Increased Connection for Shared Benefit:

Improving Transmission Planning,

Cost-Allocation, and Permitting in the Northwest

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Introduction

The clean energy transition is well underway in the United States, spurred on by technology gains, state clean energy mandates, and federal incentives in legislation including the Inflation Reduction Act (IRA), which contains nearly \$400 billion dollars in clean energy incentives. Concurrently with the need for rapid decarbonization of our electricity grid electricity demand is increasing with the need to electrify the transportation and building sectors and increases in electricity intensive industrial uses such as data centers. Effective decarbonization and management of increased electricity demand will require upgrading the existing transmission system in the United States and constructing new regional and interregional high-voltage transmission lines. Unfortunately, investment in new high-voltage transmission in the US has been declining over time. The share of energized projects developed by non-incumbent developers was 5% in 2020, down from 40% in 2013.¹ The US Department of Energy's (DOE) Grid Deployment Office recently announced nearly \$450 million in grid investments in the Northwest through the Grid Resilience and Innovation Partnerships (GRIP) Program² but those investments are in projects designed to upgrade current transmission lines and deployment processes rather than construct new lines. The challenges to building the amount of transmission needed in the region are complex and require changes in governance in addition to investment. Governance challenges include identifying the most cost-effective transmission projects over large geographic areas, allocating costs fairly to the ratepayers that will ultimately pay the bill for transmission upgrades, reaching consensus about where transmission lines should go, and permitting for construction through overlapping jurisdictions.

Changes in Regional Energy Policy, Extreme Weather, and Increased Electricity Demand Driving Need for New Transmission

Oregon and Washington have recently enacted clean energy standards in an effort to decarbonize the electricity sector. Oregon's 2021 Clean Energy Targets bill requires electricity service providers to reduce greenhouse gas emissions from electricity sold in Oregon to 100% below baseline levels by 2040.³ Washington's 2019 Clean Energy Transformation Act (CETA) mandates that all electric utilities servicing Washington customers generate 100% of their power from renewable or zero-carbon sources by 2045.⁴ There are also interim targets for eliminating coal-fired power generation. These mandates have led to the early retirement of coal plants in

https://www.energy.gov/sites/default/files/2023-10/National_Transmission_Needs_Study_2023.pdf

¹ US Department of Energy. (October 2023). National Transmission Needs Study.

² US Department of Energy Grid Deployment Office. (October 18, 2023). Grid Resilience and Innovation Partnerships (GRIP) Program Projects. <u>https://www.energy.gov/gdo/grid-resilience-and-innovation-partnerships-grip-program-projects</u>

³ Oregon Public Utility Commission. (2021). HB2021 Summary. <u>https://www.oregon.gov/puc/Documents/HB2021-</u> <u>Summary.pdf</u>

⁴ Washington Utilities and Transportation Commission. Clean Energy Transformation Act.

https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/cleanenergy-transformation-act

the Northwest, including the Boardman Oregon plant in 2022,⁵ with more than 4,000 MW of coal-powered generation expected to be removed from the grid by 2030.⁶ The power resources expected to replace those coal-fired and other thermal generation plants include wind and solar generation facilities located in eastern Oregon, Washington, and Montana. Montana has some of the highest quality onshore wind potential in the country, with a potential capacity of over 650,000 MW.⁷ Offshore wind facilities, located off the coast of southern Oregon, also have the potential to generate multiple GWs of power for the region. Oregon set a policy goal of studying this potential in 2021.⁸

Extreme weather events are on the rise around the United States and the Northwest is no exception. The "heat dome" event of 2021, which brought temperatures of 110+ degrees to the region, killing hundreds, is a particularly extreme example.⁹ Major ice storms occurred in early 2021 and late 2022, leaving thousands without power.^{10 11} Increased frequency of both abnormal heat and cold increase energy demand and put stress on transmission infrastructure. A robust regional and interregional transmission grid can mitigate against this increased demand and allow grid managers to send power to where it is needed during extreme weather events.¹²

As states are mandating carbon-free electricity and grappling with extreme weather, electricity demand is also increasing due to industry growth and the electrification of other sectors of the economy. The most recent report from the Pacific Northwest Utilities Conference Committee (PNUCC) forecasts a 25% growth in demand through July 2033 in Oregon, Washington, Idaho, and Montana, which is more than double its forecast from the previous year.¹³ In order to meet that demand, increased transmission capacity will be required to move power from locations where it is generated to population centers and industrial uses. The US DOE 2023 National Transmission Needs Study identifies a need of 2.7 to 4.4 gigawatts of increased transfer capacity

⁵ Oregon Public Broadcasting. (Sept 15, 2022). Boardman smokestack demolished, marking the end of a coal-fired era in Oregon. <u>https://www.opb.org/article/2022/09/15/boardman-oregon-coal-smoke-stack-portland-general-electric/</u>

⁶ Northwest Power and Conservation Council. (February 2022). 2021 Northwest Power Plan. <u>https://www.nwcouncil.org/fs/17680/2021powerplan_2022-3.pdf</u>

⁷ Stacker. (August 31, 2021). Montana is the #2 state with the most untapped wind energy potential.

https://stacker.com/montana/montana-2-state-most-untapped-wind-energy-potential

 ⁸ Oregon Department of Energy. (September 15, 2022). Floating Offshore Wind: Benefits and Challenges for Oregon. <u>https://www.oregon.gov/energy/Data-and-Reports/Documents/2022-Floating-Offshore-Wind-Report.pdf</u>
⁹ Samayoa M. (September 2022). Pacific Northwest heat wave was a freak, 10,000 year event, study finds. OPB.

https://www.opb.org/article/2022/09/28/pacific-northwest-heat-wave-2021-oregon-summer-weather-heat-domeclimate-change/

 ¹⁰ Associated Press. (February 13, 2021). Hundreds of Thousands Without Power in Northwest US Ice Storm.
<u>https://www.voanews.com/a/usa_hundreds-thousands-without-power-northwest-us-ice-storm/6202009.html</u>
¹¹ Rush C. (December 22, 2022). Winter Storm hits Pacific Northwest amid extreme cold. AP News.

https://apnews.com/article/oregon-portland-storms-seattle-climate-and-environment-72afca23b7bf9cca4e648da629e352da

¹² Goggin M. (July 2021). Transmission Makes the Power System Resilient to Extreme Weather. Grid Strategies for ACORE. <u>https://acore.org/wp-content/uploads/2021/07/GS_Resilient-Transmission_proof.pdf</u>

¹³ Pacific Northwest Utilities Conference Committee. (July 2023). Northwest regional forecast of power load and resources August 2023 through July 2033. <u>https://www.pnucc.org/wp-content/uploads/2023-PNUCC-Northwest-Regional-Forecast-final.pdf</u>

between the Northwest and Mountain regions by 2035.¹⁴ Currently, the only high capacity transmission line close to construction in the region is the Boardman to Hemingway 500 kV line, connecting eastern Oregon to southern Idaho. Failing to build new transmission will place meeting clean energy goals in jeopardy.¹⁵ It will also hinder economic growth and result in increased costs to ratepayers. The Clean Energy Transition Institute's 2023 Net-Zero Northwest report found that not expanding the grid would likely lead to more than \$13 billion of increased costs relative to optimal expansion.¹⁶ Limiting east-west expansion of transmission, which would constrain the ability to utilize Montana's low-cost wind resources, increases costs by more than \$3 billion.¹⁷ Expanding transmission will lower decarbonization costs and increase options for achieving the region's climate goals.¹⁸

Efforts to increase transmission are currently hindered by poor planning practices, a lack of cost allocation methodologies, and difficulties with siting and permitting transmission lines. The Northwest has yet to develop a robust transmission planning regime that can identify a cost-effective portfolio of regional transmission projects, taking into account the needs that arise from decarbonization and electrical demand growth, that will maximize the benefits of transmission to ratepayers and fairly allocate the costs. Lack of coordination within and between jurisdictions and challenges to finding consensus about where transmission will go in the region make siting and permitting decades-long undertakings. The status quo will not produce the amount of transmission that is needed to successfully transition the Northwest to a clean energy economy.

Transmission Planning

BPA and the History of Transmission in the Northwest

The electrification of the Northwest was primarily achieved through the federal Columbia River hydropower system as part of the post-Depression effort to electrify rural and developing areas of the country. Bonneville Power Administration (BPA), one of four federal power marketing authorities (PMA), sells the wholesale power generation from 31 federal dams within the Columbia River system and one non-federal nuclear plant. BPA is required by statute to sell the electricity at cost to satisfy the electrical load demands of community-owned utilities (COU) as well as rural electrification districts within its footprint. After these customers' electrical loads have been served BPA can market excess power to investor-owned utilities (IOU). The power from the federal hydropower system is considered carbon-free and is also "dispatchable", which

¹⁶ Clean Energy Transition Institute. (June 2023). Net-zero northwest: energy pathways results: transmission https://www.nznw.org/energy/transmission

¹⁴ US Department of Energy. (October2023). National Transmission Needs Study.

https://www.energy.gov/sites/default/files/2023-10/National_Transmission_Needs_Study_2023.pdf NAt ¹⁵ Harrison J. (March 24, 2022). One big detail could derail Northwest's clean-energy goals. Columbia Insight https://www.energy.gov/sites/default/files/2023-02/022423-DRAFTNeedsStudyforPublicComment.pdf

¹⁷ ibid

¹⁸ ibid

means that the flow of power can be changed quickly based on power demand. This makes it an important component of the power generation mix for achieving the region's clean electricity goals.¹⁹ BPA owns and operates approximately 15,000 miles of high-voltage transmission lines across the Northwest in order to deliver power to its customers, accounting for 75% of regional transmission.²⁰ The remaining 25% are owned by vertically integrated utility companies including PacificCorp, Idaho Power, Avista, Puget Sound Energy, Portland General Electric, and several rural cooperatives and community-owned utility companies.²¹ See the map below for the geographic extent of BPA's transmission lines.²²



Given the sheer extent of its existing transmission system and its historical role as the main provider of transmission in the region, BPA will play an important role in the buildout of future transmission capacity in the Northwest. BPA's status as a PMA creates unique issues and challenges. A recent whitepaper by Renewable Northwest and the Northwest and Intermountain Power Producers Coalition, "Appropriate and Required: BPA and Building the Grid the

¹⁹ BPA. Resource adequacy: meeting the region's energy needs. <u>https://www.bpa.gov/learn-and-</u> participate/community-education/hydropower-101/resource-adequacy

²⁰ BPA. (Aug. 2021). BPA Facts. https://www.bpa.gov/-/media/Aep/about/publicatons/generaldocuments/bpa-facts.pdf

²¹ Oregon Department of Energy. (2020). 2020 Biennial Energy Report: Energy 101. https://www.oregon.gov/energy/Data-and-Reports/Documents/2020-BER-Energy-101.pdf ²² Map available at: https://www.bpa.gov/-/media/Aep/about/publications/maps/bpa-tlines-small.pdf

Northwest Needs," details these issues and makes a strong case for how BPA can begin to reform processes in order to build more transmission.²³

As a federal power marketer, BPA is not subject to the oversight of the Federal Energy Regulatory Commission (FERC) except in limited cases. In 1996 it voluntarily complied with FERC Orders 888 and 889, which required that transmission owners provide open access to their transmission systems and charge users the same rates they would charge themselves for the service according to the terms of an open access transmission tariff (OATT). BPA allows both independent power producers (IPP) and IOUs in the region to access and use its transmission system. Under its OATT, BPA has an obligation to plan and provide for the transmission needs of its "network" customers, which are mainly the COUs that BPA is required to serve. These network customers provide information to BPA on projected load and generation growth to facilitate that planning. Payment for any upgrades is included in the rates that COU ratepayers are charged.²⁴

