

The image features a blue gradient background with a white geometric pattern of intersecting lines. The text is positioned on the left side of the image.

NorthernGrid

Annual Interregional Coordination
Meeting

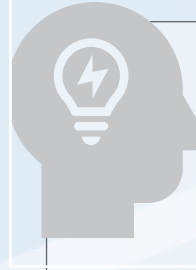
Chelsea Loomis, Western Power Pool

03/24/ 2025

Annual Interregional Coordination Meeting



Most Recent Annual
Interregional Information

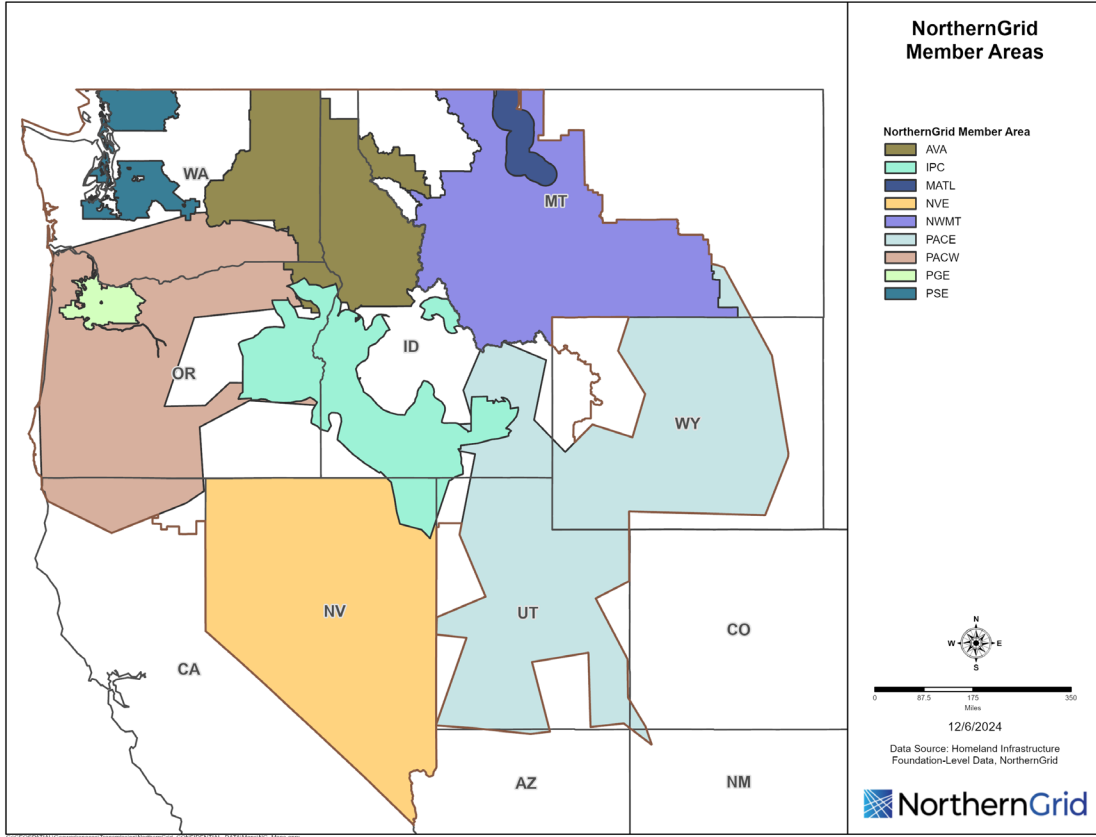
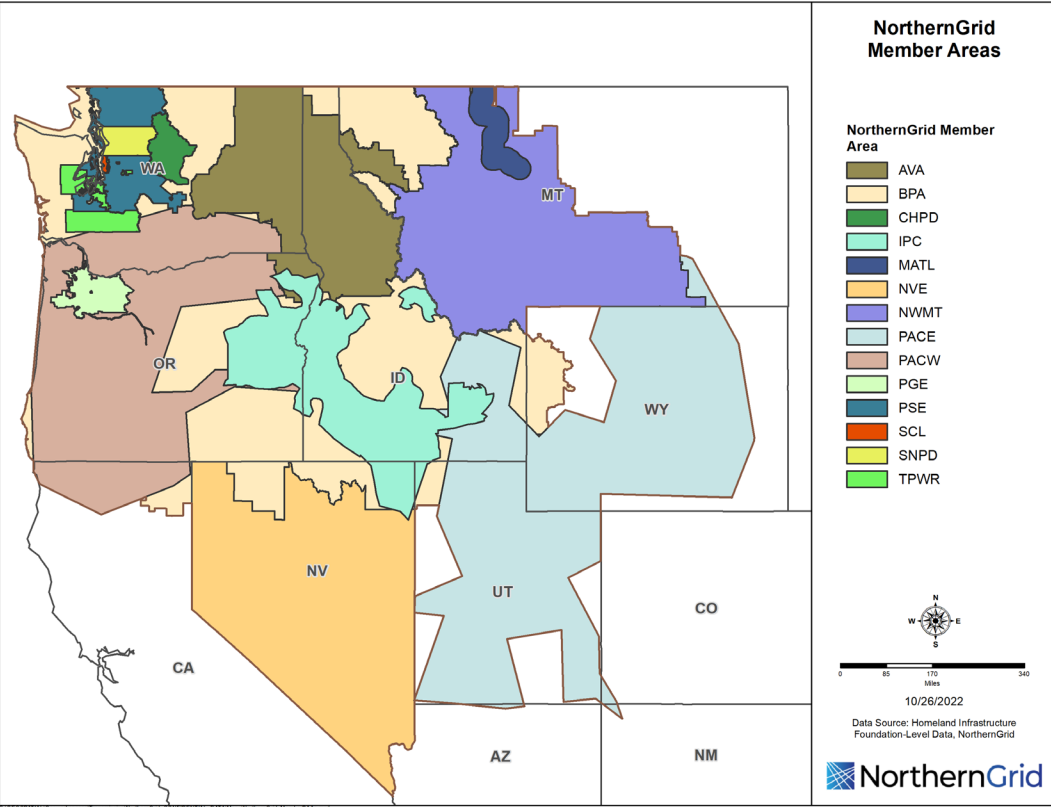


