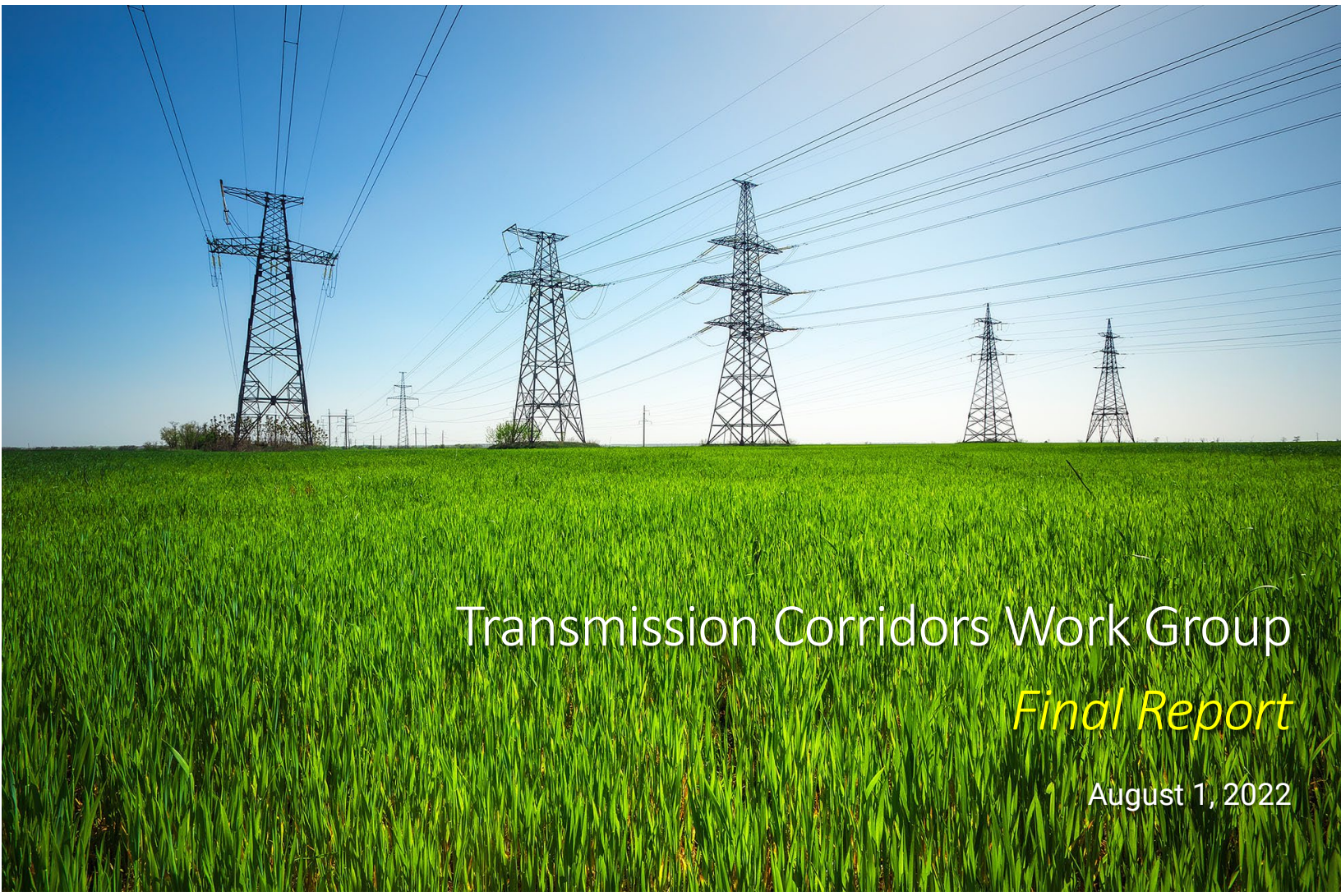

Transmission Corridors Work Group

Final Report

August 1, 2022

Prepared and submitted by the
Washington Energy Facility Site Evaluation Council

Acknowledgements

The Washington Energy Facility Site Evaluation Council (EFSEC) acknowledges the time and effort members of the Transmission Corridors Work Group (TCWG) invested in researching, deliberating, and building towards consensus around the current state of transmission needs and opportunities and the principles recommended to guide the transformation of Washington's energy transmission system. EFSEC is also grateful for the numerous guest speakers (including TCWG members) who helped illuminate the complex social, cultural, and technical issues, and enabled productive and effective TCWG outcomes.

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Executive Summary

Consistent with Section 25 of the Clean Energy Transformation Act (CETA) of 2019, Energy Facility Site Evaluation Council (EFSEC) Chair Kathleen Drew convened a Transmission Corridors Work Group (TCWG) with the following responsibilities:

1. Review the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the transmission and distribution facilities in the state to deliver electricity from electric generation, non-emitting[1] electric generation, or renewable resources to retail electric load;
2. Identify areas where transmission and distribution facilities may need to be enhanced or constructed;
3. Identify environmental review options that may be required to complete the designation of such corridors and recommend ways to expedite review of transmission projects without compromising required environmental protection; and
4. Report its findings to the governor and legislative committees by December 31, 2022.

