



# 2022-2023 TRANSMISSION PLAN



**Addendum 1 - Draft (Updated)**  
December 11, 2023

## **Foreword to Draft Addendum 1 to the 2022-2023 Transmission Plan**

At the May 18, 2023 ISO Board of Governors meeting, the ISO Board of Governors approved the 2022-2023 Transmission Plan. The following draft addendum provides the continued assessment and recommended approval of the SWIP North transmission project as a part of the 2022-2023 transmission planning process.

## Introduction

As set out in the 2022-2023 Transmission Plan presented to the Board of Governors at the May 2023 meeting, and as approved at that meeting, ISO management indicated that analysis of the SWIP North project and discussions with Idaho Power would continue beyond the approval of the rest of the Transmission Plan. The project consists of funding the SWIP North transmission line project and certain upgrades to the existing ON Line from Robinson Summit to Harry Allen, Nevada, in return for entitlements on the resulting path from Midpoint, Idaho through Robinson Summit and to Harry Allen.

## Policy Portfolio and Idaho Power Capacity Need

In the ISO's 2022-2023 transmission planning process (TPP), the base portfolio provided by the CPUC included 1,062 MW of out-of-state wind resources from Wyoming or Idaho and the sensitivity portfolio, included 1,000 MW specifically from Idaho. In the ISO's 2023-2024 TPP cycle, the CPUC identifies 1,000 MW of Idaho wind in the base portfolio itself.

Idaho Power<sup>1</sup> has also identified the benefits that SWIP North provides to Idaho in its 2023 integrated resource plan (IRP) and intends to execute definitive agreements with GBT, with conditions which would include, but not be limited to ISO Board approval of the ISO's intent to assume entitlements, FERC approval of the GBT and Idaho Power agreement(s), sufficient Idaho Power benefits to justify the project cost, and necessary state regulatory approvals of the project. Assuming successful discussions with GBT, Idaho Power intends to file a SWIP-related case with the IPUC by year end.

While the ISO's need, based on CPUC portfolio requirements, is in the North to South direction, Idaho Power has indicated the need for 500 MW in the South to North direction.

## The SWIP North Transmission Project

The SWIP North transmission project is a proposed 285-mile, 500 kV transmission line from the Midpoint substation near Shoshone in Idaho to Robinson Summit, near Ely in Nevada, with a total WECC-approved transfer capacity of 2,070 MW in the North-South direction and 1,920 MW in the South-North Direction. The SWIP North Line will connect to the existing One Nevada (ON) transmission line at the Robinson Summit substation. The ON Line is an existing 231-mile 500 kV transmission line that connects the Robinson Summit substation to the existing DesertLink transmission line that connects Harry Allen substation to Eldorado substation (see Figure 1). The ISO's proposed agreement with Great Basin Transmission includes entitlements on both the SWIP North and ON Line transmission lines. The proposed SWIP North project also includes