BPA is not obligated to proactively plan for the transmission needs of IPPs and IOUs utilizing its transmission lines for "point-to-point" service of moving energy from one place to another outside of BPA's footprint. These customers must submit specific requests for future needs and are obligated to agree to pay for the cost of any upgrades to the transmission system incurred by the requests. Currently the process for evaluating these requests, implemented in 2013, is called the Transmission Service Request Study and Expansion Process (TSEP). Under this annual process, BPA aggregates all transmission service requests in a single cluster. They then evaluate what transmission upgrades would be necessary to service all of those requests. For the portion of requests that will require upgrades, BPA requires those generators to make financial commitments to cover their portion of the necessary upgrades, including the environmental and engineering studies needed. The generators must agree to a term of service that guarantees BPA will recover its costs and they must post a line of credit or security deposit.²⁵ If a certain threshold of financial commitment cannot be secured for a transmission line or upgrades for identified future needs, BPA will not build the project. If the financial commitments are secured, BPA then determines what rate these customers will be charged for their transmission service under TSEP. Customers can either be charged BPA's "embedded" rate or an incrementally higher rate based on a financial analysis that is not transparent to the applicant. This lack of transparency makes it impossible to know if development projects will pencil out until the analysis is completed. BPA is currently months behind schedule on its 2023 TSEP Cluster Study and has announced that it will not run a 2024 Cluster Study, with plans to resume for 2025.²⁶

²³ Northwest and Intermountain Power Producers Coalition, Renewable Northwest. (May 2023). "Appropriate and Required": BPA and Building the Grid the Northwest Needs. https://renewablenw.org/sites/default/files/Reports-Fact%20Sheets/BPA%20Tx%20Whitepaper%2005.03.2023.pdf

²⁴ BPA. (October 2021). Open Access Transmission Tariff. <u>https://www.bpa.gov/-/media/Aep/transmission/open-</u> access-transmission-tariff/bpa-open-access-transmission-tariff-20211001.pdf

 $^{^{25}}$ BPA. (October 24, 2023). TSR Study and Expansion Process (TSEP) BPA Transmission Business Practice, Version 9. https://www.bpa.gov/-/media/Aep/transmission/business-practices/tbp/tsr-study-expansion-process-bp.pdf

²⁶ BPA. (July 20, 2023). Tech Forum Notice: 2024 TSEP Cluster Study Update.

BPA's TSEP process is necessary to maintain the agency's compliance under its Open Access Transmission Tariff (OATT) and to provide the agency a method for analyzing the impacts of generators proposing to interconnect to their system. It is, however, not sufficient for long term regional planning and should be supplemented with a process that involves investor-owned utilities, public power customers and other stakeholders impacted by the lack of effective regional planning. BPA is in the process of reevaluating these processes²⁷ and has recently announced projects to upgrade their current grid.²⁸ BPA has also committed to a more open and transparent process around transmission planning and interconnection²⁹

NorthernGrid Planning Process

FERC Orders 890 and 1000 require cooperative regional and interregional transmission planning by utilities.^{30 31} In some parts of the United States this is achieved by Regional Transmission Organizations (RTOs) or Independent System Operators (ISOs). These non-profit entities plan for and operate but do not own the transmission assets within their footprint. Northwest utilities have not joined an RTO or ISO, though talks about their value to the region are ongoing. There are estimates that an RTO could save the Western region \$2 billion in avoided infrastructure costs.³² Currently regional transmission planning in compliance with Order 890 and 1000 is done by NorthernGrid, a voluntary organization of 11 utilities from OR, WA, ID, MT, UT, WY, and NV plus BPA and Berkshire Hathaway Transmission (owner of the Montana-Alberta Tie Line). BPA and Berkshire Hathaway Transmission do not have FERC planning requirements but participate in NorthernGrid as members. Participants who are FERC-jurisdictional are called Enrolled Parties. Please see map below for the distribution of members throughout the region.³³

²⁷ BPA. TC-25 Tariff Proceeding. <u>https://www.bpa.gov/energy-and-services/rate-and-tariff-proceedings/tc-25-tariff-proceeding</u>

 ²⁸ Ciampoli, P. (July 14, 2023). Bonneville Power Administration moves forward with more than \$2 billion in grid projects. American Public Power Association. <u>https://www.publicpower.org/periodical/article/bonneville-power-administration-moves-forward-with-more-2-billion-grid-projects</u>
²⁹ BPA. (June 2023). Fact Sheet: BPA's Evolving Grid: Update on the State of Transmission. <u>https://www.bpa.gov/-</u>

²⁹ BPA. (June 2023). Fact Sheet: BPA's Evolving Grid: Update on the State of Transmission. <u>https://www.bpa.gov/-</u> /media/Aep/about/publications/fact-sheets/fs-20230609-bpa-evolving-grid-update-on-the-State-of-<u>Transmission.pdf</u>

 ³⁰ FERC. (July 21, 2011). Order 1000 Transmission Planning and Cost Allocation by Transmission Owning and
Operating Public Utilities. 18 CFR Part 35. <u>https://www.ferc.gov/sites/default/files/2020-04/OrderNo.1000.pdf</u>
³¹ FERC. (February 16, 2007). Order 890 Preventing Undue Discrimination and Preference in Transmission Service. 18

CFR Parts 35 and 37. https://ferc.gov/sites/default/files/2020-05/E-1fr890.pdf

³² The Nature Conservancy. (August 2022). Power of Place-West Executive Summary.

https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_Power-of-Place-WEST-Executive_Summary_WEB-9.2.22.pdf

³³ NorthernGrid. (September 25, 2023). Draft Final Regional Transmission Plan for the 2022-2023 NorthernGrid Planning Cycle. <u>https://www.northerngrid.net/private-media/documents/2022-</u> 23 DraftFinal Regional Transmission Plan.pdf



Americans for a Clean Grid recently gave the Northwest region a "D" grade on their Transmission Planning and Development Regional Scorecard.³⁴ Most of that grade was based on the overall poor planning practices of NorthernGrid, which received an "F" grade on the scorecard. NorthernGrid's biennial regional transmission planning process is managed entirely by its members. NorthernGrid uses the information its members provide to the Western Electricity Coordinating Council (WECC) on forecasted load growth, generation, and transmission resources to study North American Electric Reliability Corporation (NERC) reliability compliance over a tenyear time horizon. These studies are used to generate the Regional Transmission Plan (RTP), which details the best combination of regional transmission assets for the planning period. There are no standard requirements for the information that is given to NorthernGrid and utilities vary in what information and assumptions they incorporate into the information they submit. In the 2022-2023 study period NorthernGrid members submitted 141 transmission projects for study, only 12 of which were considered regionally significant.³⁵ Non-incumbent transmission providers can and do propose projects to be studied, but none of those projects have ever been included in

³⁴ Americans for a Clean Energy Grid. (June 2023). Transmission Planning and Development Regional Report Card. <u>https://www.cleanenergygrid.org/wp-</u>

content/uploads/2023/06/ACEG_Transmission_Planning_and_Development_Report_Card.pdf ³⁵ NorthernGrid. (October 2022). Study Scope for the 2022-2023 NorthernGrid Planning Cycle.

https://www.northerngrid.net/private-media/documents/NG_Study_Scope_2022-2023_Approved.pdf

the final RTP.³⁶ NorthernGrid meets annually to coordinate with the other two regional planning entities in the West, CAISO and WestConnect, however, they do not conduct joint planning.

Both BPA and NorthernGrid's transmission planning processes are inadequate for identifying and providing for the amount of transmission that will be needed as the region decarbonizes and deals with more frequent extreme weather conditions. The following policy recommendations are for changes to planning practices in the Northwest region that may begin to identify portfolios of transmission projects that can meet the transmission needs of the future while maximizing benefits to ratepayers. In making these recommendations we draw on best practices developed by RTOs and ISOs around the United States. While the Northwest does not participate in an RTO, the region can utilize some of the best practices developed by these entities, detailed in a 2021 paper by Grid Strategies LLC and the Brattle Group,³⁷ to kick start transmission buildout. Effective utilization of best practices may allow the region to capture more of the benefits of transmission cost-effectively for ratepayers, saving the region billions of dollars and easing the cost of the energy transition.

Steps to Reform Regional Planning

Increase the Planning Time Horizon to 20 or More Years

Regional planning should have a planning horizon of at least 20 years. The expected timeframe to build transmission is 10-15 years and the lifespan of transmission lines can be up to 60 years. A longer time horizon is needed in the Northwest to capture the requirements of the clean energy mandates in Oregon and Washington. NorthernGrid's current study scope only looks out to 2032, which falls short of these energy mandate deadlines. There is no way to accurately plan for the transmission needs of the energy transition without including the whole transition in the planning period. In the 2022-2023 Draft Final Regional Transmission Plan the Cascade Renewable Transmission Project was not selected for the RTP in combination with two other projects because it only slightly improved reliability through the 2032-time horizon and was deemed not cost effective. If NorthernGrid had used a 20-year time horizon, the value of that east-west connection to the energy transition may have been more clear.³⁸ Utilities in the region use a 20-year time horizon for their Integrated Resource Plans (IRP), which means they have the necessary information for that time frame. The region is already moving in this direction; the state of Washington has begun requiring a 20-year transmission planning horizon for state

³⁶ NorthernGrid. (September 25, 2023). Draft Final Regional Transmission Plan for the 2022-2023 NorthernGrid Planning Cycle. <u>https://www.northerngrid.net/private-media/documents/2022-</u>

²³_DraftFinal_Regional_Transmission_Plan.pdff

³⁷ Brattle Group. Grid Strategies. (October 2021). Transmission planning for the 21st century: proven practices that increase value and reduce costs. <u>https://www.brattle.com/wp-content/uploads/2021/10/2021-10-12-Brattle-GridStrategies-Transmission-Planning-Report_v2.pdf</u>

³⁸ NorthernGrid. (September 25, 2023). Draft Final Regional Transmission Plan for the 2022-2023 NorthernGrid Planning Cycle. <u>https://www.northerngrid.net/private-media/documents/2022-</u>

²³_DraftFinal_Regional_Transmission_Plan.pdf

IRPs.³⁹ Having a regional transmission plan that aligns with the 20-year resource planning horizon would allow for more comprehensive evaluation of transmission needs.

Standardize Information

In order to accurately assess transmission proposals, the regional planning process should have a standard of information that each transmission owner or non-incumbent developer must submit. This standard should include inputs included in IRPs, such as state and federal clean energy policy requirements. Regional planners should work with utilities and developers to ensure that the information they are providing is as up-to-date as possible in terms of forecasted load. The 2022-23 NorthernGrid study scope anticipates only a total annualized load growth of 0.6% through 2032.⁴⁰ This forecast load growth is only a quarter of the PNUCC forecast referenced earlier, which anticipates high industrial load growth in the next five years. Portland General Electric has recently filed a more than 40% increase in its load forecast for the next 20 years in its IRP, citing industrial and data center load growth.⁴¹ Resource planning and transmission planning often happen in different departments within utilities; sharing of information across departments is crucial to ensuring that regional planners ultimately have the needed data for decision making. Establishment of standards for information should include oversight authority to enforce the requirements.