Final Report

This final report (Report) is a deliverable from EFSEC to Governor Inslee and the appropriate legislative committees. The Report was prepared in consultation and coordination with the TCWG and reflects the outcomes of TCWG meeting discussion and consensus-based conclusions. Member comments providing emphasis or requesting further action are noted in the table contained in Appendix 8. *Readers are strongly encouraged to review this brief table*.

The principles developed by the TCWG constitute the heart of the report. TCWG-recommended principles provide foundational, solution-oriented direction throughout transmission system development, and meaningfully respond to the transmission impacts and needs of overburdened communities, background findings, geographic needs and considerations, and transmission-related challenges that set the context for this report.

The principles are organized according to phases of transmission development, beginning with overarching principles applicable to all phases and ending with best practices that may be applicable to multiple phases. The lists below are abbreviated descriptions for the purposes of the executive summary. Readers are encouraged to follow the links to view the full text.

[1] RCW 19.405.020, Definitions: (28)(a) "Non-emitting electric generation" means electricity from a generating facility or a resource that provides electric energy, capacity, or ancillary services to an electric utility and that does not emit greenhouse gases as a by-product of energy generation. (28)(b) "Non-emitting electric generation" does not include renewable resources.

Overarching Principles

1. Interregional transmission capacity is key in enabling Washington, as well as other states, to build a diverse portfolio of clean and reliable electricity resources.
2. Allow sufficient lead time for planning and engagement.
3. Properly fund or provide authorization to receive funding to Tribes and federal, state, and local agencies providing essential project review (e.g., EFSEC, Department of Archaeology and Historic Preservation).
4. Overburdened communities should not bear higher costs and risks associated with the loss of health, environment, native foods, and cultural resources as Washington strives to meet its CETA goals through new or upgraded transmission infrastructure.

Principles for Transmission System Planning

1. Designate and fund a person or organization within state government responsible for coordinating participation in transmission development activities and long-term transmission planning.
2. Leverage opportunities to access federal funding for transmission development and grid enhancement.
3. Ensure that practicable alternatives to building additional transmission infrastructure are considered.
4. Optimize grid operations and enhance the capacity of existing infrastructure.
5. Efficiently utilize system capacity.
6. Upgrade existing infrastructure.
7. Establish transmission planning practices that include proactive, long-term, interregional assessments on a regular basis.
8. Continue to explore creation of a regional transmission organization (RTO) and expanded participation in regional markets that would allow efficient dispatch of least-cost resources given transmission and other constraints.
9. Pursue practicable and cost-effective opportunities to site new electrical generation near electrical load and existing transmission.
10. Explore opportunities to use transportation rights-of-way for co-locating new transmission lines.

Principles for Expediting Environmental Review and Permitting without Compromising Protections

1. Align and coordinate process, timing, and analysis methodologies within and across National Environmental Policy Act (NEPA) and other federal laws, and State Environmental Policy Act (SEPA) during project planning.

2. Use EFSEC for cross-jurisdictional long-range transmission projects.
3. Identify opportunities for federal and state programs to establish programmatic permitting agreements for transmission projects.
4. Identify specific geographic areas for siting transmission within corridors where additional transmission capacity is needed to meet the goals of CETA, as part of regional planning for grid-critical transmission investments/projects.
5. Approach expediting review and permitting with the primary goal of avoiding cultural resource impacts in transmission corridors.
6. Invest in proactive and meaningful Tribal consultation.
7. Invest in relationship-building between project developers and Tribes.
8. Look for a "win" for Tribes and cultural resources.
9. Leverage the expertise of the Department of Archaeological and Historic Preservation (DAHP).
10. Increase funding to Tribes and DAHP to reduce staffing constraints that impede and slow Tribal cultural resources review and completion of ethnographic studies.

Principles for Siting and Constructing New or Upgraded Transmission Infrastructure

1. Respectfully engage in Tribal consultation.
2. Protect cultural and archaeological resources.
3. Protect environmental resources.
4. Engage the public.
5. Support programs to develop skilled labor.
6. Address competing and conflicting uses.
7. Mitigate wildfire risk.

Best practices, applicable to multiple phases

BP-1: Utilize screening tools such as the Washington Environmental Health Disparities Map.

BP-2: Utilize available geographic information systems.

BP-3: Identify all participating agencies and jurisdictions and their requirements prior to initiating environmental review and siting processes.

BP-4: Reduce barriers to contracting with community-based organizations and consultation with Tribes.

BP-5: Develop a "best practices" public involvement checklist.

BP-6: Increase internal applicant-/utility-level review to thoroughly vet projects before they move into an external phase.

