

Transmission Update

Curtis Westhoff, System Consulting Engineer

Sept. 8, 2022

Agenda

- Introduction / Background
- Boardman to Hemingway (B2H)
 - 2022 B2H Project Term Sheet
- Gateway West
- Southwest Intertie Project – North
- Other Regional Projects

Transmission Impact



GRID EDGE

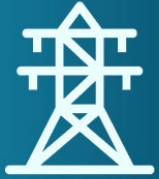
MIT Study: Transmission Is Key to a Low-Cost, Decarbonized US Grid

Modeling shows a nationwide transmission network could tap existing solar, wind and battery tech to reach zero-carbon power.

JEFF ST. JOHN | JANUARY 08, 2021

- Transmission “delivers oversize benefits”
 - Enables regional power-sharing
 - Allows wind and solar to be built in optimal areas

IRP Relevance



- Transmission Costs
- Energy Market Access
- Resource Integration
- Transmission Wheeling
- Electrical Losses
- Reliability



IRP

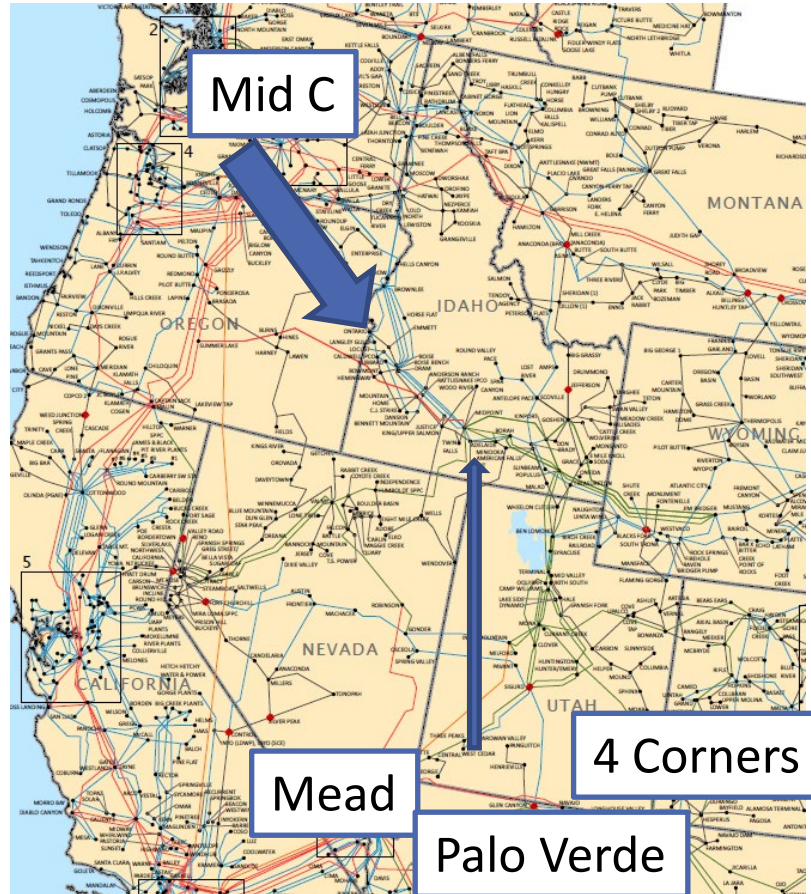


Background Transmission Overview Presentation Reminder

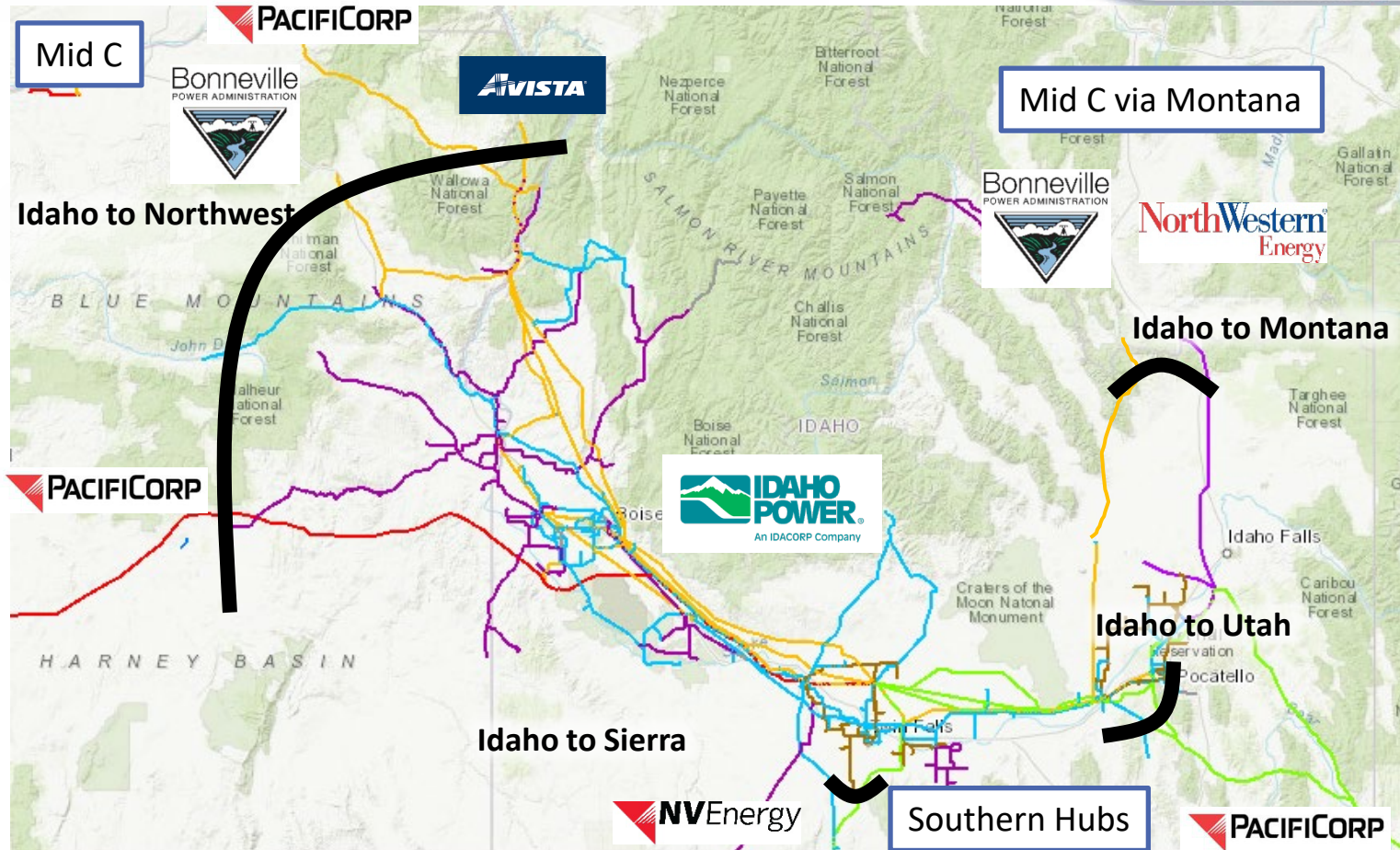
- Visit idahopower.com/irp and click Educational Resources
- or [click here](#)
- or scan the QR code