Implement Scenario-based Planning

10-year reliability standards are not adequate to assess the transmission portfolios that will be required 20+ years from now. Regional plans should evaluate a variety of scenarios that may impact loads in the region, such as electrification, high industrial growth, and extreme regional weather events. Recently published studies that may help shape scenario selections include Clean Energy Transition Institute's Net-Zero Northwest⁴² and The Nature Conservancy's Power of Place: West.⁴³ WECC's revised 20-year data sets⁴⁴ and the US DOE Grid Deployment Office's National Transmission Planning study, which is taking a deep look at transmission over 200 possible futures up to 2050, may also provide useful guidance once they are published.⁴⁵

⁴³ Nature Conservancy. (August 2022.) Power of Place-West Executive Summary.

https://gridworks.org/initiatives/western-states-transmission-initiative/#1675731815466-e9bd873c-466c

³⁹ Washington State Legislature. (July 23, 2023). Senate Bill 5165.

https://app.leg.wa.gov/billsummary?BillNumber=5165&Year=2023&Initiative=false#documentSection ⁴⁰ NorthernGrid. (October 2022). Study Scope for the 2022-2023 NorthernGrid Planning Cycle.

https://www.northerngrid.net/private-media/documents/NG_Study_Scope_2022-2023_Approved.pdf ⁴¹ PGE. (July 7, 2023). 2023 Clean Energy Plan and Integrated Resource Plan Addendum: System Need & Portfolio Analysis Refresh Oregon Public Utilities Commission <u>https://edocs.puc.state.or.us/efdocs/HTB/lc80htb16164.pdf</u>

⁴² Clean Energy Transition Institute. (June 2023). Net-zero northwest: energy pathways. <u>https://www.nznw.org</u>

https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_Power-of-Place-WEST-Executive_Summary_WEB-9.2.22.pdf

⁴⁴ Statements made by Kris Raper, WECC. (July 27, 2023). Webinar: Is more transmission necessary in the West? Western States Transmission Initiative. Recording available at:

⁴⁵ US DOE Grid Deployment Office. National Transmission Planning Study. <u>https://www.energy.gov/gdo/national-</u> <u>transmission-planning-study</u>

Account for Multiple Transmission Benefits

Currently, FERC Order 1000 only requires that regional transmission planners look at three categories of benefits: economic, reliability, and public policy. In non-RTO regions such as the Northwest, those three categories are siloed with a majority of the focus on reliability.

These three categories of benefits are not adequate to evaluate transmission benefits. Expanding the benefit analysis into a multi-value framework that takes into account the full range of benefits that transmission provides is essential to being able to identify an optimal mix of transmission projects for the region.

FERC recognizes that the current categories do not do an adequate job of fully capturing transmission benefits and has proposed a new set of transmission benefits to require in their current Notice of Proposed Rulemaking, which include: avoided or deferred reliability transmission projects and aging infrastructure replacement, either reduced loss of load probability or reduced planning reserve margin, production cost savings, reduced transmission energy losses, reduced congestion due to transmission outages, mitigation of extreme events and system contingencies, mitigation of weather and load uncertainty, capacity cost benefits from reduced peak energy losses, deferred generation capacity investments, access to lower cost generation, increased competition, and increased market liquidity.⁴⁶

The Midcontinent Independent System Operator (MISO), who received an A- on ACEG's scorecard for their planning process,⁴⁷ was the first to develop a framework of evaluating transmission projects for multiple benefits. MISO has gone through several iterations of its process, which is now called Long Range Transmission Planning (LRTP). The categories it currently uses include: congestion and fuel savings, avoided capital costs of local resource investments, avoided transmission investment, reduced resource adequacy requirements, avoided risk of load shedding, decarbonization, reliability issues addressed by LRTP, and other qualitative benefits.⁴⁸ Quantifying avoided costs of local resource investments and transmission investment directly addresses the issue of the overly costly, piecemeal process that the Northwest currently uses.

Other RTOs/ISOs use varying benefit frameworks to evaluate transmission proposals. Southwest Power Pool (SPP) includes reduced capacity reserve requirements, improvements in reliability,

⁴⁶ FERC. (April 2022). Notice of Proposed Rulemaking, Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 87 Fed. Reg. 26504. <u>https://www.ferc.gov/media/rm21-17-000</u>

⁴⁷ Americans for a Clean Energy Grid. (June 2023). Transmission Planning and Development Regional Report Card. <u>https://www.cleanenergygrid.org/wp-</u>

content/uploads/2023/06/ACEG_Transmission_Planning_and_Development_Report_Card.pdf

⁴⁸ Gramlich, R. (August 9, 2022). Enabling Low-Cost Clean Energy and Reliable Service Through Better Transmission Benefits Analysis: A Case Study of MISO's Long Range Planning. American Council on Renewable Energy. The Macro Grid Initiative.

https://acore.org/wp-content/uploads/2022/08/ACORE-Enabling-Low-Cost-Clean-Energy-and-Reliable-Service-Through-Better-Transmission-Analysis.pdf

improvements in import/export limits, public policy benefits, and reduced operating reserve requirements in its 2016 Regional Cost Allocation Review process. They emphasize including benefits that can be quantified monetarily so as to demonstrate that the cost to the ratepayers results in overall savings over time.⁴⁹ The New York Independent System Operator (NYISO) has developed specific benefit metrics for its Public Policy Transmission Process, which include project cost and cost containment, operability, expandability, performance, and systemwide economic benefits to production costs, installed capacity costs, and environmental emissions. These metrics are separate from resource adequacy and reliability standards.⁵⁰ The California Independent System Operator (CAISO) uses the three metrics of reliability, public policy, and economic benefits to evaluate projects in an iterative process to capture multiple benefits of a single project.⁵¹

Regional transmission planners should look to this suite of benefit metrics and approaches as a starting point to develop a list of benefits that transmission will provide to Northwest ratepayers based on scenarios they have identified.

Utilize Portfolio-based Planning

Regional transmission plans should include a portfolio-based evaluation method to facilitate identifying the most cost-effective projects for ratepayers. In this type of analysis, a selected suite of transmission projects is applied to an identified scenario to test both for both reliability and economic benefits on a regional basis. This analysis recognizes the benefits developed previously and works to find synergies among different combinations of transmission projects that maximize those benefits. It is an iterative process of benefit-cost analysis to identify which combination of transmission projects have the highest benefit-cost ratio (BCR) for ratepayers. Identification of projects that have multiple benefits facilitates cost allocation later in the process.

MISO has the longest track record with portfolio-based planning and their process is instructive. Originally called the Multi-Value Project process, it has now been folded into their Long Range Transmission Planning process.⁵² MISO uses a series of models to construct scenarios and test potential transmission resources in order to maximize the benefit of avoided cost of local resource investments, avoided congestion, and fuel savings, among other benefits. The resulting portfolio of transmission projects has a demonstrated high BCR for ratepayers. The estimated

⁴⁹ SPP. (July 11, 2016). Regional Cost Allocation Review Report for RCAR II. <u>https://www.spp.org/documents/46235/rcar%</u>202%20report%20final.pdf

⁵⁰ NYISO. (June 2020). Manual 36 Public Policy Transmission Planning Process Manual.

https://www.nyiso.com/documents/20142/2924447/M-36_Public%20Policy%20Manual_v1_0_Final.pdf ⁵¹ CAISO. (May 10, 2023). Revised Draft 2022-2023 Transmission Plan.

http://www.caiso.com/InitiativeDocuments/Revised-Draft-2022-2023-Transmission-Plan.pdf

⁵² MISO. (June 25, 2022). LRTP Tranche 1 Portfolio Detailed Business Case.

https://cdn.misoenergy.org/LRTP%20Tranche%201%20Detailed%20Business%20Case625789.pdf

BCR of the LRTP Tranche 1 portfolio is 2.6, meaning for every \$1.00 that a ratepayer has to pay on their utility bill for this portfolio of transmission projects they will have saved \$2.60.⁵³

Regional planners should develop a portfolio-based benefit-cost analysis methodology tailored to the region to identify transmission plans that would achieve system-wide benefits for the region's customers and ultimately save them money.

Lower Benefit-cost Ratio Needed for Inclusion in RTP

Once scenario and portfolio-based evaluation methodologies are created along with a new benefit framework, thresholds for inclusion in the RTP must be established. Currently, in order to be included in the NorthernGrid RTP, a non-incumbent proposed project has to have a BCR of 1.25 as compared to the self-reported avoided costs of the incumbent member utilities. This high BCR makes it difficult for a non-member project to be selected for the RTP. Different RTOs have established different benefit-cost ratios that qualify projects for inclusion in their regional transmission plans. MISO uses a 1.0 benefit-cost ratio for multi-value projects and SPP relies on a benefit-cost ratio of 1.0 for economic planning and public policy projects.⁵⁴ This lower ratio allows for the projects that are clearly of benefit to the ratepayer to be included in the RTP without setting a higher barrier to entry for non-incumbent developers. Regional planners should adopt a 1.0 BCR for inclusion in the RTP.

Implement Third-party, Non-market Participant Oversight

An independent, non-market participant should oversee the regional transmission planning process in order to monitor the process and verify the information and assumptions provided by incumbent utilities. The enrolled parties of NorthernGrid have incentives to favor their own projects in their decisions, as they can recover their costs with their designated rate of return at state utility commissions and FERC. BPA similarly can recover its transmission costs through rates. Non-incumbent developers do not compete on a level playing field if there is not an independent monitor of the proceedings. Independent oversight of resource procurement decisions is not without precedent in the energy industry when utilities are directly involved in decisions that affect their finances. An independent evaluator (IE) is responsible for oversight of the Request for Proposal process that occurs when a vertically integrated utility has identified a need for new generation. Both the utility and independent power producers submit proposals for filling the generation need and the IE ensures that the utility does not favor itself in the selection process.

Evolving Conversations around Transmission Planning

Conversations around effective methods of transmission planning for both FERC-jurisdictional and non-FERC jurisdictional entities are ongoing in the region. In October 2023, Western Power

⁵³ ibid

⁵⁴ Lieberman J. (2021). How transmission planning and cost allocation processes are inhibiting wind and solar development in SPP, MISO, and PJM. Concentric Energy Advisors, ACORE, ACEP, SEIA. <u>https://acore.org/wp-content/uploads/2021/03/ACORE-Transmission-Planning-Flaws-in-SPP-MISO-and-PJM.pdf</u>

Pool (WPP) published a concept paper outlining a proposal for a new transmission planning effort that aims to address the fact that current planning frameworks are not producing the amount of transmission needed in the West.⁵⁵ The effort, called the Western Transmission Expansion Coalition (WTEC, is still very much in the beginning stages as of the writing of this paper. The WTEC could and should integrate the best practices laid out above in its ongoing development.

Cost Allocation

Cost-allocation is the process of determining who benefits from the identified transmission projects in the RTP so that costs can be allocated to ratepayers accordingly. Increased transmission has both local and system-wide benefits. Benefits of local transmission projects, such as increased local capacity for newly constructed buildings, are straightforward to assess and assign to ratepayers. The system-wide benefits of high-capacity regional transmission lines are often difficult to assign to ratepayers and the process can be very contentious. No one wants to pay for costly transmission infrastructure from which they don't perceive any value gain.

BPA's statutory requirements to serve COUs and rural electrical cooperatives at cost adds a level of complexity to cost-allocation in the region. BPA's preference customers are a mix of customers expecting large load growth, such as those in the Puget Sound area or rural areas with increased data center growth, and those in rural areas that anticipate little if any load growth over the coming decades. The latter view potential increased transmission outlays by BPA as an increased cost with no benefit to them. Creating a multi-value benefit framework and clearly demonstrating the value of transmission through benefit-cost analysis as discussed in the previous sections may help those customers perceive the benefits of transmission to the region and support BPA transmission investment.