BP-7: Develop and utilize previously negotiated template language for lease or permit terms and conditions.

BP-8: Develop a standard transmission development process/template.

BP-9: Assign dedicated senior staff to complex permitting processes.

Next Steps

Consistent with the enabling legislation, EFSEC will submit this Report with its transmittal cover letter providing recommendations for specific implementation steps to the Governor's Office and appropriate legislative committees by December 31, 2022.

Introduction

A. Purpose and Legislative Charge

With the Clean Energy Transformation Act (CETA) of 2019, Washington set a course to rapidly "decarbonize" its economy by transitioning away from fossil-fuel generated energy sources to renewable and non-emitting energy sources. The Washington State Legislature (legislature), in this enabling legislation, stated,[2] "based on current technology, there will likely need to be upgrades to electricity transmission and distribution infrastructure across the state to meet the goals specified in this act. These facilities require a significant planning horizon to deliver electricity [from] generation sites to retail electric load." Pursuant to RCW 80.50.040, the Legislature directed the Energy Facility Site Evaluation Council (EFSEC) Chair to convene a Transmission Corridors Work Group (TCWG) with the following responsibilities:

5. Review the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the transmission and distribution facilities in the state to deliver electricity from electric generation, non-emitting[3] electric generation or renewable resources to retail electric load;
6. Identify areas where transmission and distribution facilities may need to be enhanced or constructed;
7. Identify environmental review options that may be required to complete the designation of such corridors and recommend ways to expedite review of transmission projects without compromising required environmental protection; and
8. Report its findings to the governor and legislative committees by Dec. 31, 2022.

A. Final Report

This final report (Report) is a deliverable from EFSEC to Governor Inslee and the appropriate legislative committees. The Report was prepared in consultation and coordination with the TCWG and reflects the outcomes of TCWG meeting discussion and consensus-based conclusions. The Report was prepared in consultation and coordination with the TCWG and reflects the outcomes of TCWG meeting discussion and consensus-based conclusions. Member comments providing emphasis or requesting further action are noted in the table contained in Appendix 8. *Readers are strongly encouraged to review this brief table*.

[2] RCW 19.405.150

[3] RCW 19.405.020, Definitions: (28)(a) "Non-emitting electric generation" means electricity from a generating facility or a resource that provides electric energy, capacity, or ancillary services to an electric utility and that does not emit greenhouse gases as a by-product of energy generation. (28)(b) "Non-emitting electric generation" does not include renewable resources.

The heart of this Report is the TCWG Recommended Principles. They were developed by the TCWG through months of information sharing, debate, and discussion. It is the hope of the TCWG that its recommended principles provide foundational, solution-oriented direction throughout the transmission system development process, and that they meaningfully address the energy needs of the future, the transmission impacts and needs of overburdened communities, geographic needs and considerations, and other transmission-related challenges that set the context for this report.

The principles are generally organized according to phases of transmission development, beginning with overarching principles and ending with principles specific to siting and construction. In addition, the Report includes a list of best practices that may be applicable to multiple phases of development.

1. Overarching Principles
2. Transmission Planning Principles
3. Expedited Environmental Review & Permitting Principles
4. Siting and Construction Principles
5. Best practices

B. Transmission Impacts and the Needs of Overburdened Communities

Overburdened communities are defined in the Healthy Environment for All Act (HEAL Act, 2021) as "a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts." Overburdened communities experience the highest rates of adverse health conditions, environmental harms, and other risk factors from climate change and fossil fuel emissions, and are at risk of additional harm when energy transmission and storage assets are located near them.

As directed in the Clean Energy Transformation Act (CETA, 2019), utilities must ensure their customers are benefitting from an equitable distribution of resources, and that utilities are addressing disparities between overburdened and other communities. Utilities must balance between providing clean energy sources at the lowest cost, while at the same time taking overburdened communities into consideration in the siting of new transmission or generation infrastructure. Electrification of the state's emission-intensive industries as a pathway to decarbonization may help to alleviate some of the environmental and health disparities faced by the overburdened communities by replacing fossil fuels with clean energy sources. Regardless, electrification of the state's economy will require very large investments in transmission infrastructure. The importance of not passing on higher costs and risks to overburdened communities was seen as paramount to the TCWG and is reflected in Overa*rching Principle #4.*

C. Overview of the Transmission Corridors Work Group

Consistent with RCW 19.405.150, EFSEC Chair Kathleen Drew convened the 22-member TCWG, consisting of one representative from each of eight selected state agencies, one representative each from the affected utilities industry and Public Utility Districts, and two representatives each

from the Association of Washington Cities, Association of Washington Counties, sovereign Tribal governments, and statewide environmental organizations. In addition, the Chair added a labor representative and a representative of the renewable power industry. Representatives from Bonneville Power Administration (BPA) and Department of Defense (DOD) served as "ex-officio" members. Members were seated through a selection process undertaken by EFSEC in July 2021 (see Appendix 4 for TCWG member final roster).