Market Imports – Hub Locations



Paths and Interconnections

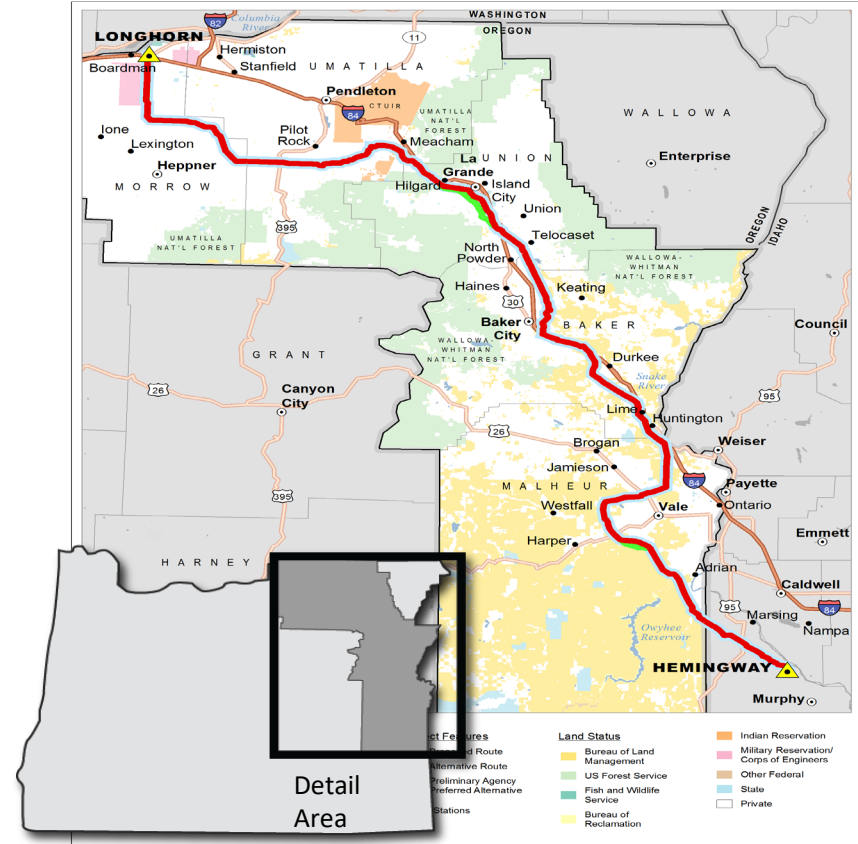


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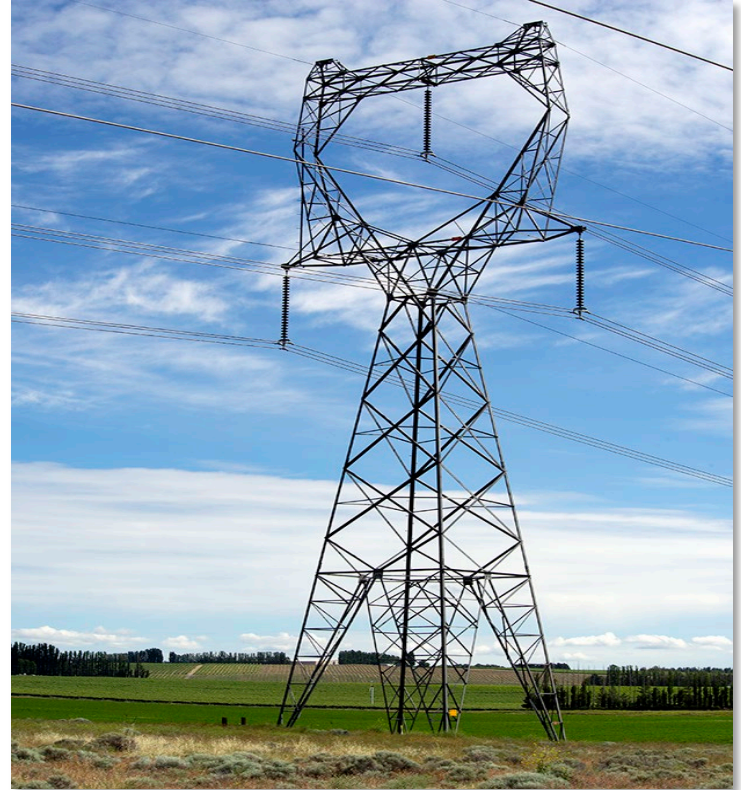
(B2H) Project

- 290-mile, 500 kV transmission line
- ~1,000 MW of bidirectional capacity increase between Northwest and Idaho
- ~30% on federal land
- BLM Record of Decision in 2017
- Permit funding partners: PacifiCorp, Bonneville Power Administration, and Idaho Power



Idaho to Northwest Path Rating Increase

Direction	Existing Path Rating	New Path Rating w/B2H
West to East	1,200 MW	2,250 MW
East to West	2,400 MW	3,400 MW



B2H Ownership

2019 IRP Permitting Percentages



	W-E Capacity	E-W Capacity
(21%)	500 MW Summer 200 MW Winter	84 MW



(24%)	250 MW Summer 550 MW Winter	96 MW
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(55%)	300 MW	820 MW
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B2H Ownership

2022 B2H Term Sheet



W-E Capacity

E-W Capacity

(45%)

750 MW

180 MW

(0%)