Adding to the complexity of cost allocation are the differences between vertically integrated utilities, which make up the enrolled parties of NorthernGrid, and merchant developers of transmission lines, who are not enrolled members, but can submit project proposals for study for possible inclusion in the Regional Transmission Plan. Similar to BPA, vertically integrated utilities own the generation facilities and transmission facilities in a given geographic footprint and recover their costs of operation and their capital costs plus a rate of return through ratepayer's utility bills. Unlike with BPA, however, this cost recovery is regulated through state Public Utility Commissions (PUC). Utilities must show that their capital outlays for projects such as transmission lines are prudent, used, and useful before state PUCs will allow them to include the costs in ratepayers' bills. Inclusion in the RTP can help a PUC reach a prudence determination. Merchant developers, in contrast, are not regulated by state PUCs and have no guarantee of cost recovery for their projects. Merchant developers submit their projects to NorthernGrid in hopes

⁵⁵ Western Power Pool. (October 2023). Western Transmission Expansion Coalition Concept Paper for a West-Wide Transmission Plan. <u>https://www.westernpowerpool.org/private-</u> <u>media/documents/Western Transmission Planning Concept Paper October 2023.pdf</u>

of being selected for the RTP, which would then trigger the current cost allocation process and allow merchant developers to recover their costs through ratepayer payments, as utilities are able to now. As previously stated, no merchant developer project has ever been selected for the RTP. Without cost allocation, merchant developer's options for cost recovery are to sell transmission capacity to utilities or independent power producers, which is riskier than the guaranteed returns of cost allocation. Given the enormous upfront costs of regional transmission lines, a lack of access to cost allocation can have a dampening effect on merchant investment in transmission development.

Currently NorthernGrid uses a straightforward cost allocation method of assigning all costs to the load of identified projects in the Regional Transmission Plan, however, the non-FERC jurisdictional members of NorthernGrid, such as BPA, are not obligated to accept any cost allocation. As there has never been a regional line or non-incumbent developer project identified in the plan, NorthernGrid has never had to grapple with cost allocation issues.

Cost-allocation methods are subject to FERC oversight and the following principles: (1) costs must be allocated in a way that is roughly commensurate with benefits; (2) there must be no involuntary cost allocation to non-beneficiaries; (3) a required benefit to cost threshold ratio cannot exceed 1.25; (4) costs must be allocated solely within the transmission planning region (or pair of regions) unless those outside the region (or pair of regions) voluntarily assume costs; (5) there must be a transparent method for determining benefits and identifying beneficiaries; and (6) there may be different methods for different types of transmission facilities.⁵⁶ After developing a new benefit framework and identifying regional multi-value projects, regional planners will need to use that benefit framework to shape a regional cost-allocation methodology according to these principles.

Developing a Cost Allocation Methodology for the Northwest

While the benefit assignment process may make the cost allocation process seem straightforward (a project that has been determined to have multiple regional benefits should be paid for by all those in the region), there can be sub-regional variations that may determine how the exact benefit framework is worked out.

There are multiple ways that other regions have dealt with this issue. CAISO uses an internal High-Voltage Transmission Access Charge modeling and assessment tool to charge transmission costs.⁵⁷ NYISO uses a zonal system based on peak summer demand assumptions to assign costs to ratepayers over a ten-year period for projects identified through their Public Policy Process.⁵⁸

 ⁵⁶ FERC. (July 21, 2011). Order 1000 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities. 18 CFR 35. <u>https://www.ferc.gov/sites/default/files/2020-04/OrderNo.1000.pdf</u>
⁵⁷ CAISO. (May 10, 2023). Revised Draft 2022-2023 Transmission Plan Section 8.5.2.

http://www.caiso.com/InitiativeDocuments/Revised-Draft-2022-2023-Transmission-Plan.pdf ⁵⁸ NYISO. (July 3, 2023). OATT Section 31.8.2.1.

https://nyisoviewer.etariff.biz/ViewerDocLibrary/MasterTariffs/9FullTariffNYISOOATT.pdf

Neither of these methods seem well suited for use by the Northwest without an RTO planning authority.

SPP employs a "Highway/Byway" process by which they assign costs based on the load rating of the identified project. It assigns 100 percent of all 300+ kV transmission upgrades to SPP zones on a regional basis using the load ratio share (LRS) as a percentage of the whole of regional loads of each zone multiplied by the total annual transmission revenue requirement of the new upgrade. New upgrades in the 100-300 kV range are allocated 33 percent to all zones in the region on a LRS basis and 67 percent to the host or local zone; and 100 percent of upgrades under 100 kV are allocated to the local zone.⁵⁹ Line ratings serving as a proxy for the benefits of a line could be adapted into a straightforward process of assigning costs based on the line rating(s) of an identified project.

MISO assigns 100% of costs of identified multi-value projects to regional load, recognizing that they benefit all customers in the region.⁶⁰ This cost-allocation method is straightforward and flows directly from the benefit assessment process and is likely the most adaptable to the Northwest.

There is no perfect cost-allocation strategy and the processes above are in constant reevaluation and adjustment. MISO filed for FERC approval of the creation of two sub-regions for cost-allocation purposes for their LRTP Tranche 1 and 2 projects in 2022.⁶¹ Entergy Energy objected to a single regional cost-allocation method for those projects, arguing that the projects did not benefit those customers in the southern portion of the MISO footprint. A stakeholder process for developing another cost-allocation method for the LRTP Tranche 3 and 4 is ongoing.

In 2022, SPP filed with FERC to create a waiver to their 100-300 kV allocation category. It found that there were several zones where wind generation was being primarily sent to other zones, with little benefit to the customers in the originating zone, who were paying for 67% of the transmission costs.⁶² The waiver would have allowed a case-by-case determination of the need for 100% regionally allocated costs for transmission for these wind projects in order to more closely align costs with benefits.⁶³ FERC originally approved this cost-allocation waiver in

⁵⁹ SPP. (July 11, 2016). Regional Cost Allocation Review (RCAR II).

https://www.spp.org/documents/46235/rcar%202%20report%20final.pdf

⁶⁰ MISO. (January 10, 2012). Multi Value Project Portfolio

https://cdn.misoenergy.org/2011%20MVP%20Portfolio%20Analysis%20Full%20Report117059.pdf

⁶¹ MISO. (February 4, 2022). Proposed Revision to MISO Tariff to Modify Cost Allocation for Multi-Value Projects FERC Docket No. ER 22-995-000.

⁶² SPP. (2019). Byway Facility Cost Allocation Review Process White Paper. Cost Allocation Working Group. https://www.spp.org/documents/62719/c2%20white%20paper%20w%20appendices%20(final).pdf

⁶³ FERC. (October 18, 2022). Order Accepting Tariff Revisions Subjects to Condition. FERC Docket No. ER22-1846-001.

October 2022, but reversed its decision in July 2023,⁶⁴ citing that the SPP board would have too much discretion over the process. Multiple states objected to the waivers on the basis that the entire region should not have to foot the bill for transmission necessitated by renewable energy mandates of individual states.⁶⁵

As the energy transition in the West and across the country continues, discussions of benefits and costs will be ongoing. Creating a flexible system that can effectively evaluate benefits and costs is an essential step in being able to navigate the transition.

Flexibility may also include allowing for alternative cost allocation scenarios than those listed above. Some proposals that have been submitted during the FERC NOPR comment period include a Transmission Alternative Right, which could allow states or interconnection customers to "buy down" the gap between benefit standard and shortfall if a project is found to not quite meet the established benefit cost ratio for inclusion in the RTP and a Transmission Expansion Right, which allows states or interconnection customers to fund expansion of an approved project in anticipation of a future need that falls outside scope of planning. Those parties that do fund those gaps or expansions would then be entitled to a commensurate portion of transmission rights, with the remaining being allocated according to established policy.⁶⁶

Stakeholder Engagement in the Planning and Cost Allocation Process

Jurisdictions that have successfully planned for and built regional transmission lines, such as MISO and SPP, have developed their benefit and cost-allocation methodologies with robust stakeholder involvement. Increased stakeholder engagement can increase the legitimacy, fairness, and effectiveness of collaborative governance structures such as regional transmission planning entities.⁶⁷ NorthernGrid does not currently have a stakeholder engagement process beyond open comment periods and its website can be difficult to navigate, making it difficult for stakeholders to gain information and engage with the planning process. Just as there is no ideal, one-size-fits-all benefit evaluation framework or cost-allocation process, there is no ideal stakeholder engagement process. Certain features are important, however, including transparency and inclusive participation. Regional planners should involve a diverse set of stakeholders in the process of developing their new methodologies and ensure that the stakeholders have a meaningful role to play in informing decision making.

⁶⁴ Howland E. (July 14, 2023). FERC reverses course, rejects SPP regional transmission cost allocation pathway for wind-heavy zone. Utility Dive. <u>https://www.utilitydive.com/news/ferc-spp-regional-transmission-cost-allocation-pat/687450/</u>

⁶⁵ Howland E. (October 31st, 2022) .Over AEP, Xcel Objectives, FERC OKs SPP Transmission Cost Allocation Process Affecting Wind-Heavy Areas. Utility Dive. <u>https://www.utilitydive.com/news/aep-xcel-ferc-spp-cost-allocation-byway-wind/635321/</u>

⁶⁶ GridLab. (August 16, 2022). Comments on NOPR Building the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection. FERC Docket No. RM2-17-000.

⁶⁷ Lanhert S., Fox D. (2022). Participatory democracy in dynamic contexts: A review of regulatory transmission organization in governance in the United States. Energy Research and Social Science 83.

Siting and Permitting

After the process of identifying transmission projects comes the work of building them. Determining the optimal route of a regional transmission line and then acquiring all of the relevant authorizations and permits to begin construction is a daunting task that can take more than a decade. Two recent Western projects, the Boardman to Hemingway and TransWest Express lines, illustrate this issue. The Boardman to Hemingway line, which crosses the Oregon/Idaho border, began its siting process in 2010, obtained federal permits by 2019⁶⁸ and received its final site certificate from the state of Oregon in 2022.⁶⁹ It still faced a challenge at the Oregon Supreme Court, which it ultimately prevailed on in March of 2023.⁷⁰ There are still a few requirements that the Boardman to Hemingway project must fulfill and Idaho Power, the utility proposing the project, hopes to be able to begin construction in 2023. The TransWest line, which connects Wyoming to Nevada, began its siting process in 2007, received state and county permits by 2020 and received its final Notice to Proceed from the federal government in April of 2023.⁷¹ Once construction begins on these projects it will be several more years until they are energized and delivering power to customers.

The reasons for these long timelines are many and depend on potential routes and how many different land-use jurisdictions will be involved. Projects can be subject to federal, state, county, tribal, and city-level permitting requirements.