The TCWG worked in a manner consistent with its Charter. Six full TCWG meetings were held, along with small group task work between meetings as needed to refine concepts that were then brought back to the full group for review and consideration. Ross Strategic, under contract with EFSEC, provided neutral third-party facilitation and documentation support services for the duration of the TCWG process.

Vision of Washington's Energy Future: Work Group Findings

As directed by the legislature and captured in the TCWG Charter, the work group used the milestones CETA outlined for electric utilities[4] to reach the required 100% clean electricity supply by 2045 as a key assumption in framing its discussions. Further, decarbonization modeling performed as part of the Washington 2021 State Energy Strategy[5] reasserted the "transformational role for the electricity sector in a decarbonized future" (pg. 115). Taken together, the TCWG recognized the necessity and urgency to address the challenges associated with ensuring the state's transmission infrastructure is able to support its clean energy goals[6].

A. Energy Needs

To inform its work, the TCWG received several presentations from regional experts in Washington energy-related policies and technical topics. The TCWG articulated the following findings to acknowledge foundational statements of fact that emerged from these presentations and subsequent group discussion:

[4] The law requires utilities to phase out coal-fired electricity from their state portfolios by 2025. By 2030, their portfolios must be greenhouse gas emissions neutral, which means they may use limited amounts of electricity generated from natural gas if it is offset by other actions. By 2045, utilities must supply Washington customers with electricity that is 100% renewable or non-emitting, with no provision for offsets. https://www.commerce.wa.gov/growing-the-economy/energy/ceta-overview/

[5] https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/

[6] Washington 2021 State Energy Strategy, pg 116, "The modeling suggests that electricity demand in Washington could grow by 13-20% over 2020 levels by 2030. Electricity load growth then accelerates, and by 2050 is up to 92% above the 2020 level. By 2045, 42-50% of the energy used in Washington would be in the form of electricity, up from 21% today. This growth — occurring parallel with CETA requirements for carbon-neutral electricity by 2030 and 100% non-carbon emitting by 2045 — will require diverse, new non-carbon-emitting generation resources."

1. **Washington is committed to a clean energy future.** Through the Clean Energy Transformation Act (CETA) of 2019, and related laws and decisions, the state is committed to decarbonizing its economy to help address the problem of global climate change.
2. **Decarbonizing the state's economy will both increase electricity demand and require new emissions-free resources to generate electricity.** Work on the Washington State Energy Strategy revealed that the most inexpensive pathway to decarbonization involves the electrification of large sectors of the economy. Electrification of those sectors is projected to more than double the overall demand for electricity in coming decades and necessitate new pathways to meet peak demand.
3. **Increased electricity demand will require increases in transmission capacity.** The significant forecasted increase in demand for power from clean energy sources mandated by CETA (doubling by 2045) is projected to require significant increases in both in-state and interstate transmission capacity within a relatively short time frame.
4. **Private utilities with less historic access to regional hydropower represent the greatest potential to shift to cleaner energy.** Washington's investor-owned utilities (Avista, Puget Sound Energy, and PacifiCorp) obtain a greater portion of their existing energy mix from coal and natural gas than other utilities and have the greatest opportunity to shift towards cleaner energy sources. Public utilities, which at times need to supplement their hydropower resources with power purchases on the open market, will also need transmission builds and upgrades to decarbonize.

B. Geographic Needs and Considerations

Due to Washington's unique geography and distribution of renewable resources relative to sources of electric load, geographically-specific transmission needs and considerations emerged frequently as a topic at TCWG meetings. Given its importance, the TCWG articulated the following finding:

Several existing transmission corridors need increased capacity to meet CETA goals. The current transmission grid has several constrained pathways of bi-directional power flow. Often in these corridors during periods of peak demand, existing transmission infrastructure has limited (or no) capacity to accommodate the demand increases. To ensure sufficient transmission from areas of generation to areas of demand, increased transmission capacity is projected to be needed in at least two, and potentially three, specific corridors:

- East-West, across the Cascades (bringing in wind and solar from eastern Washington, as well as abundant wind power from Montana and Wyoming)
- North-South, along the I-5 corridor (bringing in wind and solar from eastern Washington, abundant wind power from Montana and Wyoming, solar from California and the Southwest, plus possible hydro resources from Canada)

- Southern Coastal Areas to I-5 corridor (for projected offshore wind development referenced in the 2021 State Energy Strategy[7]).