0 MW

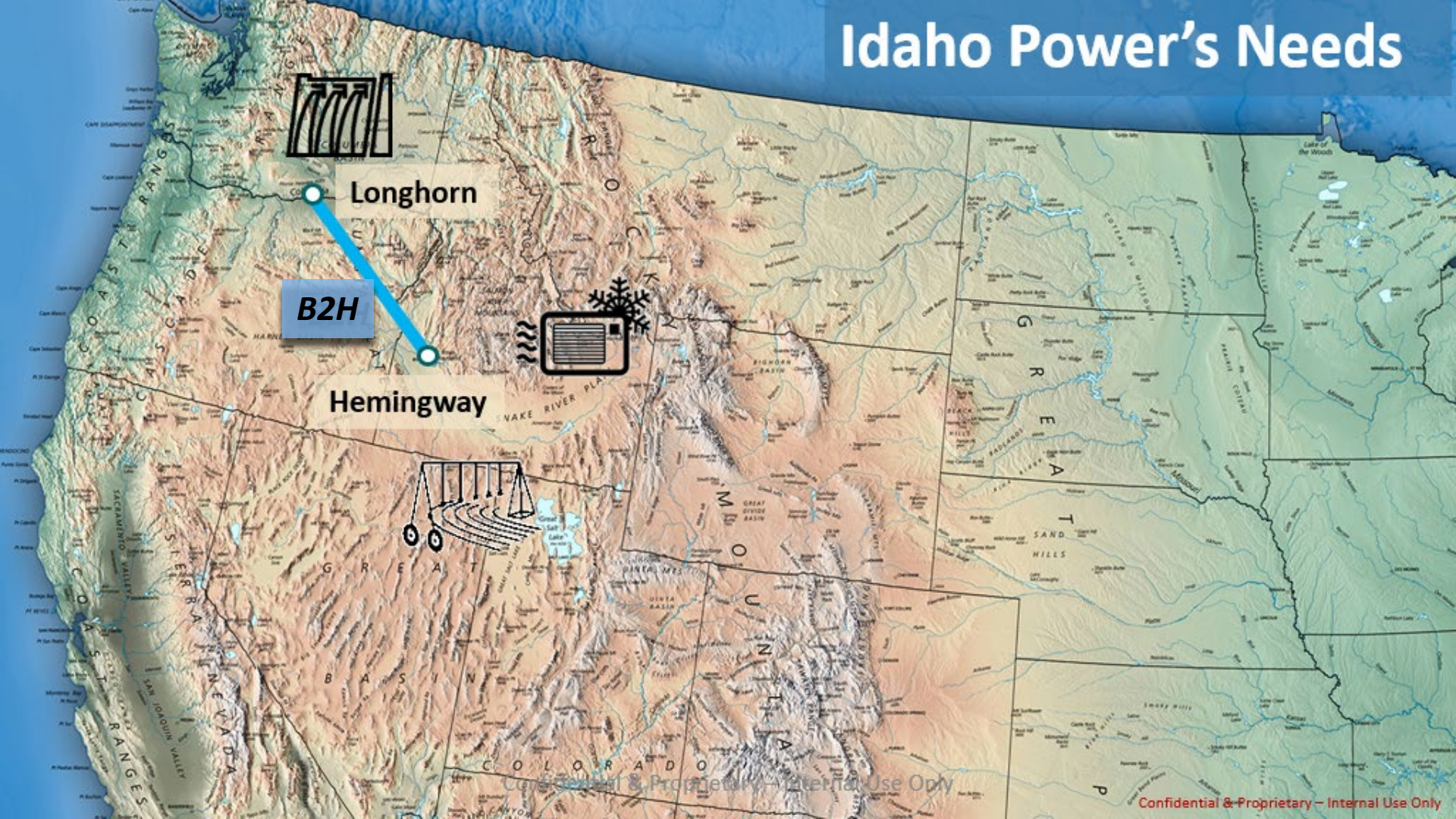
0 MW

(55%)