Federal Processes

Federal requirements are triggered when transmission lines cross public lands, such as Bureau of Land Management (BLM), Department of Forestry (UFS), or Department of Defense (DoD) lands. Of these, BLM Right-of-Way (ROW) determinations usually take the longest, with a median time from submission of application to approval of 9 years.⁷² These ROW determinations disproportionately affect transmission in the West due to the high concentration of federal land in the region, particularly in Nevada, Utah, Idaho, and Oregon. Any action with the potential to impact the environment on federal lands is subject to National Environmental Protection Act (NEPA) review. As BPA is a federal agency any action the agency takes, whether on private or federal land, triggers a NEPA review. NEPA requires determination of whether a federal action

⁶⁸ Idaho Power. Boardman to Hemingway Scheduling and Permitting. <u>https://www.idahopower.com/energy-environment/energy/planning-and-electrical-projects/current-projects/boardman-to-hemingway/schedule-and-permitting/</u>

⁶⁹ Oregon Department of Energy. Facilities: Boardman to Hemingway Transmission Line. https://www.oregon.gov/energy/facilities-safety/facilities/pages/b2h.aspx

⁷⁰ Oppie T. (March 20, 2023). Idaho Power's new high voltage transmission line cleared by Oregon Supreme Court. Oregon Public Broadcasting. <u>https://www.opb.org/article/2023/03/20/idaho-high-voltage-transmission-line-power-energy-oregon-board, man/</u>

⁷¹ TransWest Express. Timeline. <u>https://www.transwestexpress.net/about/timeline.shtml</u>

⁷² Sud R., Patnaik S., Glicksman R. (February 2023). How to reform federal permitting to accelerate clean energy infrastructure a nonpartisan way forward. Center on Regulation and Markets Brookings Institute.

https://www.brookings.edu/articles/how-to-reform-federal-permitting-to-accelerate-clean-energy-infrastructure-anonpartisan-way-forward/

will have major environmental impacts. If so, an Environmental Impact Statement (EIS) must be prepared. To date for transmission projects, the average time for a NEPA review is 6.5 years.⁷³ These long timelines drive up project costs and hinder the deployment of clean energy generation that is waiting for transmission access with an estimated cost of \$100 billion dollars across the US.⁷⁴ There has been detailed analysis of what exactly is causing these long delays and there is evidence that it is not the NEPA requirement itself but other issues with the process that are the cause.^{75 76} These include a lack of staffing capacity and resources in federal agencies, a lack of coordination between federal agencies, delays in communication and information completion from applicants, inconsistent funding, and compliance with other statutory and regulatory requirements.⁷⁷

State Processes

States in the Northwest vary in their approaches to permitting transmission lines. Washington and Oregon have established Energy Facility Siting Councils (EFSC) in an effort to streamline the permitting process of large energy projects. In Oregon, a transmission line greater than 10 miles in length being constructed in more than one city or county or greater than 230 kV must obtain a site certificate from the Council.⁷⁸ In Washington, a transmission line project must seek certification from the council if it is in a National Interest Electric Transmission Corridor (NIETC) and may choose to receive a certification if it is greater than 115 kV and located outside a NIETC or at least 115 kV and located in a new corridor or more than one city or county.⁷⁹ These requirements in Oregon and Washington apply to all projects, including those which are also subject to federal NEPA review. In Montana, the state Department of Environmental Quality (DEQ) is responsible for administering the Major Facilities Siting Act, which applies to transmission lines over 69 kV, with certain exceptions for those that are less than 10 miles in length and less than 230 kV, have obtained ROW agreements from more than 75% of property owners over 75% of their length, and those that are less than 150 miles long and required under

⁷³ American Clean Power. (April 2023). U.S. Permitting Delays Hold Back Economy, Cost Jobs. <u>https://cleanpower.org/resources/u-s-permitting-delays-hold-back-economy-cost-jobs/#:~:text=But%20failure%20to%20act%20on,120%20million%20cars</u>

⁷⁴ ibid

⁷⁵ Pleune J. (May 2023). Choosing between environmental standards and a rapid transition to renewable energy is a false dilemma. Roosevelt Institute. <u>https://rooseveltinstitute.org/publications/choosing-between-environmental-standards-and-a-rapid-transition-to-renewable-energy-is-a-false-dilemma/</u>

⁷⁶ Ruple J., Pleune J., Heiny E. (April 11, 2022). Evidence-Based Recommendations for Improving National Environmental Policy Act Implementation. Columbia Journal of Environmental Law Vol. 47 No. S. <u>https://journals.library.columbia.edu/index.php/cjel/article/view/9479</u>

⁷⁷ ibid

⁷⁸ Oregon Department of Energy. Council Jurisdiction.

https://www.fisheries.noaa.gov/resource/document/rebuilding-interior-columbia-basin-salmon-and-steelhead

⁷⁹ Washington Energy Facility Site Evaluation Council. Certification Process. <u>https://www.efsec.wa.gov/about-</u> <u>efsec/certification-process</u>

state or federal law.⁸⁰ Idaho has no state level siting requirements and leaves siting and permitting to county and local jurisdictions pursuant to their applicable regulations.⁸¹

While state-level processes are designed to supersede or coordinate with any local or county level permitting processes, state level requirements can be redundant if federal permitting is required. State processes that are not aligned with federal processes cause delays in the permitting process through duplicative environmental review and additional agency oversight and approvals. These processes also provide redundant opportunities for appeal and litigation which can all add years to project timelines. Additionally, some states have land use regulations which make it more difficult to site and permit a transmission line. In Oregon, land use regulations established through the Department of Land Conservation and Development restrict development of energy facilities on prime farmland, which makes siting transmission lines through the Willamette Valley very difficult.⁸²

City and County Processes

Cities and counties in the region generally have siting authority for renewable energy projects within their boundaries unless the applicant has brought their project to the relevant state energy siting council. Some counties in the region have issued moratoria on the siting of any kind of renewable energy facility within their jurisdiction,⁸³ which can become an issue if a transmission line project is proposed to traverse some of that county. One of these moratoria within the length of a proposed transmission project can hold up the entire timeline of a project. Tensions between county and state-level processes for renewable energy siting have increased in Washington recently, with Washington's EFSEC declining to stop review of projects brought to it even though county moratoria may exist.⁸⁴

Native American Tribal Consultation

Native American tribes have been mostly left out of conversations around energy development in the region. There is significant conflict around the history of the development of our region's most vital clean dispatchable energy, hydropower. It is critically important that mistakes are not repeated and harms perpetuated during the clean energy transition. Electricity infrastructure development must be done in a respectful manner, considering the needs and concerns of the

⁸⁰ Montana Department of Environmental Quality. Permitting and Operator Assistance, Major Facilities Siting Act. <u>https://deq.mt.gov/energy/assistance</u>

⁸¹ Idaho Governor's Office of Energy and Mineral Resources. Permitting and Siting Roles. <u>https://oemr.idaho.gov/energy-infrastructure/permitting/</u>

⁸² Oregon Department of Land Conservation and Development. (2019). OAR 660-033-0130 May 2019 Amendments. <u>https://www.oregon.gov/lcd/LAR/Documents/660-033-0130 Solar perm mark-up.pdf</u>

⁸³ Aidun H., Elkin J., Eisenson M., Goyal R., Marsh K. (May 2023). Opposition to Renewable Energy Facilities in the United States: May 2023 Edition. Sabin Center for Climate Change Law Columbia Law School. <u>https://scholarship.law.columbia.edu/sabin_climate_change/200/#:~:text=In%20this%20edition%2C%20the%20auth</u> ors,significant%20opposition%20in%2045%20states.

⁸⁴ Jenkins D. (December 6, 2022). Yakima County solar moratorium eclipsed by state council. Capital Press. <u>https://www.capitalpress.com/ag_sectors/rurallife/yakima-county-solar-moratorium-eclipsed-by-state-council/article_1de9a3fa-7591-11ed-9593-af0ab3e4fafd.html</u>

region's native inhabitants. Recognizing the tribal concerns that can be caused by both generating and transmission development, the Columbia River Inter-Tribal Fish Commission (CRITFC) recommended maximizing energy efficiency and peak load demand reduction strategies to minimize the need for new transmission lines and distribution lines in its 2022 whitepaper on energy policy in the Columbia River Basin.⁸⁵

The US federal government and the tribes have a legal nation-to-nation relationship, which comes with formal government to government consultation requirements for many federal actions related to energy development. Any federal agency project or effort which may affect historic properties that are located on tribal lands or properties that any Native American tribe or Native Hawaiian organization attaches religious or cultural significance to the historic property, regardless of the property's location, triggers formal consultation under the National Historic Preservation Act. ^{86 87 88} The federal government holds reservation lands in trust for tribes through the Bureau of Indian Affairs (BIA). The Bureau of Indian Affairs is the agency that issues ROW for energy projects on tribal lands.⁸⁹ Tribal consultation is required when federal actions, such as granting a ROW, may significantly impact tribes.⁹⁰ Due to the Dawes Act and the history of the federal government encouraging private ownership of land, some tribal reservations are a checkerboard of tribal lands and privately owned land. This creates a literal maze of ownership that can be very difficult to navigate.

In addition to the legal requirements of government-to-government consultation, Native American tribes expect to be meaningfully included and involved in the planning of any project which crosses ceded territory or any property to which the tribe assigns cultural significance. Failing to recognize both the legal requirements for consultation and tribes' desire and interest in being involved in projects may significantly delay projects and perpetuate harm to Native American tribes and communities.

Community Opposition

Local opposition to the siting of a transmission line can come from property owners, community members, and community organizations, each with their own particular objection to a project. Private property owners who are asked to grant ROWs through their property for the siting of a

⁸⁵ Columbia River Inter-Tribal Fish Commission. (2022). Energy Vision for the Columbia River Basin. <u>https://critfc.org/energy-vision/</u>

⁸⁶ US General Services Administration. NHPA Section 106 Tribal Consultation.

https://www.gsa.gov/resources/native-american-tribes/nhpa-section-106-tribal-

consultation#:~:text=Section%20106%20of%20the%20National,lands%2C%20or%20when%20any%20Native ⁸⁷ US Advisory Council on Historic Preservation. The National Historic Preservation Act.

https://www.achp.gov/sites/default/files/2018-06/nhpa.pdf

⁸⁸ United States Code Title 54 Sections 306101-303131

https://uscode.house.gov/view.xhtml?req=granuleid%3AUSC-prelim-title54-chapter3061&edition=prelim⁸⁹ Department of Interior. Bureau of Indian Affairs. How to apply for right-of-way.

https://www.bia.gov/service/rights-of-way-individually-owned-indian-and-tribal-lands/apply-right-of-way

⁹⁰ Department of Interior, Bureau of Indian Affairs. Tribal consultations. <u>https://www.bia.gov/service/tribal-</u> <u>consultations</u>

transmission line can be understandably concerned about economic and aesthetic effects. Community members who are adjacent to the line may object to the effect of a high-voltage line on their view. Community organizations may oppose lines for perceived environmental, recreational, or aesthetic reasons. These concerns are unique to each community. The Boardman to Hemingway project experienced particularly fierce opposition from a coalition of community members. The Stop B2H campaign⁹¹ was involved with every aspect of the permitting and siting process of that project, taking their objections all the way to the Oregon Supreme Court, which added significantly to the timeline of the project. Larger regional or national environmental organizations can also get involved in opposition to transmission lines, particularly those that have potential wildlife impacts.

While permitting processes at the federal and state level include many opportunities for both public input and appeal, it is common for communities or individuals to feel that the public process was insufficient and left their individual concerns unaddressed. This leads to communities feeling that these decisions are being imposed on them. Statutorily required notice and comment periods can be difficult for community members to access due to inequities in how information is distributed, when meetings are scheduled, the type of information shared, languages used, or a myriad of other factors. Historical and existing lack of community trust for state and federal agencies may limit community engagement significantly, leading to a process that does not accurately capture community sentiment. This can then lead to more conflict further into the project. Relying solely on agency notice and comment periods for public engagement around large infrastructure projects is not adequate and new models need to be developed which focus on providing a more meaningful process tailored to and led by impacted communities.