C. Transmission-related Challenges

As a precursor to developing forward-looking, solution-based principles, the TCWG discussed and articulated findings related to key transmission-related challenges that members concluded were substantial impediments to the transformation of the transmission system required to meet CETA goals:

1. **The length of time required for adding new transmission infrastructure is significant.** Based on recent experience in Washington, Oregon, and Idaho, the lead time required for planning, permitting, and constructing high-voltage transmission lines may take 10-20 years. Given this, planning is already behind schedule for projected future demands. Under CETA, electricity supply in Washington must be free of greenhouse gas emissions by 2045.
2. **The electric grid has not experienced a major transformation in decades, and previous planning assumptions may no longer be valid.** Information related to cultural resources, environmental concerns, and equity impacts may not have been adequately considered during the development of previous transmission infrastructure projects.
3. **Climate change will exacerbate peak demand and may be unmet by existing transmission capacity.** According to federal transmission reliability standards, utilities must be prepared to provide customers power when they need it most on the coldest and hottest days of the year. The anticipated increase in extreme weather events due to climate change is expected to exacerbate peak demand. Increased transmission capacity will be needed if peak demand needs cannot be achieved through energy conservation measures, distributed energy resources, and new approaches for managing electrical flow.
4. **No single source exists for comprehensive planning information.** Planning for transmission lines is complex due to a patchwork of land ownership, land use, sensitive resources, permitting requirements and disparate datasets. Organizations such as the NorthernGrid and Western Electricity Coordinating Council (WECC) provide centralized resources for transmission planning purposes. However, these organizations do not site transmission lines.
5. **Existing regional transmission planning organizations will face additional demands due to the scale of transformation needed.** Robust regional coordination is needed to transform the electrical system to achieve a decarbonized economy. Existing regional planning organizations should expand technical analysis scope to include longer time horizons.
6. **Access to long-term firm transmission service between clean energy production areas and load centers is limited.** Certainty about transmission service curtailment risk is an important consideration for commercial arrangements between renewable energy

[7] https://www.commerce.wa.gov/growing-the-economy/energy/2021-state-energy-strategy/

developers and load serving entities. There is a need to alleviate the backlog of requests to connect to and transmit electricity on the grid and create greater system flexibility. Regulators and financial institutions do not adequately value transmission service that is not firm (24x7), but still available for most of the year.

7. **Transmission lines come with cost and controversy.** The development of transmission lines is expensive and controversial and can have significant impacts on communities and existing land use.
8. **Using transportation rights-of-way for new transmission could be an opportunity, but requires complex planning and preparation.** Transportation rights-of-way may present logical opportunities for constructing new transmission lines. Substantial planning and preparation would be required to make this possible.
9. **The current trained workforce is likely too small to both maintain current transmission infrastructure and construct new transmission infrastructure.** Shortages of skilled, journey-level workers in the region is a significant challenge to the construction of upgraded and new transmission infrastructure and continued maintenance of the existing transmission system.

TCWG Recommended Principles

The following recommended principles provide foundational, solution-oriented direction throughout transmission system development, and meaningfully respond to previously identified background findings, geographic needs and considerations, and transmission-related challenges.

The principles are organized by the transmission system development phase to which they apply: Transmission planning, expedited environmental review & permitting, and siting and construction. They are topically-grouped—there is no implied priority or level of importance associated with their numbering.

While some of these principles could apply to other kinds of energy development (e.g., clean energy facilities), the TCWG believes all apply to transmission system development.

D. Overarching Principles

1. **Interregional transmission capacity is key in enabling Washington, as well as other states, to build a diverse portfolio of clean and reliable electricity resources.** A robust, interregional bulk power transmission network is necessary for achieving Washington's climate, energy, and economic objectives. Enhanced transmission capacity and diversity across the West, including Canadian provinces, will allow Washington's utilities to provide more clean and reliable electricity at a lower cost (diversity of resources enables selection of lower cost resources in real-time.)

2. **Allow sufficient lead time.** Planning for new or upgraded transmission infrastructure should be initiated as soon as possible. This should include early and ongoing consultation with Tribes, the military, and local governments.
3. **Properly fund or provide authorization to receive funding to Tribes and federal, state, and local agencies providing essential project review (e.g., EFSEC, Department of Archaeology and Historic Preservation).** The increased and accelerated workload required to expedite transmission system improvements must be properly funded and/or authorized by the legislature and the U.S. Congress, and staffed to ensure expectations and requirements for regulatory, environmental, and cultural reviews are met during all phases of transmission system development**.**
4. **Overburdened communities should not bear higher costs and risks** associated with the loss of health, environment, native foods, and cultural resources as Washington strives to meet its CETA goals through new or upgraded transmission infrastructure. When considering the impacts to overburdened communities from expanding the transmission system, the following are important considerations:
    a. Knowledge and understanding of the impact.
    b. The importance of an equitable and transparent planning process.
    c. Addressing potential gaps in regulatory oversight to ensure the equitable distribution of benefits in transmission planning.
    d. Fostering and requiring early engagement with leadership from overburdened communities, ensuring that those directly impacted by transmission system decisions have a meaningful opportunity to help shape those decisions.