300 MW

820 MW

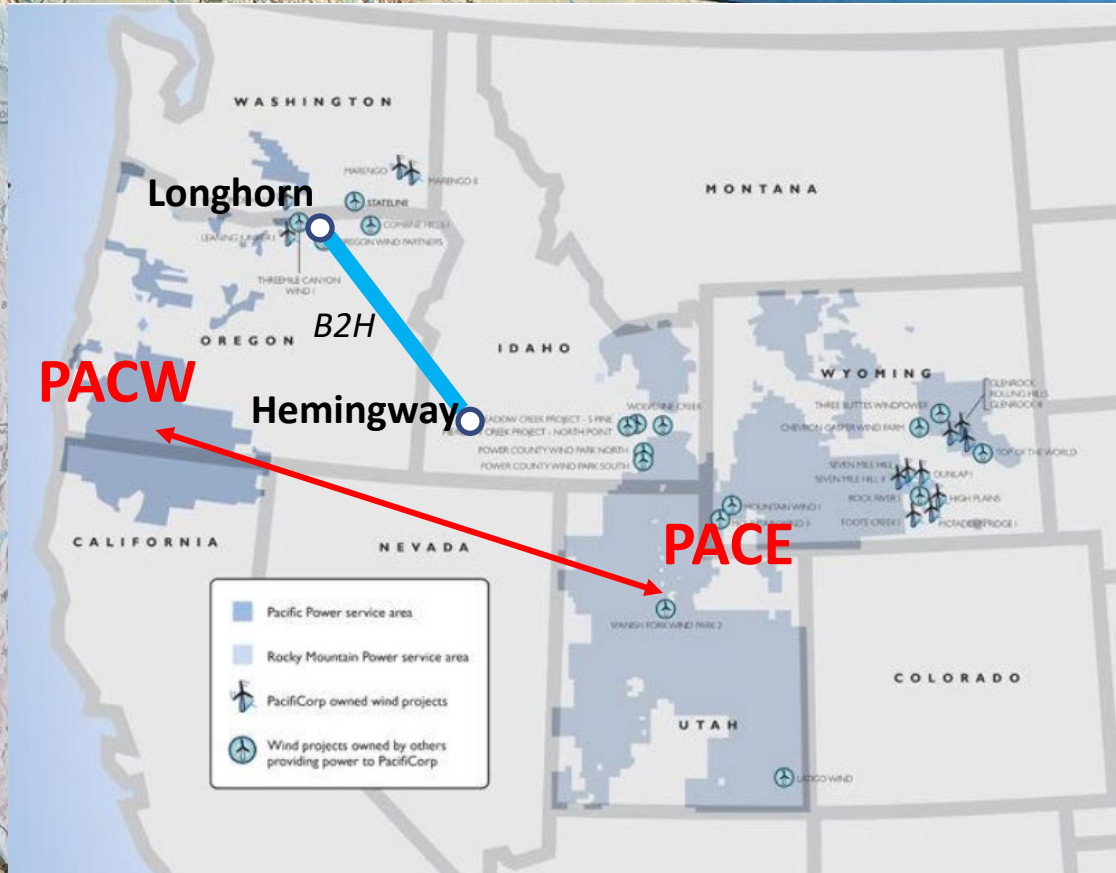
Idaho Power's Needs



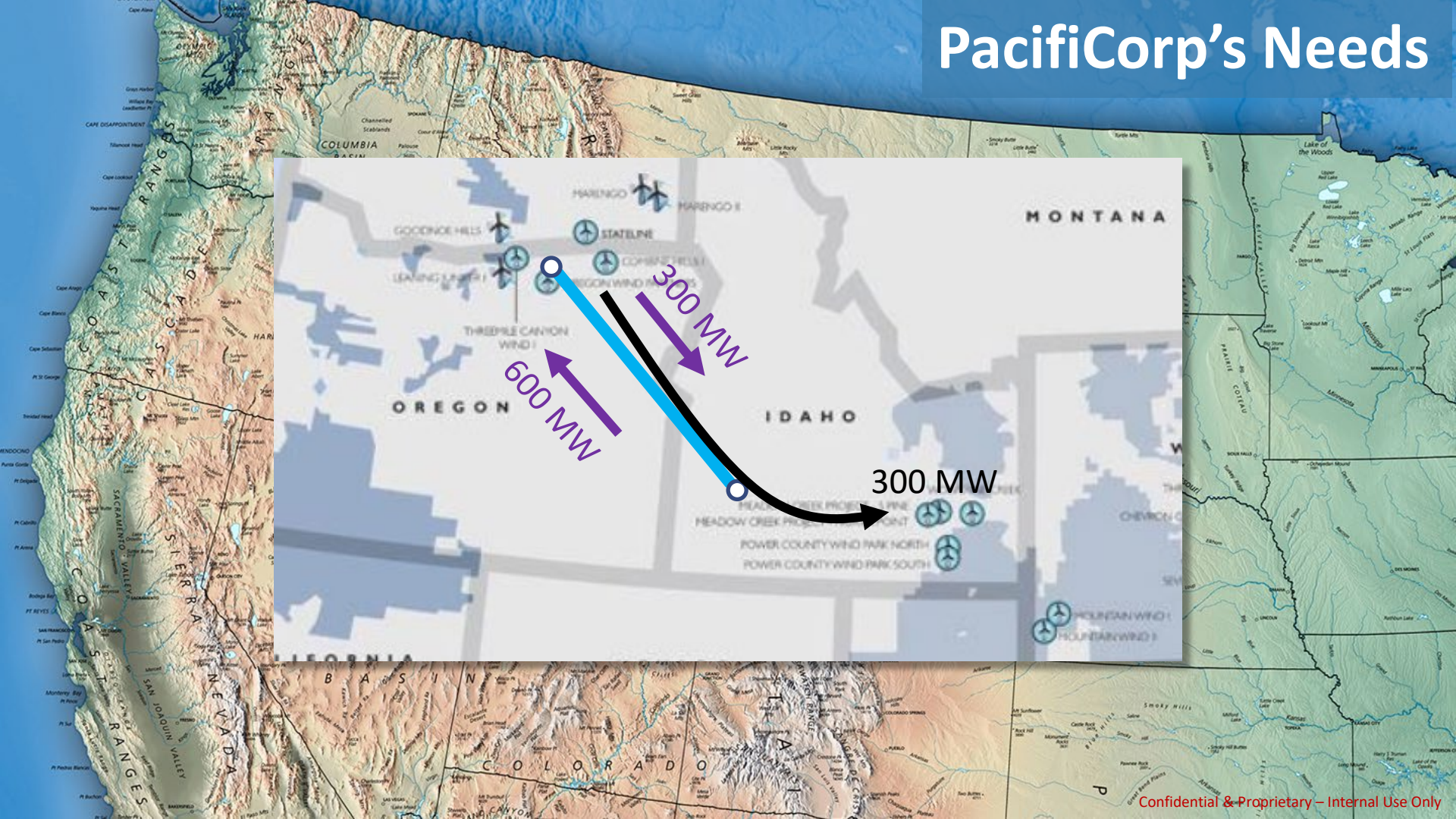
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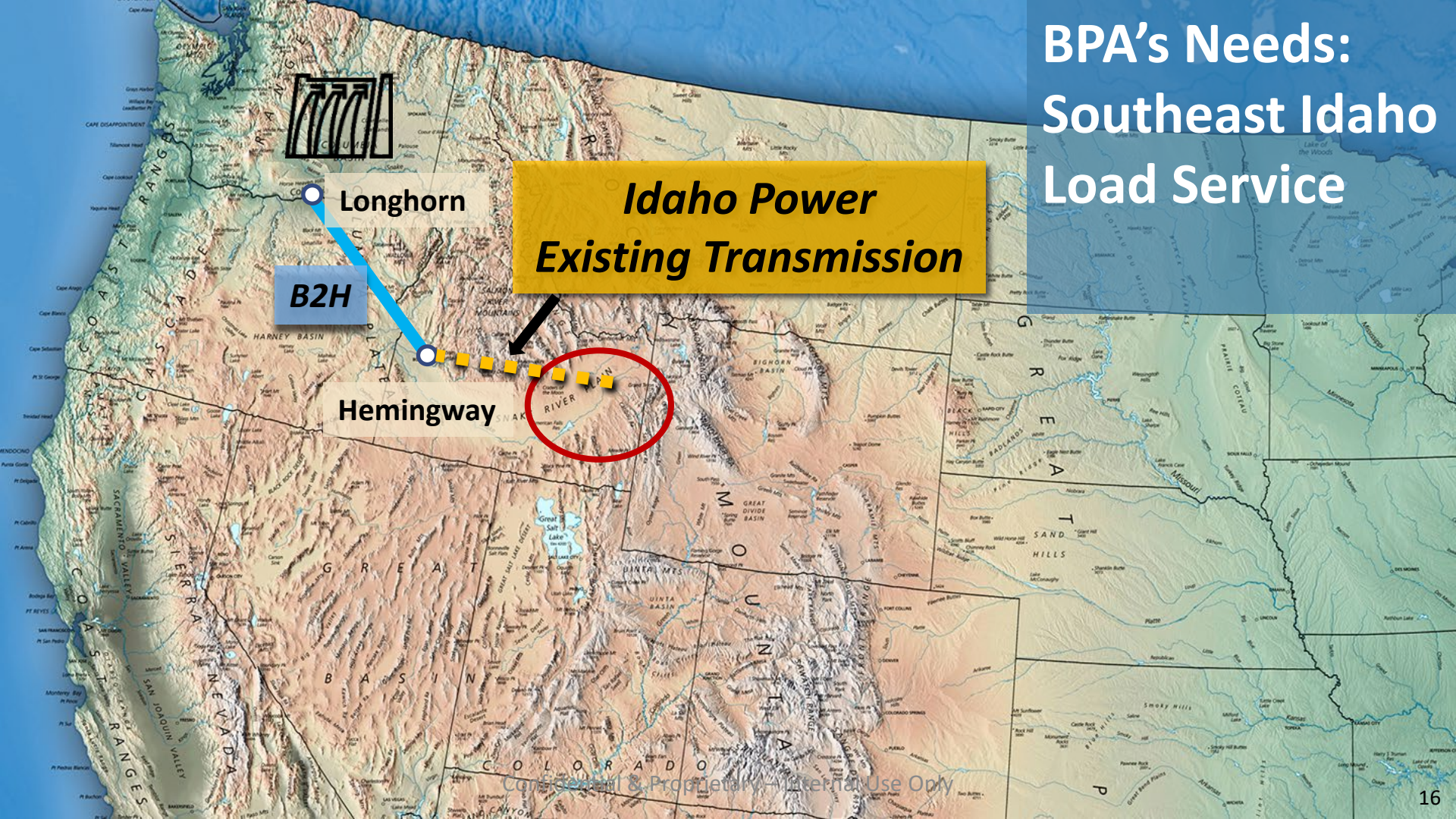
PacifiCorp's Needs