Steps for Permitting and Siting Reform

The Potential of Energy Corridors and Co-location

The potential of pre-designating corridors where transmission lines could be sited and/or using existing ROW from other infrastructure types to provide the ROW for transmission is one solution to permitting issues that is discussed frequently. This could be particularly helpful in states with an abundance of federal land where agencies can implement programmatic regulations and environmental evaluations for pre-designated corridors. This process is unlikely to be successful on private lands or where public and private lands intersect given the multiple jurisdictional layers and land ownership.

The Bureau of Land Management has recently completed the revision of the designation of energy corridors in the West pursuant to the Energy Policy Act of 2005, Section 368.⁹² These

⁹¹ Stop B2H Coalition. <u>https://stopb2h.org/</u>

⁹² US Dept of Interior. (April 20, 2022). Energy Policy Act of 2005 Section 368 Energy Corridor Review. Final Report, Volume 2: Regions 1-6. <u>https://www.corridoreis.anl.gov/documents/docs/Final-Report-Summaries.pdf</u>

are often called "Section 368" corridors. These corridors are for all energy infrastructure, not just electrical transmission. Since these corridors were only recently finalized there is no project that has yet utilized them, so their value to shortening permitting times is not yet known. The revised energy corridors were developed under the influence of a settlement agreement after litigation from environmental organizations stopped original designations in 2009. It is possible then that projects routed through these federal corridors will face less opposition from environmental groups than if another route was taken, thus saving time.⁹³ The Environmental Protection Area has created an initiative called "RE-Powering America's Land" that suggests using contaminated lands, landfills, and abandoned mines to site renewable energy⁹⁴ and it has been suggested that they could be used for transmission as well.⁹⁵ Presumably these sites would also require less environmental review, as they are already considered "brownfield" sites.

The benefits of co-location may be less disturbance of wildlife habitat and faster permitting requirements due to existing ROW designation. The Nature Conservancy's Power of Place report makes extensive use of co-location along existing electrical ROWs to develop their low-impact electrification scenarios.⁹⁶ The feasibility of co-locating along existing electrical ROWs depends on the exact type of transmission line being proposed and the width of the existing ROW, as there are technical and safety requirements that must be met. The feasibility of co-locating within ROW of other infrastructure is more varied and depends on many factors.⁹⁷ Existing highway/roadway and railway ROW are the most often discussed for potential co-location.

For existing electrical ROW on federal land, given preexisting disturbance and established requirements for vegetation management, agencies should consider the use of Categorical Exclusions under NEPA for expanding those rights of way. The Council on Environmental Quality (CEQ) oversees reforms and amendments to NEPA and would be the appropriate agency to determine how Categorical Exclusions could be applied to existing ROWs to speed up the permitting process.

Roadway ROW fall under Federal Highway Administration (FHA) or state Department of Transportation (DOT) jurisdiction. States have been given the authority by FHA to make their own policies around electrical co-location. The FHA released a memo in 2021 clarifying that

⁹⁶ Nature Conservancy. (August 2022). Power of Place-West Executive Summary.

⁹³ Straub N. (July 8, 2009). Groups Sue U.S. Over Energy-Transmission Corridors on Public Lands. New York Times Energy and Environment. <u>https://archive.nytimes.com/www.nytimes.com/gwire/2009/07/08/08greenwire-groups-sue-us-over-energy-transmission-corrido-17235.html</u>

⁹⁴ EPA. RE-Powering America's Land. <u>https://www.epa.gov/re-powering</u>

⁹⁵ Sud R., Patnaik S., Glicksman R. (February 2023). How to reform federal permitting to accelerate clean energy infrastructure a nonpartisan way forward. Center on Regulation and Markets Brookings Institute.

https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_Power-of-Place-WEST-Executive_Summary_WEB-9.2.22.pdf

⁹⁷ FERC. (June 2020). Report on Barriers and Opportunities for High Voltage Transmission: A Report to the Committees on Appropriations of Both Houses of Congress Pursuant to the 2020 Further Consolidated Appropriations Act. <u>https://www.congress.gov/116/meeting/house/111020/documents/HHRG-116-II06-20200922-SD003.pdf</u>

clean energy infrastructure and transmission can be accommodated in Federal-aid highway ROW.⁹⁸ There are design, safety, and maintenance issues with which to contend in co-location along roadways; state DOTs are the agencies that have the authority to develop policies and procedures to mitigate them. Some states have statutorily banned the practice of co-location along highways, while other states, such as Wisconsin, have developed policies and procedures to accommodate electrical co-location. NextGen Highways is actively advocating for the use of highway ROW for transmission and has resources for developers to guide thinking about this option.⁹⁹

Railway ROW are different from highway ROW in that they are held by private companies instead of public agencies. The ROW often date back to the 1800s and railroads were often grandfathered into more modern land use regimes and regulations, which can make for unique challenges. In addition, there are concerns about electrical interference with the steel of railroad tracks. Undergrounding transmission lines along railroad ROWs is one option, with the proposed SOO Green Link project¹⁰⁰ attempting to connect wind power generated in rural Iowa within MISO to the PJM market. The Iowa Utilities Board granted the project's petition for franchise and right of eminent domain in September 2023.¹⁰¹ The feasibility of using private railroad ROWs is fact-dependent on each proposed transmission project but could potentially alleviate some issues with permitting on public lands and other types of private property.¹⁰²

Innovative solutions such as co-location will require agencies that don't normally participate in energy issues to develop policies and procedures for energy infrastructure. When considering the energy transition and planning for increased capacity, government agencies should make sure to allocate resources to all departments that will be involved.

Federal Reform

There is consensus that federal permitting processes are holding up the deployment of needed infrastructure projects, including transmission lines, but not necessarily a consensus about which steps to take to solve the problem. Proposed federal legislation on comprehensive permitting reform is still working its way through the legislative process. Absent legislation, the Biden administration has taken steps to accelerate transmission permitting, including attempts to

⁹⁸ Pollack S. (April 27, 2021). Memorandum: State DOTs Leveraging Alternative Uses of the Highway Right-of-way Guidance. US Department of Transportation Federal Highway Administration.

https://www.fhwa.dot.gov/real_estate/right-of-way/corridor_management/alternative_uses_guidance.cfm ⁹⁹ NexGen Highways. (March 2023). Transmission Line and Highway Rights-of-Way (ROW) Requirements Fact Sheet. https://nextgenhighways.org/wp-content/uploads/2023/04/Transmission-Line-and-Highway-ROW-Requirements-V2.pdf

¹⁰⁰ SOO Green HVDC Link. <u>https://soogreen.com/</u>

¹⁰¹ Iowa Utilities Board. (September 13, 2023). Order Granting Petition for Electric Transmission Line Franchise and Right of Eminent Domain. Docket No. E-22436.

https://wcc.efs.iowa.gov/cs/idcplg?ldcService=GET_FILE&RevisionSelectionMethod=latest&allowInterrupt=1&dDoc Name=2130060&noSaveAs=1&utm_medium=email&utm_source=govdelivery

¹⁰² Trabish H. (November 12, 2020). Transmission troubles? A solution could be lying along rail lines and next generation highways. Utility Dive. <u>https://www.utilitydive.com/news/transmission-troubles-a-solution-could-be-lying-along-rail-lines-and-next/587703/</u>

rectify deficits in agency coordination and communication delays. In early 2022, the US Department of Energy (DOE) initiated the Building a Better Grid Initiative.¹⁰³ This initiative aims to utilize existing authorities and harness new authorities from the Infrastructure Investment and Jobs Act (IIJA) to increase investment in transmission infrastructure around the country. As part of the initiative, the administration has taken steps to make energy siting and permitting more streamlined. In anticipation of finalizing the National Transmission Needs Study, the DOE has issued a Notice of Intent to develop new rules around the designation of National Interest Energy Transmission Corridors (NIETC).¹⁰⁴ The designation of a NIETC allows FERC to expedite permitting for a transmission project, as well as opens up financing and other regulatory tools. The DOE is working toward a new framework for the NIETC process that is applicant-driven, which means that developers could propose a project that meets the transmission needs identified in the National Transmission Needs Study.

In addition to the NIETC process, the DOE and other agencies are working to streamline the federal permitting processes for transmission. In May of 2023, nine federal agencies signed a Memorandum of Understanding (MOU) establishing the DOE as the lead agency for all high voltage interstate transmission lines that do not fall under the NIETC process.¹⁰⁵ The MOU establishes a 6-month timeline for DOE to update its regulations under Section 216 (h) of the Federal Power Act, including regulation of the Integrated Interagency Preapplication Process (IIPP). The IIPP process is designed to help applicants identify necessary documentation and studies needed for permit review and spot issues before official applications are filed. This process is similar to what FERC uses in permitting natural gas pipelines and has been identified as a way to speed up the permitting process. The MOU also requires DOE to harmonize the IIPP process with that of Title 41 of the Fixing America's Surface Transportation Act (FAST-41) that is administered by the Federal Permitting Improvement Steering Committee (FPISC). FAST-41 is a federal government-wide attempt to streamline permitting processes across a variety of infrastructure projects by increasing coordination of agency actions. The MOU commits DOE to establish a standard schedule identifying clear steps needed to reach a final decision for a transmission project within two years. The DOE announced in mid-August of 2023 that it intended to call its updated regulations the Coordinated Interagency Transmission Authorization and Permits Program (CITAP) and released the draft standard schedule.¹⁰⁶ A lack of clarity

¹⁰³ US DOE. (January 19, 2022). Notice of Intent: Building a Better Grid Initiative to Upgrade and Expand the Nation's Electric Transmission Grid to Support Resilience, Reliability, and Decarbonization 87 FR 2769. <u>https://www.federalregister.gov/d/2022-00883</u>

¹⁰⁴ US DOE. (May 15, 2023). Notice of Intent and Request for Information: Designation of National Interest Electric Transmission Corridors 88 FR 30956. <u>https://www.federalregister.gov/d/2023-10321</u>

¹⁰⁵ White House. (May 4, 2023). Memorandum of Understanding Among the U.S. Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, the Environmental Protection Agency, the Council on Environmental Quality, the Federal Permitting Improvement Steering Council, Department of the Interior, and the Office of Management and Budget Regarding Facilitating Federal Authorizations for Electric Transmission Facilities. <u>https://www.whitehouse.gov/wp-content/uploads/2023/05/Final-Transmission-MOU-with-signatures-5-04-2023.pdf</u>

¹⁰⁶ US DOE Grid Deployment Office. (August 11, 2023). Coordinated Interagency Transmission Authorization and Permits Program. <u>https://www.energy.gov/sites/default/files/2023-08/CITAP_Draft-Standard-Schedule.pdf</u>

around requirements and an open-ended review process have been cited repeatedly as barriers to project completion by transmission developers. This lack of clarity is likely contributing to the delays in obtaining information from applicants that have been identified as a contributor to long NEPA review times. These actions taken by DOE could lower these barriers and could mean that final federal decisions could be reached within four years, less than half of the current median time to receive a BLM ROW permit decision.

There is some evidence that the FAST-41 process has reduced permitting times for transmission projects in the past. The SunZia Southwest Transmission Project, under its current ownership and routing, was initiated late in 2020 and was included in the FAST-41 process in the summer of 2021. According to the Fast-41 dashboard maintained by FPISC, the EIS for the project was completed in less than two years.¹⁰⁷ The Plains and Eastern Clean Line HVDC began in 2012, with an EIS completed in late 2015. The FAST-41 process was initiated in fall of 2016 and all permits were completed by fall of 2017, one year ahead of schedule.¹⁰⁸

Unfortunately, NIETC and other federal programs for speeding up transmission construction will likely have limited impact in the Northwest as designed. These regulations were designed with interregional transmission projects built by investor-owned utilities and merchant transmission developers in mind. BPA is the majority owner of transmission in the Northwest and does not qualify for many of these programs as a federal agency not subject to FERC jurisdiction. Merchant transmission lines in the region could be developed with these incentives and regulations in mind, however it is unlikely that the amount of transmission needed in the region will be built without the cooperation or oversight of BPA.