E. Principles for Transmission System Planning

1. **Designate and fund a person or organization within state government responsible for coordinating participation in transmission development activities and long-term transmission planning.** This will help meet CETA requirements and leverage federal funding by playing a role in regional transmission planning.
2. **Leverage opportunities to access federal funding for transmission development and grid enhancement.** Several federal programs, including many led by the U.S. Department of Energy (DOE) related to the Bipartisan Infrastructure Law, exist to encourage transmission development, and help build the electricity grid of the future. Developers of large-scale transmission projects (including BPA and the regulated utilities) should work together with state, local, and Tribal governments to participate in these programs if possible.
3. **Ensure that practicable alternatives to building additional transmission infrastructure are considered**. Local community energy development, distributed energy resources, and robust energy conservation opportunities should be maximized prior to or in parallel with investment in transmission projects. These efforts can benefit local communities and reduce impacts to culturally important and other resources. Ensure the case for

transmission is clearly documented and communicated, prior to proposing new transmission.

4. **Optimize grid operations and enhance the capacity of existing infrastructure.** Pursue opportunities to enhance the capacity of the transmission grid, such as grid-enhancing technologies and dynamic line ratings. Ensure that unused transmission capacity is made available to power providers to bring power to their customers through flow-based scheduling, acknowledging there may be a need for revised allocation of costs.
5. **Efficiently use system capacity.** Electricity providers and transmission owners should work together with transmission customers to 1) ensure energy requested is commensurate with the actual need for serving end users and, if so, 2) alleviate the backlog of requests to connect to and transmit electricity on the grid, and create greater system flexibility.
6. **Upgrade existing infrastructure**. Pursue opportunities to build higher-capacity transmission lines in existing corridors, including considering high-voltage direct current (HVDC) and other alternative technologies.
7. **Establish transmission planning practices that include proactive, long-term, interregional assessments on a regular basis**. Washington, as well as other states, needs a better assessment of the transmission requirements to support its clean energy transformation. A 20-year transmission plan should reflect the quantity and location of new clean energy resource requirements and the expanded demand for electricity in transportation, industry, and buildings. A multi-state approach using existing planning organizations is preferred.
8. **Continue to explore creation of a regional transmission organization (RTO) and expanded participation in regional markets** that would allow efficient dispatch of least-cost resources given transmission and other constraints. Coordinating operations of the transmission system would create system efficiencies and help identify grid-critical transmission investments. Exploration should focus on documenting the regionally specific costs and benefits of an RTO, challenges and opportunities, and the intersection points with Washington and Oregon clean energy policies and goals.
9. **Pursue practicable and cost-effective opportunities to site new generation near load and existing transmission.** Siting new generation near the load, where practicable and cost-effective, will help to minimize the need for transmission build-out. Practical considerations mean that this will not always be possible. For example, the suitability of renewable generating facilities is highly determined by the availability of suitable resources and must balance economic, environmental, and cultural impacts, and Environmental Justice principles.
10. **Explore opportunities to use transportation rights-of-way** for co-locating new transmission lines. It is important to consider the interplay of uses, transportation

sustainability goals, and construction policies like "dig once[8]" when co-locating transmission lines in transportation rights-of-way.

F. Principles for Expediting Environmental Review and Permitting without Compromising Protections

1. **Align and coordinate process, timing, and analysis methodologies within and across National Environmental Policy Act (NEPA) and other federal laws, and State Environmental Policy Act (SEPA) during project planning**. Achieve efficiencies by combining NEPA and SEPA processes, where feasible. Coordinate in advance on methodologies for analysis when NEPA and SEPA are involved in transmission projects to avoid duplicative or redundant time-consuming work.

2. **Use EFSEC for cross-jurisdictional long-range transmission projects.** Transmission projects that cross jurisdictional boundaries often get bogged down in overlapping and duplicative approval processes. Where new or upgraded long-distance transmission is needed to meet the goals of CETA and where those long-distance transmission needs can be met in existing corridors (transmission or transportation) these multi-jurisdictional projects should automatically use the EFSEC permitting process. Use of the EFSEC process can ensure timeliness and consistency in response to environmental and cultural resource issues.

3. **Identify opportunities for federal and state programs to establish programmatic permitting agreements for transmission projects.** Programmatic permitting can reduce the number of permit applications in review queues and reduce the requirements of applicants by encouraging advanced planning and identifying expectations for design requirements and conservation measures for similar projects.

4. **Identify specific geographic areas for siting transmission within corridors where additional transmission capacity is needed to meet the goals of CETA, as part of regional planning for grid-critical transmission investments/projects.** The process to identify the geographic areas must be inclusive of all impacted populations within and adjacent to the geographic areas and account for impacts across jurisdictions (e.g., crossing points between states). Focus applications in those areas of need and areas with the greatest probably of permitting success, and could be facilitated by a federal-state programmatic environmental impact statement.

5. **Approach expediting review and permitting with the primary goal of avoiding cultural resource impacts in transmission corridors**. Early Tribal consultation prior to application review can help identify which alternatives are non-starters from a cultural resource

[8] A policy to encourage the placement of fiber or conduit in the ground any time a trench is dug for a public project.

impact perspective, and opportunities to most effectively mitigate impacts that cannot be avoided.