PacifiCorp's Needs



BPA's Needs: Southeast Idaho Load Service



Longhorn

B2H

*Idaho Power
Existing Transmission*

Hemingway

B2H Term Sheet w/ BPA & PAC



Idaho Power & BPA

- Idaho Power Receives
 - B2H Permitting Interest
 - Transmission Wheeling Revenue
 - BPA Transmission Service
- BPA Receives
 - SE Idaho Load Transmission Service
 - Transmission Wheeling Revenue

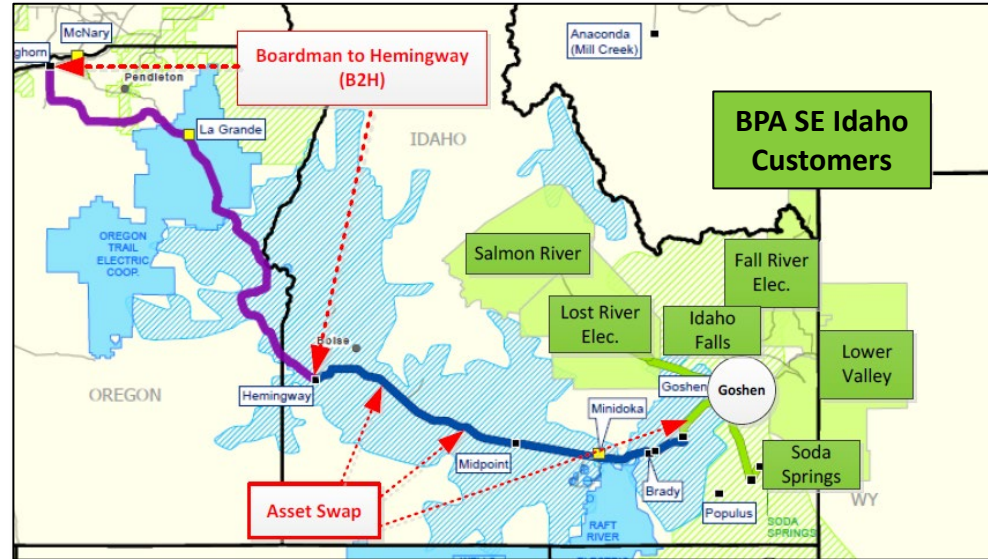
Idaho Power & PacifiCorp

- Idaho Power Receives
 - Transmission Assets
 - 200 MW Bidirectional Capacity to a Southern Power Hub
 - SE Idaho load service assets (via BPA)
- PacifiCorp Receives
 - S. Idaho Transmission Assets
 - 600 MW east-to-west
 - 300 MW west-to-east

BPA SE Idaho Load Customers

New Idaho Power Transmission Network Customers with B2H

1. City of Idaho Falls
2. Lower Valley Energy
3. Fall River Rural Electric Cooperative
4. City of Soda Springs
5. Salmon River Rural Electric Cooperative
6. Lost River Electric Cooperative



Idaho Power / BPA Seasonal Needs Puzzle Pieces

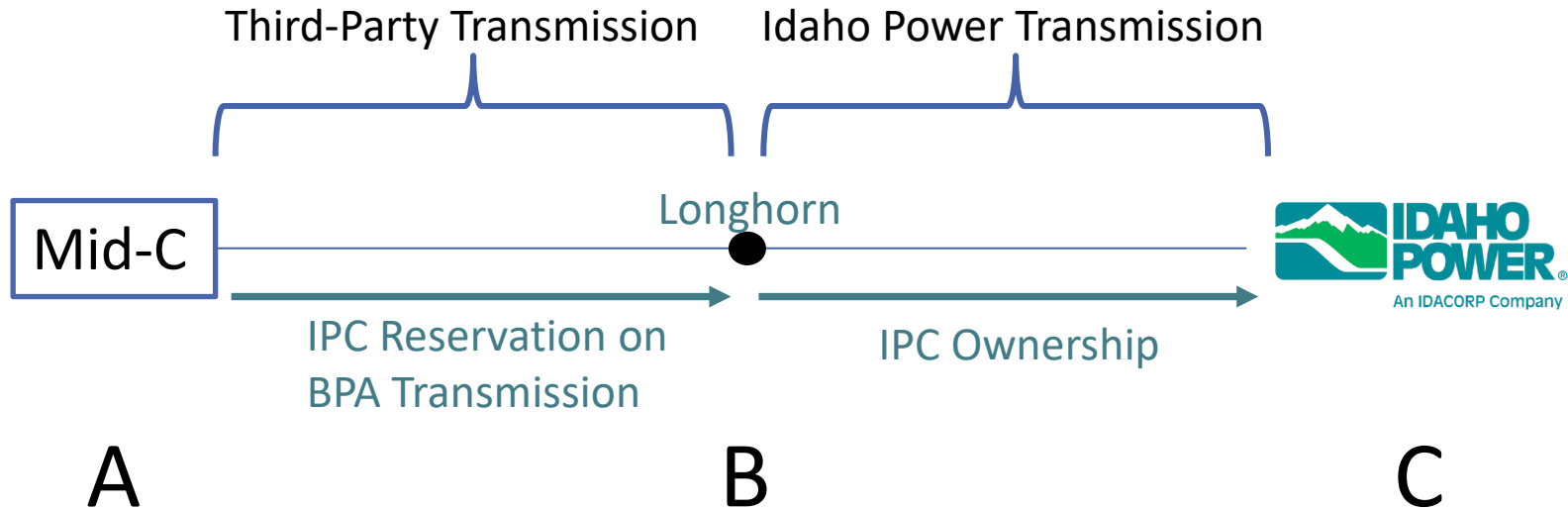
**Idaho Power
Customer B2H Needs**

**Summer: 500 MW
Winter: 200 MW**

**BPA Transmission
Service B2H Needs**

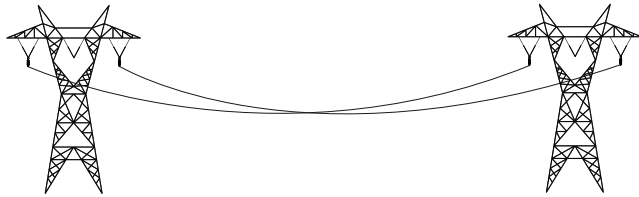
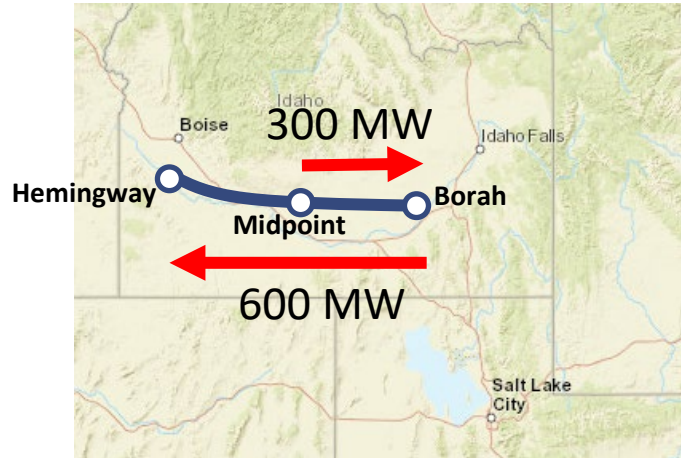
**Summer: 250 MW
Winter: 550 MW**