Changes to the NEPA process itself were recently included in legislation to raise the debt ceiling of the United States.¹⁰⁹ These changes were intended to address the length of NEPA review by statutorily limiting the timeline and the applicability standards of the process. Major highlights include a two-year deadline for completion of an EIS, agency discretion to develop rules around applicant-created EIS, and the ability for agencies to consider negative consequences of not acting, which potentially could highlight the benefits of transmission lines to the clean energy transition. The new deadline includes a right to petition courts for enforcement of that deadline. Judges may review the reasons for delay and set a new deadline of 90 days to completion or longer if needed to comply with the law.¹¹⁰ This judicial enforcement may speed up the NEPA process significantly, but it has yet to be tested. It also remains to be seen if environmental

¹⁰⁷ Federal Infrastructure Projects Permitting Dashboard. SunZia Transmission Project.

https://www.permits.performance.gov/permitting-project/fast-41-covered-projects/sunzia-southwest-transmissionproject

¹⁰⁸ Federal Infrastructure Projects Permitting Dashboard. Plain and Eastern Clean Line.

https://www.permits.performance.gov/permitting-project/fast-41-covered-projects/plains-and-eastern-clean-line ¹⁰⁹ Fiscal Responsibility Act of 2023. Title III. Section 106 and 107.

https://www.congress.gov/118/plaws/publ5/PLAW-118publ5.pdf

¹¹⁰ Fiscal Responsibility Act of 2023. Title III. Section 107(g)(3)(A)&(B). <u>https://www.congress.gov/118/plaws/publ5/PLAW-118publ5.pdf</u>

advocacy groups will challenge the sufficiency of a NEPA review under these new deadlines. NEPA litigation can substantially add to the timeline of projects, making changes to NEPA requirements questionable as to actual timeline reduction.

Another federal effort to move energy projects through the permitting process is the establishment of Renewable Energy Coordination Offices (RECO) at the BLM.¹¹¹ These five offices are meant to provide the increased capacity for environmental review and permitting needed as more renewable energy and transmission projects apply for permits. Unfortunately, there is not yet a RECO office for the Northwest region, though there is one in Nevada. Given the identified need to move energy between the NW and Mountain regions and Nevada's participation in NorthernGrid and the Western Resource Adequacy Program, integrating the Northwest into the BLM RECO office in Nevada might help streamline future projects.

Given the identified urgent need for transmission, refining, and streamlining the permitting process is an important and necessary step but it is not without controversy or concern. Further federal reform specific to transmission needs should focus on evidence-based solutions. Lack of agency capacity and expertise in federal agencies, lack of coordination between federal agencies, and inadequate stakeholder processes can and should be addressed. Addressing these issues may not require formal reform legislation; agencies can look to already established best practices.

There are examples of policy and procedures implemented at the federal level that have led to better coordination between federal agencies and stakeholder groups. CEQ initiated a pilot program in 2011 to study innovative NEPA strategies.¹¹² The results of the five projects selected for study showed that investments made in front-end organization and stakeholder engagement avoided delays later on in the process and reduced litigation.¹¹³ Strategies employed included establishing formal points of contact at each relevant state and federal agency for large projects, collaboratively engaging stakeholders in working groups, and developing interactive, transparent datasets.¹¹⁴ These strategies require upfront investment of time and money, but pay off in increased efficiencies and other benefits. For example, datasets can be used in subsequent projects, which then reduces the time needed to permit those projects. CEQ made recommendations based on the pilot study, including that all agencies should examine the best practices developed by the pilot programs for NEPA implementation.¹¹⁵ Implementation of these

¹¹³ Ruple J., Pleune J., Heiny E. (April 11, 2022). Evidence-Based Recommendations for Improving National Environmental Policy Act Implementation. Columbia Journal of Environmental Law Vol. 47 No. S. https://journals.library.columbia.edu/index.php/cjel/article/view/9479 ¹¹⁴ ibid

 ¹¹¹ The Nature Conservancy. (June 13, 2022). Revived Renewable Energy Coordination Offices to Help BLM Meet
Clean Energy Goals. <u>https://www.nature.org/en-us/newsroom/blm-revival-renewable-energy-coordination/</u>
¹¹² CEQ. CEQ NEPA Pilot Program. Obama Administration Archives. https://perma.cc/DJ7A-M5RL

¹¹⁵ Boots M. (January 26, 2015). Memorandum to Interested Parties and Heads of Federal Agencies. National Environmental Policy Act Pilot Projects Report and Recommendations. <u>https://ceq.doe.gov/docs/ceq-</u> <u>reports/CEQ_NEPA_Pilots_Conclusion_Recommendations_Jan2015.pdf - :~:text=CEQ selected five pilots to further</u> <u>the NEPA,they review their environmental programs and NEPA implementation</u>

best practices by relevant agencies could have the dual benefits of overall reduction of time to permitting transmission lines and reduction in litigation.

Another example of a tool that requires upfront investment but can pay off in the long term is the use of Programmatic EIS (PEIS), which analyze the potential effects of a category of action instead of specific proposals. This allows information to be gathered and issues to be spotted before specific applications are submitted and can be helpful for stakeholder engagement and alignment of priorities without the pressure of deciding on an outcome for a specific project. This strategy was used by BLM when designating Westwide Energy Corridors ¹¹⁶ and has been used to good effect at other BLM offices. The Pinedale BLM office time to reach a permitting decision for the three oil and gas fields in its jurisdiction was less than half of the time for other field offices between 2016-2019. ¹¹⁷ This is attributed to the ability to easily tier permitting requests based on the information gained through the PEIS process.¹¹⁸ Agencies involved in transmission permitting should look at the use of PEIS and its ability to ultimately streamline the many permitting requests that will come with the scale of transmission buildout that is needed. CEQ has issued guidance on effective use of PEIS for agencies.¹¹⁹

The federal government has increased funding for many of its agencies through recent legislation, but they still have to compete with the private energy industry for staff. A needs assessment and subsequent increase in Congressional funding for salary for federal energy employees may help attract and retain the talent needed.¹²⁰ The federal government should also look at a comprehensive workforce development plan for agencies involved in the clean energy transition in order to increase overall agency capacity and retain staff. The upfront investment in retraining staff to implement NEPA best practices and coordination between agencies may be significant and will require resources. Congress should make every effort to stabilize the funding of agencies involved in the energy transition to ensure staff retention and make sure those investments pay off.

State Reform

States have jurisdiction over land use decisions within their borders on all non-federal land and can enter into voluntary agreements with transmission providers to plan and pay for

¹¹⁶ BLM. West-wide Energy Corridor Information Center: Guide to the West-Wide Energy Corridor Final Programmatic Environmental Impact Statement. https://corridoreis.anl.gov/eis/guide/index.cfm

¹¹⁷ Ruple J., Pleune J., Heiny E. (April 11, 2022). Evidence-Based Recommendations for Improving National Environmental Policy Act Implementation. Columbia Journal of Environmental Law Vol. 47 No. S. https://journals.library.columbia.edu/index.php/cjel/article/view/9479

¹¹⁸ ibid

¹¹⁹ Boots M. (December 18, 2014). Memorandum for Heads of Federal Departments and Agencies: Effective Use of Programmatic NEPA Reviews. https://ceq.doe.gov/docs/ceq-regulations-and-

guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf

¹²⁰ Sud R., Patnaik S., Glicksman R. (February 2023). How to reform federal permitting to accelerate clean energy infrastructure a nonpartisan way forward. Center on Regulation and Markets Brookings Institute.

https://www.brookings.edu/articles/how-to-reform-federal-permitting-to-accelerate-clean-energy-infrastructure-a-nonpartisan-way-forward/

transmission lines to further state energy policy goals. This can be done by any state agency, but generally goes through the state utility board. FERC reaffirmed this right in 2021 in a policy statement that reiterated that nothing in the Federal Power Act nor any FERC rules precludes such agreements and encouraged states to consider the option for transmission buildout.¹²¹ FERC also emphasized that this option may achieve transmission goals faster than the regional planning process. This solution may help solve the "chicken and egg" problem of renewable energy developers being unwilling to invest in projects without knowing that transmission will be available and transmission owners not wanting to invest until they know capacity on the line will be sold. New Jersey's Board of Public Utilities utilized this option, called a State Agreement Approach, on behalf of the state in 2020 and again in 2023 to award a series of onshore transmission contracts to support the construction of 7500 MW of offshore wind to be delivered to New Jersey customers¹²² as part of the effort to meet the state's clean energy goals.

States can also establish a dedicated Electricity Transmission Authority (ETA) for facilitating the buildout of transmission within the state. An ETA is created by legislation and has a board of directors appointed by members of the executive and legislative branches of the state government. It also has an executive director and members of staff to support the work of the board. The powers of the ETA are dependent on the originating statute. New Mexico and Colorado legislators have given their ETAs power to engage in transmission planning, identify and establish corridors for transmission siting, enter into public and private partnerships to develop projects, sell bonds and collect fees to raise funds, and exercise eminent domain authority, among others.¹²³¹²⁴ The Colorado ETA has also asked the US DOE to allow ETAs to be applicants in the NIETC process, which would unlock federal permitting and financing assistance.¹²⁵ The NM and CO ETAs are limited in that they cannot directly compete with public utilities, which makes them "developers of last resort." The value in an ETA can come from having the power to facilitate and build transmission that, for whatever reason, no one else wants to build but that the state deems necessary. An example of this is in the San Luis Valley in Colorado, which has excellent solar potential that has been prevented from being developed by private landowners blocking transmission proposals to the Valley.¹²⁶ Colorado's ETA has the

content/uploads/2022/11/RETA Act.pdf

¹²¹ FERC. (June 17, 2021). State Voluntary Agreements to Plan and Pay for Transmission Facilities. Docket No. PL21-2-000. 86 FR 33700. <u>https://www.federalregister.gov/documents/2021/06/25/2021-13440/state-voluntary-agreements-to-plan-and-pay-for-transmission-facilities</u>

¹²² New Jersey Board of Public Utilities. (April 26, 2023). Order Initiating a New Jersey State Agreement Approach Request Docket No. QO23030129.

https://www.nj.gov/bpu/pdf/boardorders/2023/20230426/8D%20ORDER%20OSW%202nd%20Transmission.pdf ¹²³ New Mexico Renewable Energy Transmission Authority Act. (2007). https://nmreta.com/wp-

¹²⁴ Public Utilities Commission Modernize Electric Transmission Infrastructure Act. (2021). <u>http://leg.colorado.gov/bills/sb21-072</u>

¹²⁵ Staks K., Galbraith M. (2023) Comments of the Colorado Electric Transmission Authority. US DOE Grid Deployment Office National Interest Electric Transmission Corridor Designation Process. <u>https://static1.squarespace.com/static/6390da3a799a023d4be2c27e/t/64c2f50568071f3c99927ab7/1690498310</u> 231/CETA+Comments+on+NIETC+Designation+Process+07-27-2023+FINAL.pdf

¹²⁶ Best A. (June 5, 2023). Colorado's "transmission developer of last resort". Big Pivots. <u>https://bigpivots.com/colorados-transmission-developer-of-last-resort/</u>

power to both plan alternate routes and exercise eminent domain authority if necessary to bring transmission to the Valley, unlocking its clean energy potential for Coloradans and for export to New Mexico and beyond. Some entities are wary of a state agency with eminent domain powers, however, state authority to site transmission lines optimally may ultimately reduce total siting concerns of the energy transition. New Mexico's ETA, established in 2007, has never used its eminent domain powers in a contested case, but has been able to use it to efficiently clear titles for transmission ROW. In addition, having state ETAs with the power to negotiate between themselves could lead to resolution of issues related to opposition by "pass-through" states to transmission lines that must be sited through their state but don't offer any clear benefit to their residents. State ETAs could potentially work out mutually agreeable benefit agreements between themselves.