Identification and preliminary
discussion of interregional
solutions



Updates of the status of any
ITP being evaluated or
previously included in
Regional Transmission Plan

NorthernGrid footprint map



NorthernGrid Committees



Member

- Budget
- Vendor
- Planning



Member Planning

- Scope
- Study
- Develop Plan



Enrolled Parties Planning

- FERC-Jurisdictional entities



Enrolled Party and States

- State Utility Commissions
- FERC Entities



Cost Allocation Task Force

- Projects selected into Plan by Qualified Developers



NorthernGrid Schedule of Deliverables

End of Q1

Member Data Submission Complete
Stakeholder Meeting on Submittals

End of Q4

Draft Regional Plan with Stakeholder engagement process
Economic Study Request report

End of Q7

Draft Final Regional Transmission Plan posted by September 30*
Cost Allocation results
Economic Study Request report

Study Scope with Stakeholder engagement process

End of Q2

https://www.northerngrid.net/private-media/documents/NorthernGrid_Planning_Process_Diagram_with_Quarters_Final_1_28_2020.pdf

Data updates due

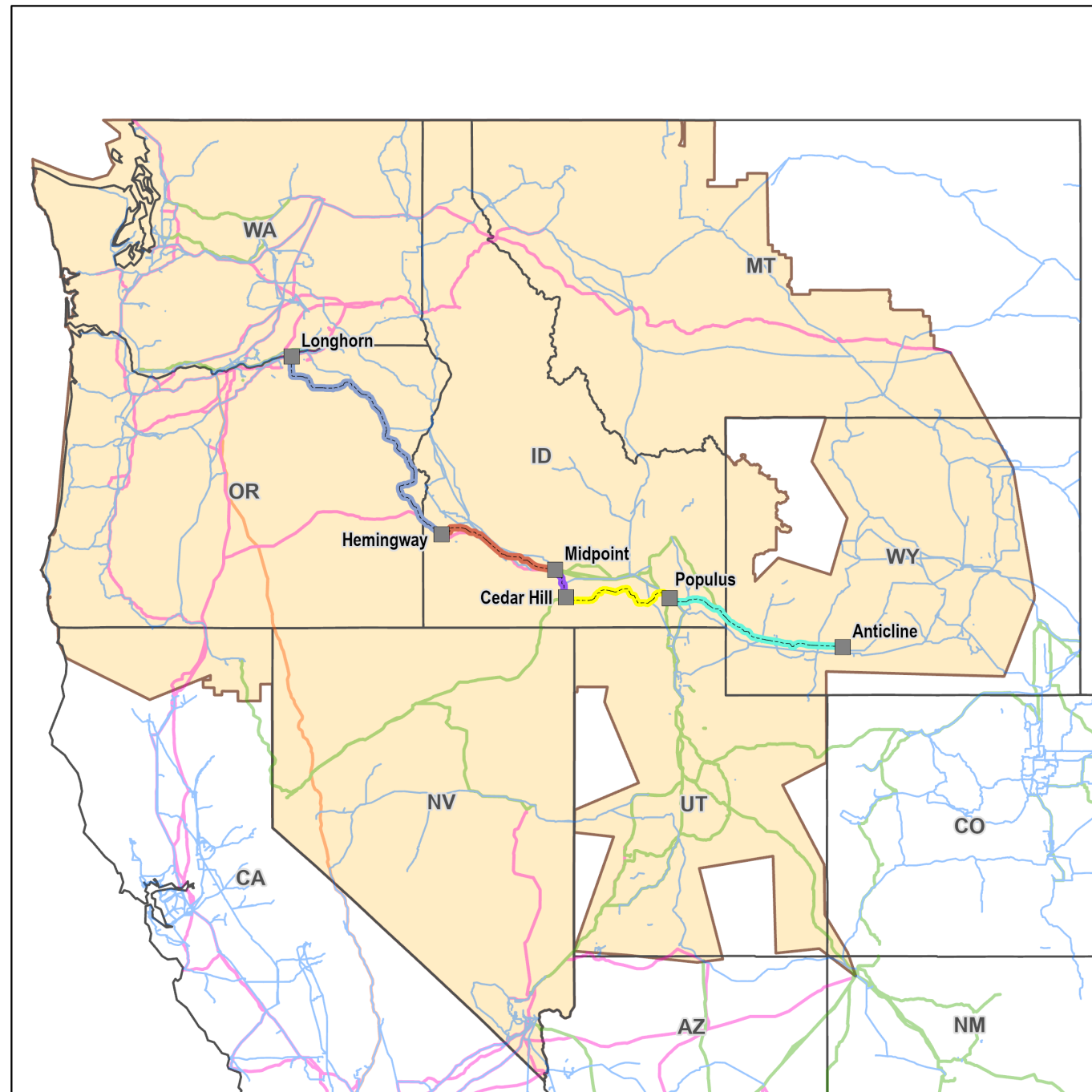
End of Q5

Regional Transmission Plan posted by December 31*

End of Q8

*Indicates FERC requirement, all others typically agreed upon by members

NorthernGrid 2022-2023 Regional Transmission Plan



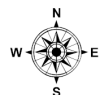
2022-2023 Regional Transmission Plan

Member-Driven

- Substation
- Regional Transmission Plan
 - Boardman - Hemingway 500 kV AC *
 - Cedar Hill - Populus
 - Hemingway - Midpoint #2 500 kV AC
 - Midpoint - Cedar Hill
 - Populus - Anticline
- Existing Transmission Lines (HIFLD)
 - 230 - 287 kV
 - 345 kV
 - 500 kV
 - 1000 kV (DC)
 - NorthernGrid

* With 230 kV upgrades

Gateway South and Gateway West Segment D.1 are not depicted on this diagram as they are under construction.