B2H Mid-C Market Connection



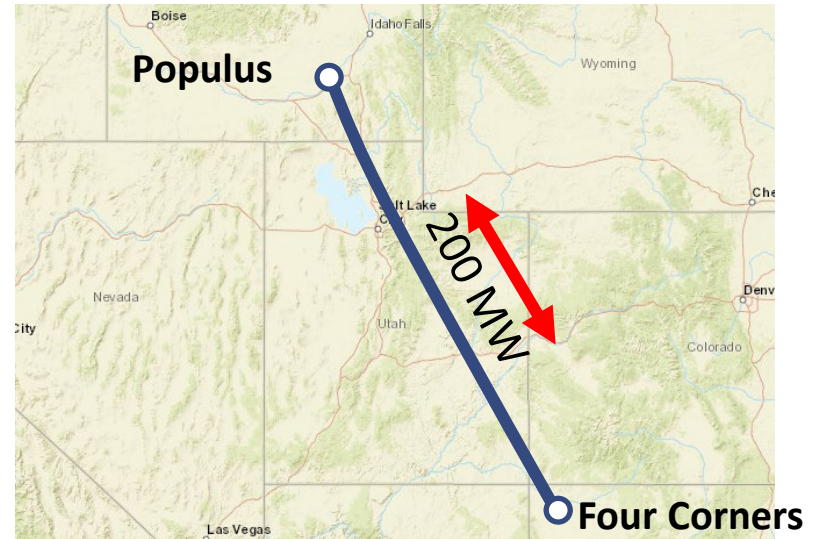
Idaho Power – PacifiCorp Transaction

Idaho Power to PacifiCorp (Assets)

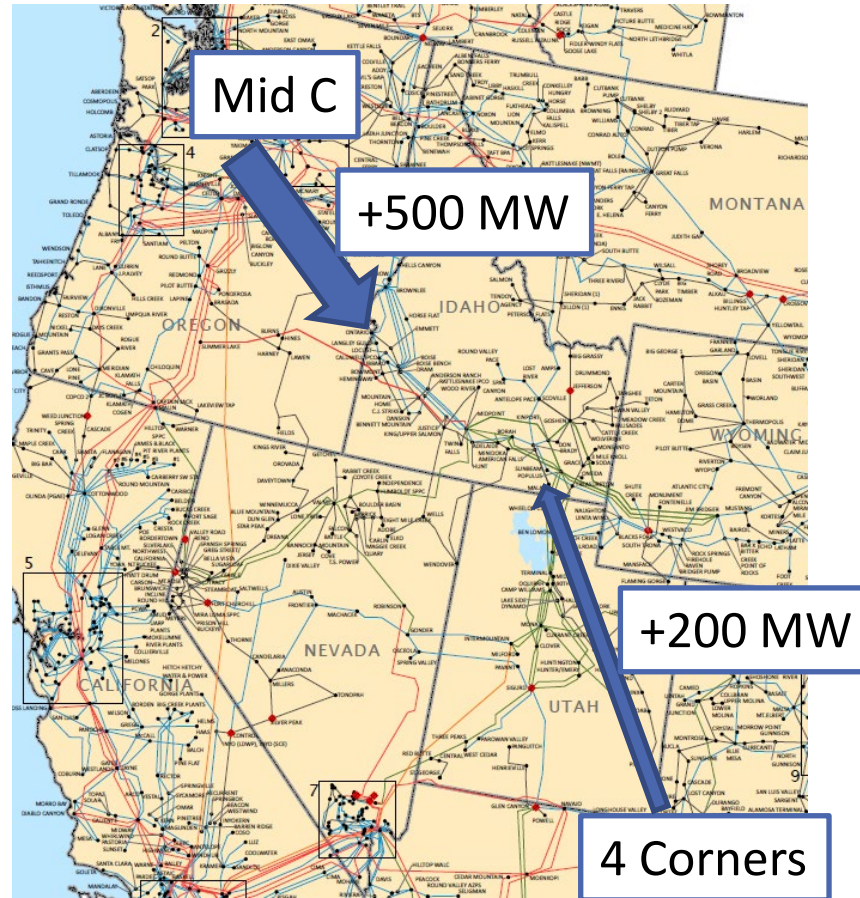


510 MW OATT (E-W) → 300 MW OATT (W-E)

PacifiCorp to Idaho Power (Assets)



B2H Market Diversity Benefit



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Gateway West Transmission Project



Idaho Power Gateway Projects

1/3 Permitting Interest

- Hemingway – Midpoint 500 kV
- Hemingway – Cedar Hill 500 kV
- Midpoint – Cedar Hill 500 kV