Alignment between state processes and federal processes can speed up the permitting process for transmission lines when a project traverses both federal and state or private land. As much as is practicable, state agencies should strive to avoid duplicative review processes. States should work to align policies with federal review requirements to limit unnecessary state spending and applicant costs when federal permitting is required for a project. The state of Nevada has chosen to accept any federal environmental review as sufficient for its purposes for the siting of utility facilities and has prohibited duplicative environmental review.¹²⁷ As part of this alignment effort states should work to increase coordination between state agencies that govern energy and land-use. As noted earlier, establishing formal points of contact between relevant agencies can be very helpful for reducing permitting times.

In order to facilitate transmission buildout, states may need to develop transmission-specific exceptions to land use statutes. Studies have shown that optimal transmission development eases the burden on siting renewable energy at the state and county level due to avoided costs, both administrative and monetary, of overbuilding local generation.¹²⁸ Changing statutory requirements for siting of transmission could reduce the burden on state and local capacity overall as the clean energy transition continues and save ratepayers money.

Tribal Engagement

It is important for developers to understand that Native American tribes are not stakeholders, they are sovereign states. Engaging tribes requires a willingness to acknowledge their right to self-determination. Native American tribes have been proactive about addressing energy issues in the region and educating those in the energy industry about what their status as treaty-protected sovereign states means for energy development. The Affiliated Tribes of Northwest Indians (ATNI) has both climate change and energy programs and holds clean energy summits where they share resources on all aspects of clean energy development for tribal communities. They also educate energy professionals about tribal consultation and provide resources about

 ¹²⁷ Nevada Revised Statute 704.877. <u>https://www.leg.state.nv.us/Nrs/NRS-704.html#NRS704Sec877</u>
¹²⁸ Clean Energy Transition Institute (June 2023). Net-zero northwest: energy pathways results: transmission. <u>https://www.nznw.org/energy/transmission</u>

the process. Points they emphasize include: each tribe is its own sovereign state and each tribe speaks for itself through its elected officials, formal processes of tribal consultation are distinct from informal processes of engagement with tribal leaders and both are necessary, building trust and respect and committing to long-term relationships is essential as is being open to learning from and collaborating with tribal experts and recognizing the value of their indigenous knowledge.¹²⁹ Tribes also point out the importance of engaging as early in the process as possible to begin building relationships and avoid tribes feeling like their involvement is only a box to be checked. Tribes have limited resources and extra time may be needed to respond to queries and gather information. Developers should effectively engage tribes as soon as possible in siting discussions.

Community Engagement

Engaging effectively with local communities impacted by a proposed transmission line is a challenging task. A regional transmission line will inevitably traverse many diverse communities whose residents have a range of opinions about energy infrastructure. One of the core issues is similar to the cost allocation issue discussed previously: no one wants to pay for something from which they derive no benefit. Unlike solar and wind generation facilities, transmission lines do not come with the economic benefits of increased local tax revenue and long-term job creation. Community groups are likely to oppose projects if they perceive that they are paying for projects with diminished property values, reduced access to recreational opportunities, increased environmental degradation, and decreased aesthetic value of their communities with no commensurate benefit. Community opposition can significantly delay a project, particularly if it involves litigation. Developing effective ways to work together with communities is essential for timely completion of transmission projects.

Several national and state entities have developed excellent resources for best practices for community engagement when citing energy projects. Americans for a Clean Energy Grid recently put out a comprehensive report on recommended practices specifically for electric transmission developers.¹³⁰ Washington's EFSEC released the final report from its Transmission Corridors Work Group in 2022,¹³¹ which details community engagement principles. The Oregon Smart Siting Collaboration released the "Siting Renewable Energy in Oregon" report in 2023 that lays out voluntary guidelines for siting renewable energy in the state,¹³² which could be applied to

¹²⁹ Marchand A. (2023). Navigating tribal consultation: beyond the checkbox. Presentation for ATNI 2023 Clean Energy Summit. <u>https://atnitribes.org/climatechange/energy/</u>

¹³⁰ Blaug E., Nichols N. (February 2023). Recommended Siting Practices for Electric Transmission Developers. Americans for a Clean Energy Grid.

https://cleanenergygrid.org/portfolio/recommended-siting-practices-electric-transmission-developers/ ¹³¹ Washington Energy Facility Site Evaluation Council. (August 1, 2022). Transmission Corridors Work Group Final

Report. <u>https://www.efsec.wa.gov/sites/default/files/181034/Final_TCWG_Report%20_2022_0801.pdf</u> ¹³² Oregon Smart Siting Collaboration. (March 2023). Siting renewable energy in Oregon: voluntary guidelines

developed through outreach and engagement. <u>https://renewablenw.org/sites/default/files/Reports-</u> <u>Fact%20Sheets/OSSC%20Final%20Report.pdf</u>

transmission projects. All of these reports emphasize "early and often" engagement in order to build trust with community members.

There is a long-term relationship that exists between transmission developers and communities which requires the development of trust and rapport. Some developers may prefer to manage stakeholder engagement through the public comment periods afforded by federal and state agency approval processes. As mentioned earlier, this approach may make it difficult to build trust with communities in the West. As transmission lines generally traverse rural areas between population centers, the dynamics of the urban/rural divide can come into play, with some in rural areas having cultural and ideological reasons to oppose projects that they perceive benefit urban communities. Community members can view federal agencies as detached from local concerns, with procedures that are opaque and difficult to access, leading to questions about the legitimacy of the entire process.¹³³ Interaction with these federal and state agencies being the only option for engagement with a project may lead to distrust of the developer and increase opposition to the project.

In order to gain trust and move projects forward, developers and permitting authorities should have clear processes to communicate the benefits of increased transmission to the communities in which they will be working. They should engage with local groups for ideas about community benefits and ways to potentially improve conditions to offset any perceived or real impacts associated with a proposed project. Communities should be enfranchised to manage the conversation around how benefits are spread within the affected region. When working groups are to be utilized to coordinate federal and state agency actions, citizen groups should have a seat at the table. Rural counties and cities often do not have the resources to engage with developers and agencies in the ways they might desire. States should coordinate with their landgrant universities to provide technical and other support to those communities which might want the expertise during energy siting proceedings.

Solutions to the issue of community benefit will vary widely depending on many factors. One creative solution that has been proposed for community benefit is the co-location of rural broadband with transmission lines.¹³⁴ Developers can propose routes that would maximize broadband connectivity to residents, making agreements with both broadband providers and landowners, thereby increasing the likelihood of community support of the whole project. Another example is funding community grant programs, as Grid United is doing in the states in which they work. Community non-profits decide how the money is spent, which ensures the community decides what benefits they receive from the project.¹³⁵

¹³³ Eisenberg A. (2022). Rural disaffection and the regulatory state. Penn State Law Review Volume 126, pg. 739 ¹³⁴ Allen R. (June 13, 2023). Accelerate the US high-capacity transmission build-out with voluntary, strategic colocation. Utility Dive. <u>https://www.utilitydive.com/news/accelerate-us-high-capacity-transmission-build-out-voluntary-strategic-co-location-rural-broadband/652661/</u>

¹³⁵ Grid United North Plains Connector. Community Investment Program. <u>https://northplainsconnector.com/community-incentive-program/</u>

Another important area for consideration is engagement with wildlife managers and scientists on potential wildlife impacts prior to final determination of routes. Rural lands are often prime wildlife habitat for threatened and endangered species and concerns about impacts to sensitive habitats should be addressed early and through broad input from experts and local and regional organizations working on habitat preservation. National organizations such as the Nature Conservancy and the Audubon Society ¹³⁶ are actively engaged in the work of facilitating a clean energy transition while safeguarding wildlife concerns. The recently approved SunZia Southwest Transmission line that runs from New Mexico to Arizona is a case study of active engagement with environmental organizations helping smooth the way to project completion.¹³⁷ Pattern Energy Group, which owns the line, worked closely with Audubon Southwest to develop mitigation strategies and fund research for migratory birds.¹³⁸ Audubon Southwest credits staff at Pattern Energy for being willing to directly engage from the outset of their involvement with the project and think creatively about solutions. A regional thinking approach to wildlife habitat can be taken, as wildlife mitigation and habitat enhancement do not necessarily have to occur directly adjacent to new transmission. Mitigation efforts can be directed toward improving conditions for displaced wildlife elsewhere in the vicinity.

Conclusion

The status quo of transmission planning, cost allocation, siting, and permitting in the Northwest will not sustain the improvements to existing transmission and construction of new transmission needed to successfully decarbonize the grid while maintaining system reliability and low costs to consumers.

Reforms in the regional transmission planning process in the Northwest are needed in order to identify a mix of transmission projects that will maximize benefits to ratepayers at the least cost. Best practices including: 20+ year planning time horizons, accounting for multiple benefits in benefit-cost criteria, implementing scenario and portfolio-based planning, reducing benefit-cost ratio so merchant developers can more easily qualify for cost allocation, and instituting independent monitoring should be implemented as soon as possible to meet the needs of the region.

Federal government agencies should continue agency streamlining and coordination efforts as well as consider further actions to accelerate the permitting of transmission, using CEQ best practice guidance for NEPA implementation as a guide. State agencies should align their processes with federal processes and reduce duplicative review and appeal opportunities to the greatest extent possible, as well as consider options such as establishment of Electricity

 ¹³⁶ Bateman B., Moody G., Fuller J., Taylor L., Seavy N., Grand J., Belak J., George G., Wilsey C., Rose S. (2023).
Audubon's Birds and Transmission Report: Building the Grid Birds Need. National Audubon Society: <u>https://media.audubon.org/2023-07/BirdsAndTransmission.pdf?utm_id=106479&sfmc_id=4860296</u>
¹³⁷ ibid

¹³⁸ Peterson E. (May 29, 2023). SunZia southwest transmission project receives final federal approval. Inside Climate News. <u>https://insideclimatenews.org/news/29052023/sunzia-transmission-project-approval/</u>

Transmission Authorities to facilitate transmission buildout. It may be necessary for states to look at exceptions to land-use statutes for transmission as well. All levels of government need resource support to increase capacity to complete the work of the energy transition.

Statutorily required federal and state notice and comment periods are not adequate for public engagement of large infrastructure projects. Communities need to feel heard and be meaningfully involved in order to gain comfort with new infrastructure and current practices are falling short. Federal and state agencies should look to best practices for collaboration with communities when going through NEPA and other environmental review processes. Developers of transmission should not rely only on federal agency processes to engage stakeholders when planning projects. They should create effective strategies to engage with Native American tribes, wildlife managers, and local communities and develop methods to spread the benefits of transmission development to all affected by the construction of this critical infrastructure. Developers can look to the resources provided for best practices to guide these efforts.

Taken together these actions may help the region build the transmission needed to achieve its clean energy goals and create a sustainable economic future for all.

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