7/20/2023

Data Source: Homeland Infrastructure Foundation-Level Data, NorthernGrid



NorthernGrid System Load for 2034-2035

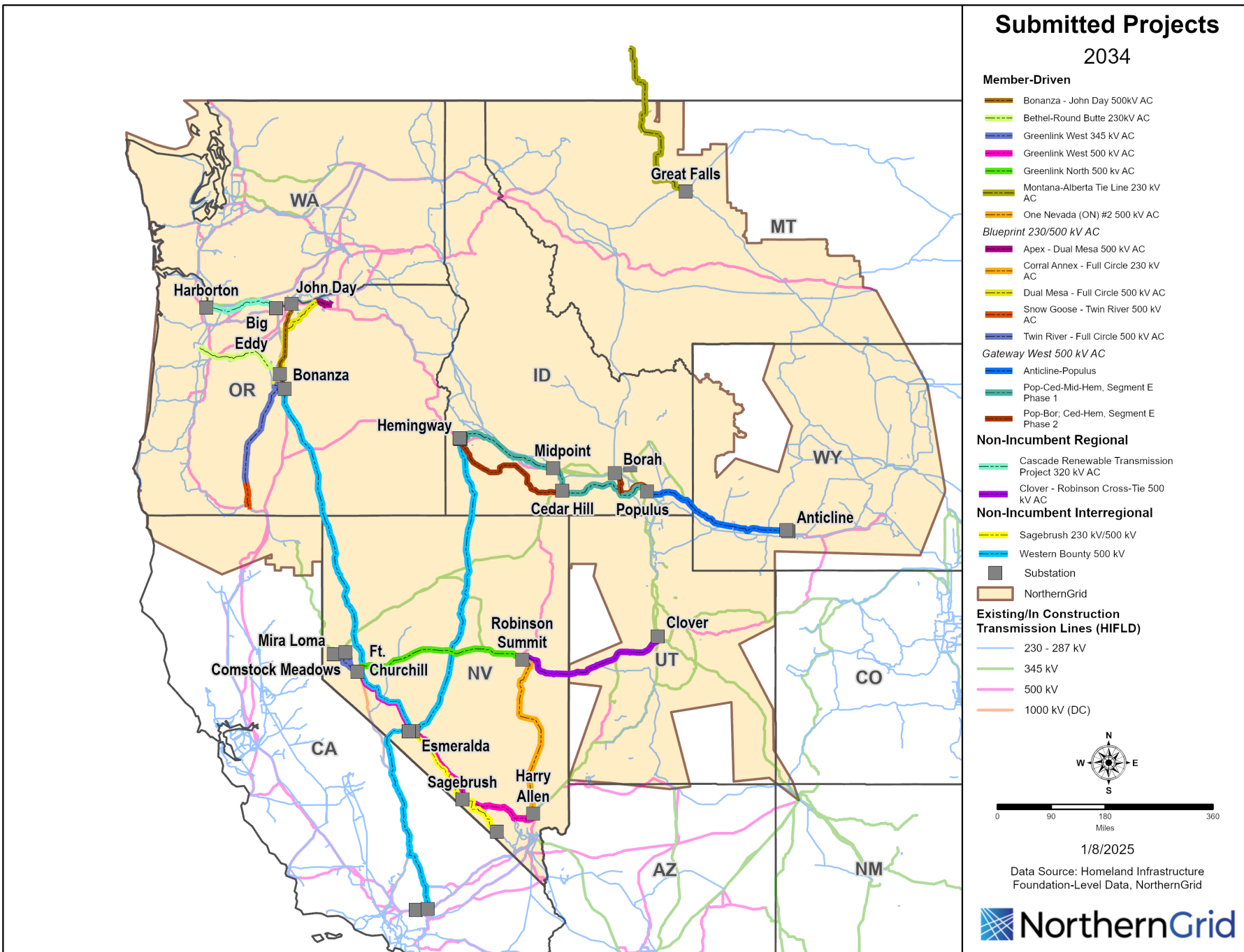
| | NG Study Cycle 2022-2023 (MW) | NG Study Cycle 2024-2025 (MW) | %Increase |
|------------|--|--|------------------|
| Jan | 49,264 | 55,235 | 12% |
| Feb | 47,454 | 53,645 | 13% |
| Mar | 44,994 | 49,991 | 11% |
| Apr | 42,608 | 48,057 | 13% |
| May | 44,277 | 48,463 | 9% |
| Jun | 51,652 | 59,093 | 14% |
| Jul | 54,887 | 61,867 | 13% |
| Aug | 53,900 | 61,244 | 14% |
| Sep | 47,818 | 54,490 | 14% |
| Oct | 43,769 | 49,474 | 13% |
| Nov | 45,409 | 52,558 | 16% |
| Dec | 49,564 | 55,787 | 13% |