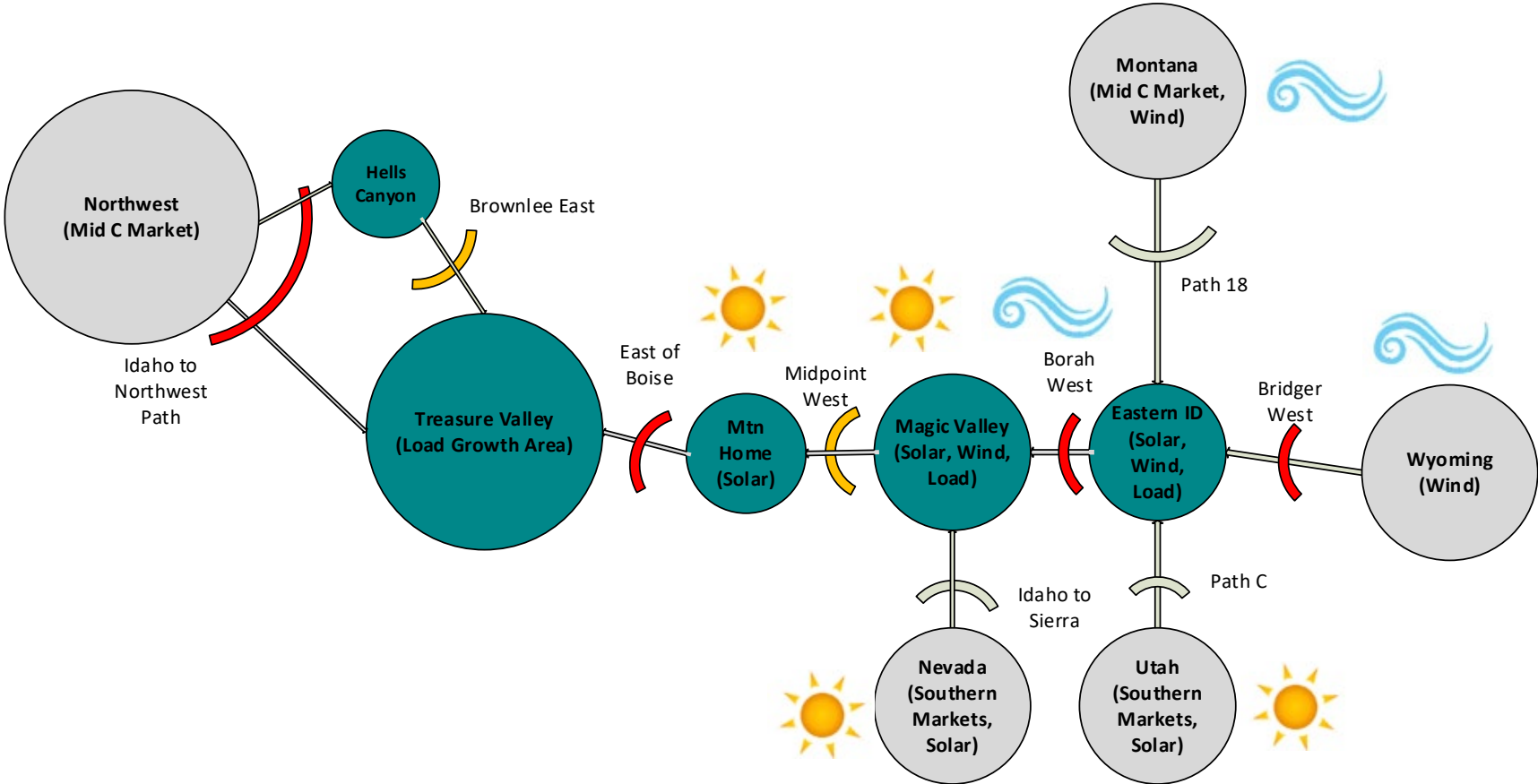


Transmission Facilitation Program

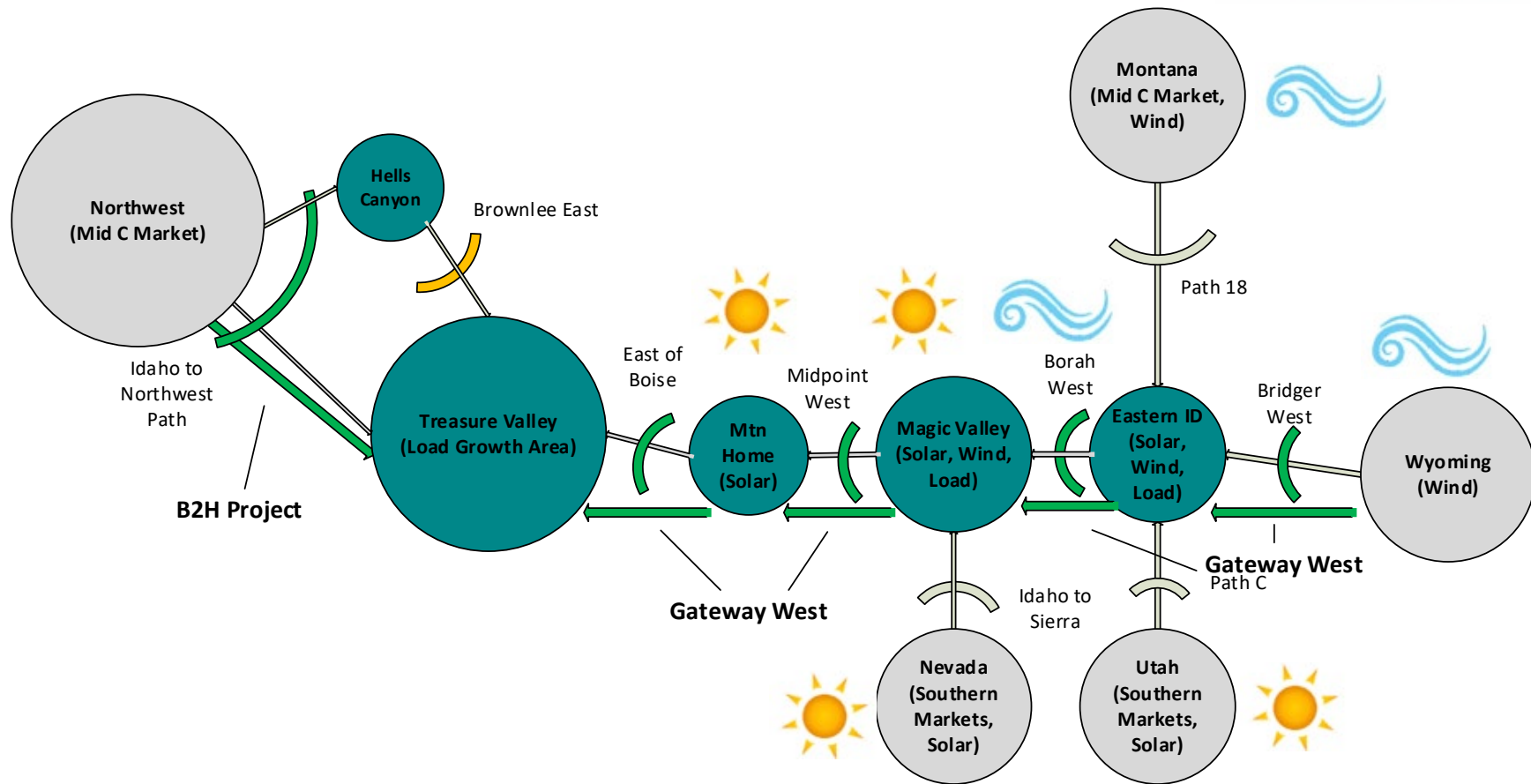
(TFP) Opportunity

- Infrastructure Investment and Jobs Act (IIJA)
- Project Eligibility:
 - 1,000 MW new build or 500 MW upgrade to existing line/corridor
 - Not likely to be built in as timely of a manner without TFP facilitation
- \$2.5B Revolving Fund for Facilitations
 - Capacity Contracts, Loans, Public-Private Partnerships
 - Initial solicitation limited to Capacity Contracts
- Idaho Power is monitoring the program and submitted comments to the Department of Energy in June
 - May benefit the Gateway West project