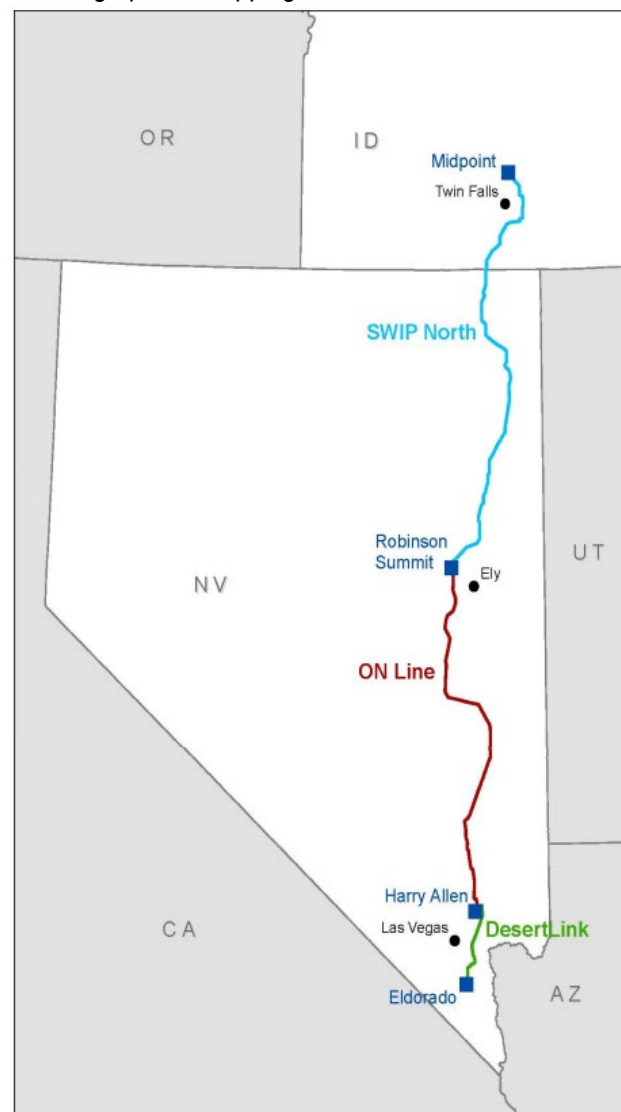
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<sup>1</sup><http://www.caiso.com/InitiativeDocuments/Idaho-Power-Letter-to-CAISO-Regarding-SWIP-North.pdf>

phase shifting transformers at Robinson Summit and series compensation on the ON Line.

The ISO already has operational control of the DesertLink transmission line between Harry Allen and El Dorado, which was approved as an economic project in the 2013-2014 TPP cycle and became operational in 2020. There is no capacity expansion required on the DesertLink transmission line in order to specifically integrate Idaho wind resources at Harry Allen through the SWIP North and ON transmission lines.

Figure 1: Geographical Mapping of the SWIP North Transmission Line



The SWIP North transmission project is the sole known transmission project that would serve California load-serving entities (LSEs) in accessing out-of-state wind resources in Idaho. It is a near-shovel ready project which has achieved key milestones such as a Bureau of Land Management (BLM) Right-of-Way Grant, an approved Construction,

Operation, and Maintenance Plan (COM Plan), and a Conditional Notice-to-Proceed. A FERC-approved transmission use and capacity exchange agreement (TUA) between Great Basin Transmission, a subsidiary of LS Power, and NV Energy governs the Southwest Intertie Project (SWIP North and ON Line).<sup>2</sup> Under the TUA, completion of SWIP North triggers a capacity swap such that GBT gets 1,117.5 MW from Midpoint to Harry Allen in the North-South direction and 1,072.5 MW in the South-North direction. NV Energy holds the remaining capacity.

#### Existing Capacity Exchange Agreement between NV Energy and Great Basin Transmission (GBT)

The Southwest Intertie Project (SWIP North and ON Line) is governed by a Transmission Use and Capacity Exchange Agreement (TUA), between NV Energy and LS Power affiliates including Great Basin Transmission LLC (GBT), the owner of SWIP North.<sup>3</sup>

Under the TUA, completion of SWIP North triggers a capacity swap such that GBT gets 1,117.5 MW from Midpoint to Harry Allen in the North-South direction and 1,072.5 MW in the South-North direction. NV Energy holds the remaining capacity.<sup>4</sup>

## **Proposed ISO and Idaho Power Entitlements on SWIP North and the ON Line**

Management proposes to assume operational control of entitlements for 1,117.5 MW in the North-South direction and 572.5 MW in the South-North direction with the remaining 500 MW in the South-North direction held by Idaho Power. Entitlements in the North-South direction will enable the integration of Idaho wind resources included in CPUC resource portfolios and the South-North entitlements will provide export opportunities for excess California solar generation.