NorthernGrid Generation Changes for 2034-2035

| | Fuel Type | ID | MT | NV | OR | UT | WA | WY | Grand Total |
|-------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------------|
| Addition | Battery Storage | 4,012 | 303 | 3,208 | 3,438 | 3,710 | 2,921 | 3,041 | 20,632 |
| | Biodiesel | | | | | | 711 | | 711 |
| | Blast Furnace Gas | | | 118 | | | | | 118 |
| | Coal | | | | | | | 99 | 99 |
| | Geothermal | 30 | | 93 | | | | | 123 |
| | Natural Gas | | 293 | 705 | | 858 | | 2,227 | 4,083 |
| | Non-Emitting | | | | | | | 1,214 | 1,214 |
| | Nuclear | 462 | | | | 690 | | 845 | 1,997 |
| | Pumped Storage | | | 653 | | 200 | | | 853 |
| | Solar | 4,225 | 425 | 3,243 | 2,763 | 7,980 | 2,349 | 1,274 | 22,259 |
| | Solid Waste | | | | 5 | | | | 5 |
| | Water | | | | 1,000 | 6 | | | 1,006 |
| | Wind | 1,115 | 2,491 | | 3,687 | | 2,770 | 8,935 | 18,999 |
| Retirement | Coal | | 370 | 712 | | | | 1,034 | 2,116 |
| | Geothermal | | | 70 | | | | | 70 |
| | Landfill Gas | | | 15 | | | | | 15 |
| | Natural Gas | | | 118 | | | | | 118 |
| | Solar | | | 126 | | | | | 126 |
| | Water | | | 13 | | | | | 13 |
| | Wind | | | 149 | | | | | 149 |





NorthernGrid Submitted Projects:

Member-Driven
Non-Incumbent, Regional
Non-Incumbent, Interregional



Conditions of Interest for NorthernGrid footprint

Heavy system loading, lower renewable generation output

North to South/East to West

Low Hydro/End of Summer

East to West

West to East

South to North

Summer Peak

Winter Peak

West of Cascades, North



Combinations of transmission projects

Point of Interest!!