Resource Integration



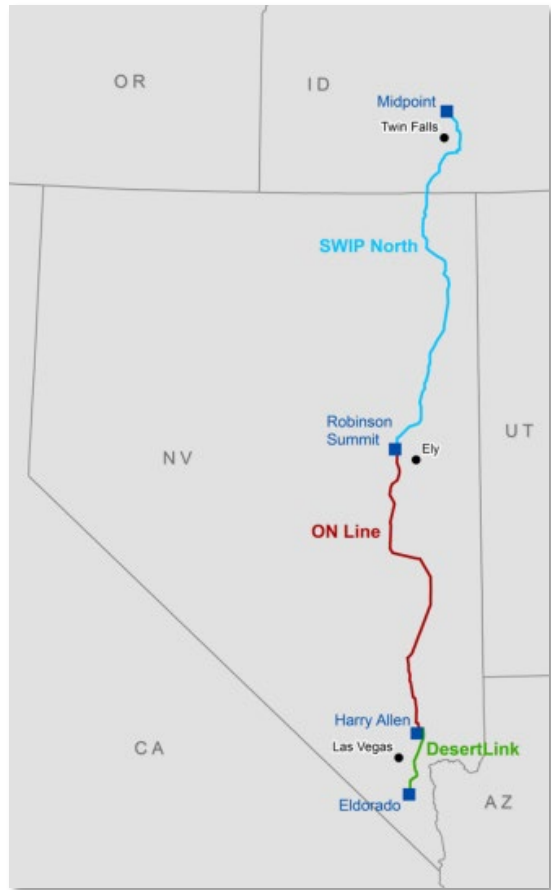
Resource Integration



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Southwest Intertie Project - North

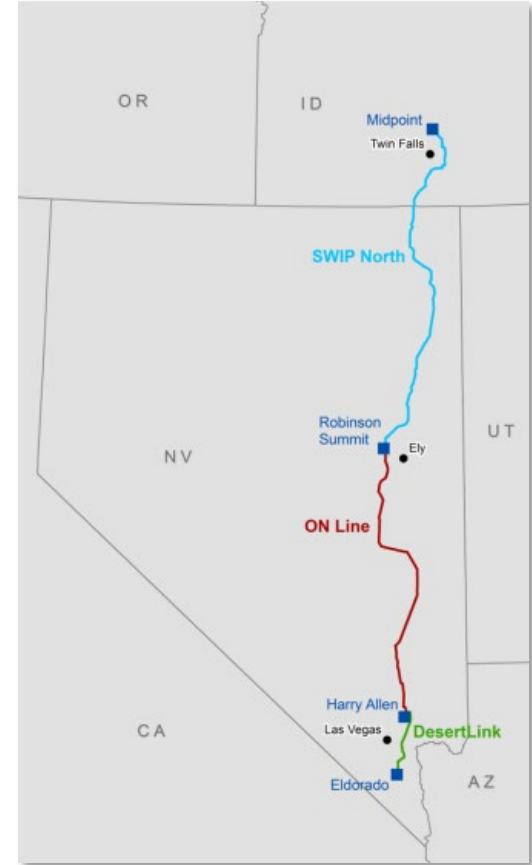


- Developer: Great Basin Transmission, LLC (affiliate of LS Power)
- Midpoint to Robinson Summit
- ~2000 MW Capacity
- Addition would also unlock capacity on the existing One Nevada Line to Harry Allen (Las Vegas area).
- Idaho Power participation could provide transmission access (across congestion on NV Energy's system) to a southern market hub .

Southwest Intertie Project – North

IRP Modeling

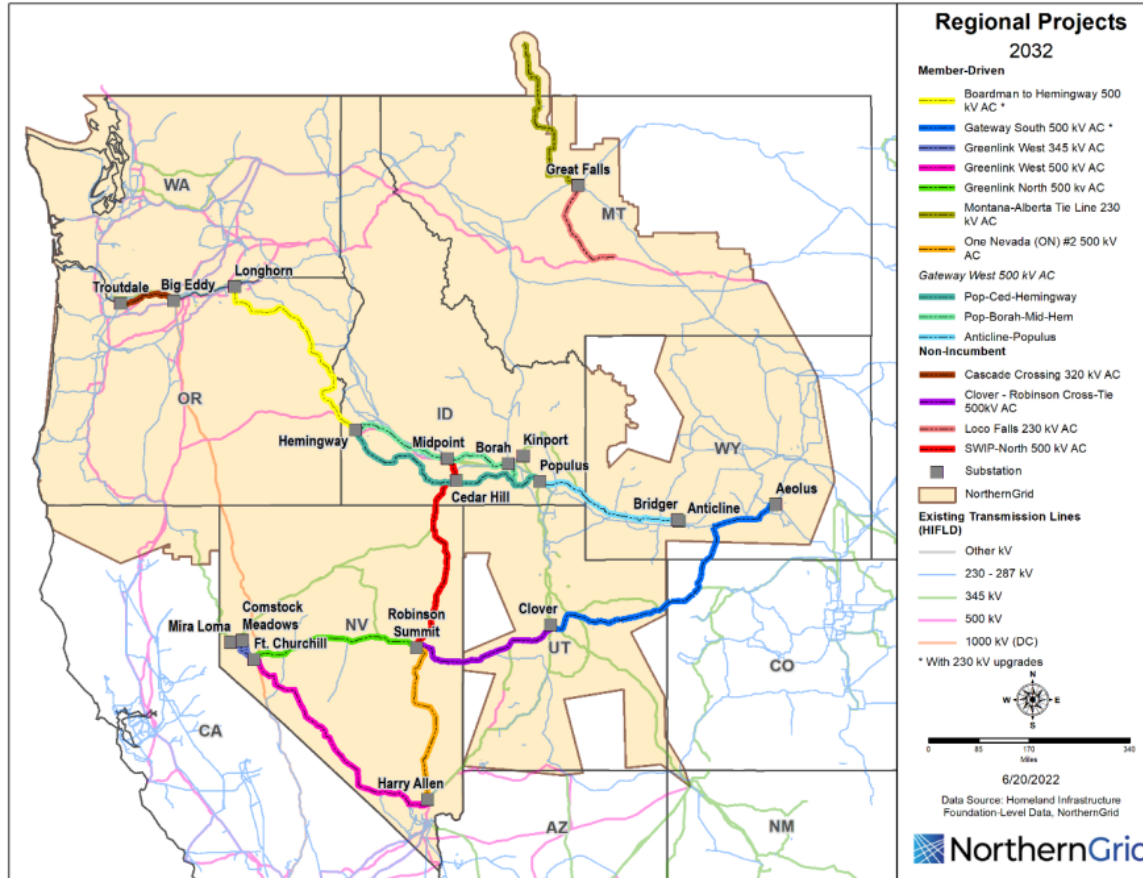
- 2021 IRP Sensitivity
 - 200 MW Idaho Power ownership slice
 - Publicly available cost data
 - Results indicated customers could benefit from Idaho Power's involvement in the project
- 2023 IRP
 - Company will engage with the developer to perform a more detailed evaluation



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Thank You!