The underlying SWIP North facilities will remain in the NV Energy balancing area and be operated by NV Energy, similar to other out-of-balancing area transmission entitlements under the ISO's operational control. Idaho wind resources will be studied as part of the NV Energy interconnection queue with the ISO and Idaho Power conducting affected system studies as required. These pseudo-tied resources will be dynamically scheduled into the ISO markets. For deliverability of these imports, LSEs contracting with Idaho wind resources will need to be allocated Maximum Import

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<sup>2</sup> The second amended and restated TUA is available in FERC Docket No. ER20-2295

<sup>3</sup> See Second Amended and Restated TUA, FERC Docket No. ER20-2295. [Note Nevada Power and Sierra Pacific Power merged as subsidiaries doing business as NV Energy.](#)

<sup>4</sup> Under the second amended and restated TUA, for the ON Line capacity allocation, NV Energy gets the first 900 MW, GBT gets the next 800 MW as well as 50% of capacity above 1,700 MW. For the SWIP North Line, GBT gets the first 900 MW, NV Energy gets the next 700 MW. GBT gets 100% of the capacity above 1,600 MW up to their ON Line rights. Anything additional goes to NV Energy.

Capability (MIC) at Midpoint in Idaho which is a scheduling point. MIC can also be allocated at Robinson Summit in Nevada which is another scheduling point. The quantity of MIC at these scheduling points maybe restricted until such time when the network upgrades internal to the ISO are in-service. In the interim and if necessary, an LSE may choose to find MIC at any scheduling point where these resources can and are being scheduled.

## Estimated Cost

The total project is currently estimated to cost \$1,090 Million. The project costs for the ISO and Idaho Power will be based on the percentage share of allocation of entitlements between the ISO and Idaho Power. Based on the capacity allocation shares, the ISO is responsible for 77.2% (\$841.5 Million) of the overall project costs and Idaho Power is responsible for 22.8% (\$248.5 Million) of the overall project cost. It is important to note here that though the funding is only for the SWIP North transmission project, it provides the ISO with operational control of GBT's entitlements on both, the proposed SWIP North Line and the existing ON Line in Nevada. Though the ISO has not specified a cost cap on the overall project or a cap on the Return on Equity (ROE), the ISO will work with GBT to require prudent cost containment measures in a definitive project sponsor agreement. GBT will be required to apply to become a Participating Transmission Owner (PTO), at which point the ISO Board may evaluate the specific cost-containment measures agreed to by the parties. The approval of the assumption of entitlements is conditioned on this ISO Board approval of GBT's PTO application. Additionally, one of the conditions for the approval of the ISO's recommendation is FERC acceptance of GBT's transmission revenue requirement rate structure and TO tariff.

## Assessment and Benefits of Project

The ISO has completed its assessment of the SWIP North transmission project under development by LS Power for accessing wind resources in Idaho, as described in the ISO's 2022-2023 Transmission Plan. This project will support access to the resource portfolios submitted by the California Public Utilities Commission (CPUC) to the ISO for study in its transmission planning process (TPP). Specifically, the 2022-2023 sensitivity portfolio and 2023-2024 base portfolio identify 1,000 MW of Idaho wind resources to be imported into the ISO. The SWIP North transmission project is the sole known transmission project that would serve California Load Serving Entities (LSEs) in accessing out-of-state wind resources in Idaho. The ISO's economic studies also demonstrate other economic benefits contributing to the overall value provided by the project, as set out in the 2022-2023 TPP.

The ISO believes that approving the operational control of entitlements and developing the proposal with Idaho Power as a joint regional policy-driven project is the most cost

effective way of importing Idaho wind resources. The proposal takes advantage of the ON Line already being energized and enables the ISO to acquire Great Basin Transmission's entitlements on the SWIP North Line as well as the existing ON Line as compared to building an entirely new, roughly 500-mile transmission line from Harry Allen in Nevada to Midpoint in Idaho. Additionally, the project costs are shared between the ISO and Idaho Power thereby reducing cost impact to California rate payers.

The SWIP North transmission line, which is the only known transmission line that can integrate wind resources in Idaho into California, is a near shovel-ready project with 95% of land rights already acquired and has a conditional Notice-to-Proceed from the Bureau of Land Management (BLM) along with a BLM Right-of-Way Grant. The project has also completed National Environmental Policy Act (NEPA) process and has an environmental impact statement (EIS) and BLM Record of Decision in this matter. It also has an approved Construction, Operation, and Maintenance Plan (COM Plan) which includes key compliance requirements stipulated by the BLM. Substantial development progress, along with achieving milestones such as BLM approvals and the EIS, have significantly de-risked the project for California ratepayers as well as help enable the integration of Idaho wind resources in a timely manner and in line with CPUC portfolios.