6. **Invest in proactive and meaningful Tribal consultation.** Tribes are distinct sovereign governments and should be engaged in a deliberate and thoughtful manner that ensures good two-way communication and uses Tribal staff time and other resources as efficiently as possible. Tribal consultation is not accomplished through public comment periods associated with agency permitting processes. In 2022, the governor signed legislation detailing processes for greater Tribal consultation for programs allocating climate funds (HB1753) and in the EFSEC process (HB1812). This principle recognizes the importance of these legislative actions and the need to continue to invest in and enhance Tribal consultation.

7. **Invest in relationship-building between project developers and Tribes.** Developers of proposed projects that will need frequent interaction with Tribes during the permitting process should invest in relationship-building in the initial stages of project planning. State agencies should support this relationship building by offering project applicants information, training, and resources to support Tribal engagement (see Principle 10 below).

8. **Look for a "win" for Tribes and cultural resources.** Project applicants should assume the responsibility for identifying creative solutions to concerns and needs raised by Tribes during their engagement with applicants.

9. **Leverage the expertise of Department of Archaeology and Historic Preservation (DAHP).** Provide out-of-state developers, applicants, and other state and federal agencies with the relevant background and training on Washington Tribes and treaties. Increase funding for DAHP staff to develop and potentially deliver this training for project applicants and other permitting agencies on Tribal issues. DAHP could also serve in a liaison role between applicants and Tribes (as required if it is an EFSEC process) to achieve a consistent standard of Tribal consultation across and within state agencies to improve relationship-building and coordination with potentially impacted Tribes where no previous relationship exists.

10. **Increase funding to Tribes and DAHP** to reduce staffing constraints that impede and slow Tribal cultural resources review and completion of ethnographic studies. Provide funding from federal, state, and utilities sources to individual Tribes and DAHP to appropriately staff up for the permit load.

G. Principles for Siting and Constructing New or Upgraded Transmission Infrastructure

1. **Respectfully engage in Tribal consultation.** Conduct siting and construction with utmost respect for cultural needs, values, and resource protection, recognizing the value of both cultural surveys and ethnographic studies as foundational information.[9]

2. **Protect cultural and archaeological resources.** Avoiding cultural and archaeological resources is always the preferred method, followed by minimal disturbance. If cultural or archaeological resources are encountered during construction, and after meaningful consultation with Tribes it is determined avoidance is impossible, an "Inadvertent Discovery Plan" should be developed in accordance with Tribal policies and statutory requirements.

3. **Protect environmental resources.** Siting and construction of new or upgraded transmission lines must comply with all applicable local, state, and federal regulations including those requiring the avoidance, minimization, and mitigation of environmental impacts. These regulations should be considered in transmission siting and all legal requirements should be followed. Siting should be prioritized in areas that have the least impact to resources.

4. **Engage the public**. Public review processes reflect important values concerning public involvement and transparency. They must be protected in any effort to expedite permitting, siting, or construction of transmission resources. Apply appropriate public involvement strategies and adapt strategies to address the specific needs of each project.

5. **Support programs to develop skilled labor.** Training for skilled, journey-level workers should meet critical, robust safety thresholds, with compensation commensurate to the level of danger involved in this work. Apprenticeship and Tribal partnership programs that develop this skilled workforce should be implemented without discrimination.

6. **Address competing and conflicting uses.** Siting across federal lands, including Department of Defense operational areas, must consider competing and conflicting land uses. Early consultation with the relevant military branch and other federal agencies is critical when assessing potential areas for transmission infrastructure.

7. **Mitigate wildfire risk.** Siting and construction should strictly observe best practices to mitigate wildfire risk.

[9] Project applicants must coordinate with DAHP to protect information that is privileged or confidential under Tribal laws.

Best Practices

Though at a finer grain than the principles above, the following set of best practices capture some of the lived experience of TCWG members and presenters. Best practices were noted as they emerged during TCWG meetings, and are offered here to help increase efficiency, efficacy, and success during the implementation of the transmission system development phases.

BP-1: Utilize screening tools such as the Washington Environmental Health Disparities Map (a cumulative environmental health impacts assessment tool) to access critical information for the public, agencies, policymakers, and community-based organizations to make informed decisions regarding transmission infrastructure and related assets.

BP-2: **Utilize available geographic information systems.** Utilize available geographic information systems available from the military, Department of Ecology, Department of Natural Resources, Department of Fish and Wildlife, Department of Archaeology and Historic Preservation (DAHP), and others. For example, DAHP employs robust mapping data to identify cultural resource sites in Washington state. These data can be used in pre-screening geographic areas for transmission siting to minimize the chance of negatively affecting resources and avoid delays in the permitting process.

BP-3: Identify all participating agencies and jurisdictions and their requirements prior to initiating environmental review and siting processes. Anticipating specific needs and requirements can reduce the number of surprises and decrease inefficient permit revisions and resubmittals.

