspower.com

<sup>&</sup>lt;sup>1</sup> SWIP-South in this report refers to an upgraded ON Line project (i.e. ON Line plus series capacitor upgrades to support SWIP-North).

<sup>&</sup>lt;sup>2</sup> GBT managed the Path Rating process for the upgraded ON Line Project in conjunction with SWIP-North on behalf of the ON Line owners, NV Energy and Great Basin Transmission South, LLC.

<sup>&</sup>lt;sup>3</sup> ON Line was placed into service in 2014. This in-service date is associated with upgrading ON Line with 70% series compensation in conjunction with placing SWIP-North in service.

BURNS SUMMER LAKE **MIDPOINT** 500kV V/~ - KINPORT BORAH **SWIP-North:** (New) Midpoint-Robinson Summit 500kV Line HUMBOLDT (~285 miles) (To VALMY) **ROBINSON** SUMMIT 500/345kV Substation FALCON 345kV (345kV) **SWIP-South:** Robinson Summit-Harry Allen 500kV Line GONDER (~231 miles) (230kV) HARRY ALLEN 500/345/230kV Substation → (To CRYSTAL) (To NORTHWEST) ← (230kV) 500kV Harry Allen-Eldorado 500kV Line (HAE) 345kV (~59 miles) (To MEAD) ELDORADO 500kV

Figure 1. Diagram of Southwest Intertie Project, North and South