The current project cost estimate is \$1,090 Million (\$3.8 M/mile) and includes ON Line system upgrades. The \$/mile cost is comparable to competitively procured transmission such as Harry Allen-Eldorado (\$3.4 M/mile) and Delaney-Colorado River Transmission (\$4.3 M/mile). Though the ISO has not specified a cost cap on the overall project or a cap on the Return on Equity (ROE), the ISO will work with GBT to require prudent cost containment measures in a definitive project sponsor agreement.

In order to prudently manage any potential cost escalations, the ISO plans to negotiate a "meet and confer" clause to the definitive agreement should the project costs exceed 10% of the provided project cost estimate. It is expected that GBT will develop a comprehensive risk register and mitigation plans that will be used for the Project based on experience permitting, designing, procuring and constructing similar projects in the West and throughout the U.S., including DesertLink and the ON Line.

GBT will be required to apply to become a Participating Transmission Owner (PTO), at which point the ISO Board may evaluate the specific cost-containment measures agreed to by the parties. The approval of the assumption of entitlements is conditioned on this ISO Board approval of GBT's PTO application. Additionally, one of the conditions for the approval of the ISO's recommendation is FERC acceptance of GBT's transmission revenue requirement rate structure and TO tariff.

Based on the allocation shares between Great Basin and Idaho Power, the ISO will ultimately be responsible for 77.2% of the overall project costs (estimated at \$841.5

Million) and Idaho Power will be responsible for 22.8% (estimated at \$248.5 Million) of the overall project cost.

The ISO does not intend to go through a competitive procurement process because the approval is being sought for ISO operational control of entitlements on an existing transmission line, the ON Line, and the to-be-developed SWIP North transmission line, as opposed to requesting the approval for building a new 500 mile-plus transmission line between Idaho and California. Additionally, Idaho Power, the joint capacity off-taker, does not have a competitive procurement framework for transmission.

## Conclusion

With the CPUC's portfolio requirements for integrating Idaho wind resources in the base and sensitivity portfolios of the 2022-2023 transmission planning process and the continued need identified in the portfolio for the 2023-2024 TPP<sup>5</sup> and draft portfolio for the 2024-2025 TPP<sup>6</sup>, along with Idaho Power's interest in and need for the project, the ISO is recommending to jointly assume Great Basin Transmission's (GBT) entitlements on the proposed SWIP North transmission line, and the existing ON Line, with Idaho Power, subject to certain conditions being met. These conditions include:

- Idaho Power filing and receiving approval for its SWIP-related case from the IPUC by September 30, 2024;
- The CPUC reaffirming the need for Idaho wind in its 2024-2025 TPP portfolio decision;
- Great Basin Transmission, LLC, a subsidiary of LS Power, declaring its intent to become a Participating Transmission Owner by July 1, 2024, submission and approval of its application in accordance with the CAISO Tariff and Transmission Control Agreement; and
- The Federal Energy Regulatory Commission's acceptance of Great Basin Transmission's Transmission Owner Tariff and a transmission revenue requirement rate structure.

The ISO is recommending to move this forward as a regional policy-driven project, jointly with Idaho Power, to take advantage of cost-sharing benefits. The proposal calls for the ISO's assumption of 1,117.5 MW in the North to South direction and 572.5 MW in the South to North direction, with the remaining 500 MW in the South to North direction held by Idaho Power. This proposal is as an extension of the ISO's Board-approved 2022-2023 TPP to facilitate alignment with Idaho Power's intent to file a SWIP-related case with the Idaho Public Utilities Commission (IPUC) for the SWIP North transmission project by the end of this year.

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<sup>5</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M502/K956/502956567.PDF>

<sup>6</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M520/K522/520522241.PDF>