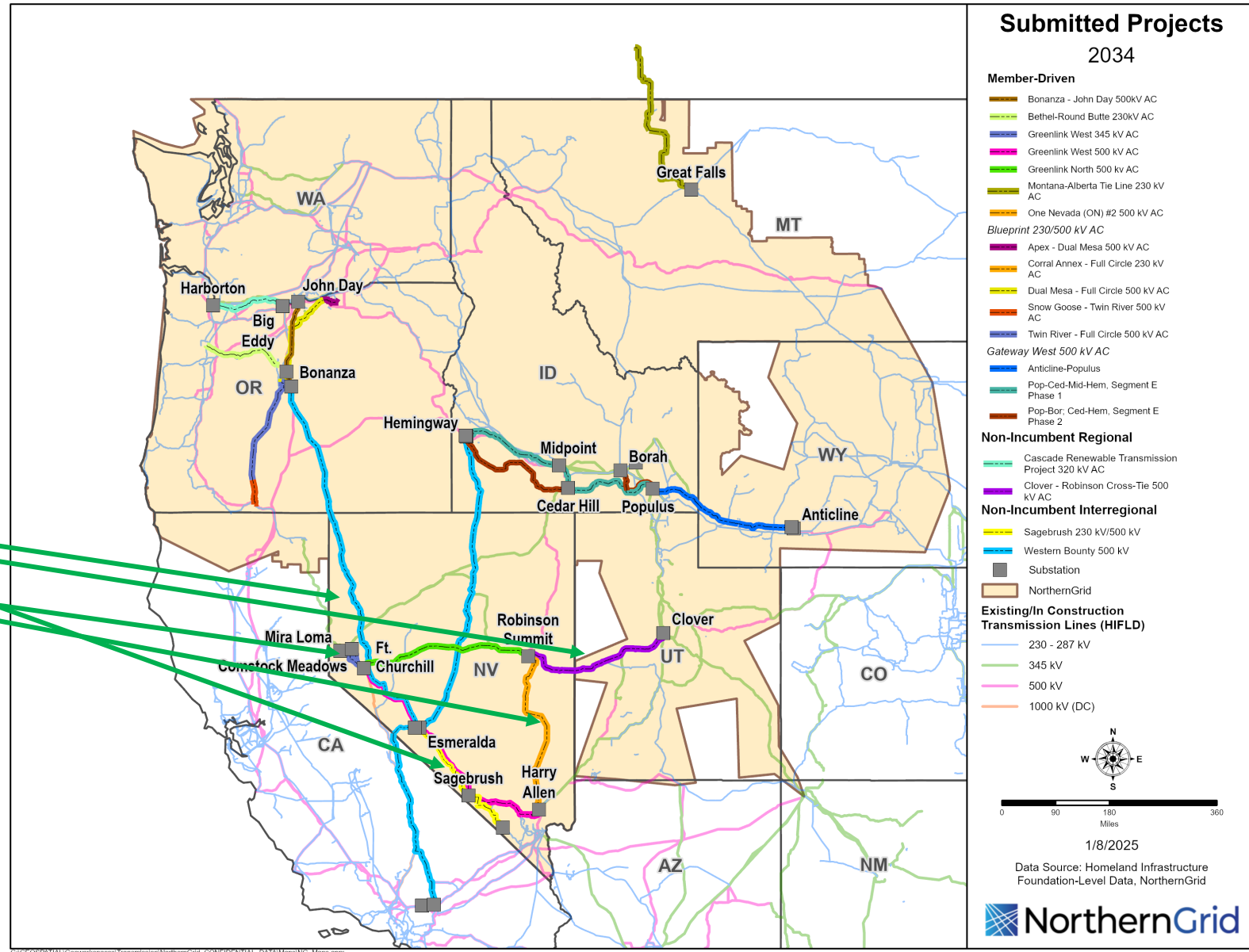
9 conditions for the NG footprint * 22 Regional Combinations yields a total of **198** Base Cases

| Regional Combination | All Greenlink Projects | MATL | One Nevada #2 | Gateway West, Anticline-Populus | Gateway West, Populus-Cedar Hill-Midpoint-Hemingway | Gateway West, Populus-Borah-Midpoint, Cedar Hill-Hemingway | Cascade Renewable Transmission System | Clover-Robinson (Cross-Tie) | Sagebrush (Interregional) | Western Bountly (Interregional) | Blueprint | Bonanza/John Day to Bonanza | Bethel Round Butte (Lambert Mountain View) |
|----------------------|------------------------|------|---------------|---------------------------------|---|--|---------------------------------------|-----------------------------|---------------------------|---------------------------------|-----------|-----------------------------|--|
| 1 | | | | | | | | | | | | | |
| 2 | x | x | x | x | x | x | | | | | x | x | x |
| 3 | x | x | x | x | x | x | x | x | | | x | x | x |
| 4 | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 5 | | | | | | | x | | | | | | |
| 6 | | | | | | | | x | | | | | |
| 7 | x | | x | | | | | x | | | | | |
| 8 | x | | x | | | | | x | x | x | | | |
| 9 | x | | x | | | | | | | | | | |
| 10 | x | | | | | | | | | | | | |
| 11 | x | | | | | | | x | | | | | |
| 12 | | | | x | x | | | | | | | | |
| 13 | | | | x | x | x | | | | | | | |
| 14 | | | | x | | | | | | | | | |
| 15 | | | | x | x | x | | | | x | | | |
| 16 | x | | x | x | x | x | | | | | | | |
| 17 | x | x | x | x | x | x | | x | | | | | |
| 18 | x | x | x | x | x | x | x | | | | | | x |
| 19 | | | | | | | | x | | | | | |
| 20 | x | x | x | x | x | x | | | | | x | | |
| 21 | x | x | x | x | x | x | | | | | | x | |
| 22 | x | x | x | x | x | x | | | | | | | x |



Example: RC 8

| Regional Combination | All Greenlink Projects | MATL | One Nevada #2 | Gateway West, Anticline-Populus | Gateway West, Populus-Cedar Hill-Midpoint-Hemingway | Gateway West, Populus-Borah-Midpoint, Cedar Hill-Hemingway | Cascade Renewable Transmission System | Clover-Robinson (Cross-Tie) | Sagebrush (Interregional) | Western Bounty (Interregional) | Blueprint | Bonanza/John Day to Bonanza | Bethel Round Butte (Lambert Mountain View) |
|----------------------|------------------------|------|---------------|---------------------------------|---|--|---------------------------------------|-----------------------------|---------------------------|--------------------------------|-----------|-----------------------------|--|
| 1 | | | | | | | | | | | | | |
| 2 | x | x | x | x | x | x | | | | | x | x | x |
| 3 | x | x | x | x | x | x | x | x | | | x | x | x |
| 4 | x | x | x | x | x | x | x | x | x | x | x | x | x |
| 5 | | | | | | | x | | | | | | |
| 6 | | | | | | | | x | | | | | |
| 7 | x | x | x | x | x | x | | x | x | x | | | |
| 8 | x | x | x | x | x | x | | x | x | x | | | |
| 9 | x | x | x | x | x | x | | x | x | x | | | |
| 10 | x | | | | | | | | | | | | |
| 11 | x | | | | | | x | | | | | | |
| 12 | | | | x | x | | | | | | | | |
| 13 | | | | x | x | x | | | | | | | |
| 14 | | | | x | x | x | | | | x | | | |
| 15 | | | | x | x | x | | | | | | | |
| 16 | x | | x | x | x | x | | | | | | | |
| 17 | x | x | x | x | x | x | | x | | | | | |
| 18 | x | x | x | x | x | x | x | | | | | | x |
| 19 | | | | | | | | x | | | | | |
| 20 | x | x | x | x | x | x | | | | | x | | |
| 21 | x | x | x | x | x | x | | | | | | x | |
| 22 | x | x | x | x | x | x | | | | | | | x |



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NorthernGrid Informational Series

Intro

FERC Orders

Resource Planning vs Transmission Planning

Participants in the NorthernGrid Planning Process

Walk-Through of the Planning Cycle

What is the Regional Transmission Plan

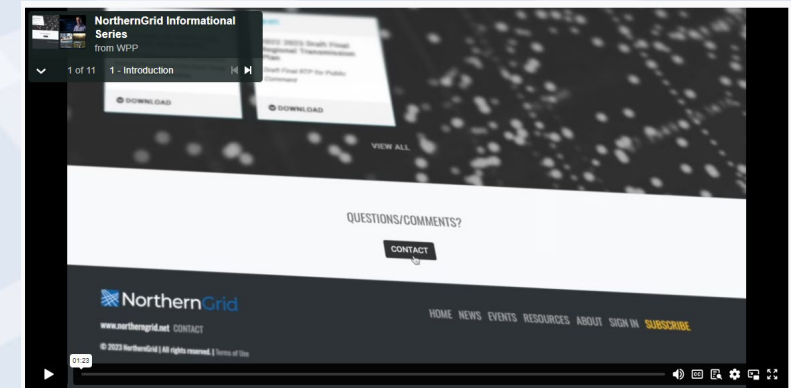
Technical Studies

Economic Studies

Cost Allocation

Cost Allocation Benefits & Payments

Role of the State



Thank you!

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NorthernGrid