BP-4: Reduce barriers to contracting with community-based organizations and consultation with Tribes during planning and environmental review processes.

BP-5: Develop a "best practices" public involvement checklist to facilitate development of public involvement strategies and adapt strategies to address the specific needs of each project.

BP-6: Increase internal applicant-/utility-level review to thoroughly vet projects before they move into an external phase. Engage early with state and federal agencies to determine and access critical information for vetting purposes. Ensure projects are sufficiently vetted and evaluated so that those that move to the external review have a high probability of a successful outcome.

BP-7: Develop and utilize previously negotiated template language for lease or permit terms and conditions. Templated language can substantially reduce the need for lengthy negotiations during the permitting process.

BP-8: **Develop a standard transmission development process/template**. Building from the learning and best practices identified through other successful linear transmission projects, develop a standard transmission development process/template that can

serve as the starting point for new projects. An individual project's schedule and timeline will be contingent upon its unique constraints.

BP-9: **Assign dedicated senior staff to complex permitting processes**. Senior staff experience is critical to efficiently managing complex transmission projects. It is also critical to minimize disruptions from staff turnover throughout the process.

Next Steps

Consistent with the enabling legislation, EFSEC will submit this report with its transmittal cover letter providing recommendations for specific implementation steps to the Governor's Office and appropriate legislative committees by December 31, 2022.

Appendices

1. Legislative Charge
2. Acronyms and Definitions
3. TCWG Charter
4. TCWG Final Roster
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Appendices

Appendix 1: Legislative Charge

Clean Energy Transformation Act (CETA) of 2019, Section 25

Full Text of Section 25 (enabling legislation)

(1) The legislature finds that based on current technology, there will likely need to be upgrades to electricity transmission and distribution infrastructure across the state to meet the goals specified in this act. These facilities require a significant planning horizon to deliver electricity generation sites to retail electric load. Pursuant to RCW 80.50.040,29 the energy facility site evaluation council chair shall convene a transmission corridors work group and report its findings to the governor and the appropriate committees of the legislature by December 31, 2022.

(2) The work group must include one representative from each of the following state agencies: The department of commerce, the utilities and transportation commission, the department of ecology, the department of fish and wildlife, the department of natural resources, the department of transportation, the department of archaeology and historic preservation, and the state military department. The work group shall also include two representatives designated by the association of Washington cities, one from central or eastern Washington and one from western Washington; two representatives designated by the Washington state association of counties, one from central or eastern Washington and one from western Washington; two members designated by sovereign tribal governments; one member representing affected utility industries; one member representing public utility districts; and two members representing statewide environmental organizations. The energy facility site evaluation council chair shall invite the Bonneville power administration and the United States department of defense to each appoint an ex officio work group member.

(3) The work group shall:
   a. Review the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the transmission and distribution facilities in the state to deliver electricity from electric generation, non-emitting electric generation, or renewable resources to retail electric load;
   b. Identify areas where transmission and distribution facilities may need to be enhanced or constructed; and
   c. Identify environmental review options that may be required to complete the designation of such corridors and recommend ways to expedite review of transmission projects without compromising required environmental protection.

(4) The energy facility site evaluation council may contract services to assist in the work group efforts.

This section expires January 1, 2023.

Appendix 2: Acronyms and Definitions

Available transfer capacity: Maximum incremental transfer possible between two parts of a power system without violating any specified limits. The transfer can occur between two areas in the system and can occur in specific groups of system devices.[10]

CETA: Clean Energy Transformation Act (2019): SB 5116, 2019 commits Washington to an electricity supply free of greenhouse gas emissions by 2045. CETA requires the state's electric utilities to fully transition to clean, renewable, and non-emitting resources.

Clean energy: Energy that comes from renewable, non-carbon emitting energy sources that do not pollute the atmosphere when used. Clean energy can further refer to energy saved by energy efficiency measures.

Contracted power: Power which the transmission licensee has agreed to carry or is required to carry as per allocation from the generating stations or the long-term agreement between the importing and exporting utility.[11]

Decarbonization: Decarbonizing the energy system means replacing fossil fuel energy sources currently (e.g., coal, oil, and natural gas) with energy sources that emit far less carbon dioxide (e.g., wind and solar). Decarbonizing the power sector requires a multi-faceted approach that could include continued substitution of lower-emission power sources, continued improvements in end-use efficiency, improved grid flexibility and storage, and the use of carbon capture, utilization, and storage (CCUS) on remaining fossil fuel-based generation.[12]

Distributed energy resources: A non-emitting electric generation or renewable resource or program that reduces electric demand, manages the level or timing of electricity consumption, or provides storage, electric energy, capacity, or ancillary services to an electric utility and that is located on the distribution system, any subsystem of the distribution system, or behind the customer meter, including conservation and energy efficiency.[13]

Distribution of electricity: Electrical power distribution is the final stage of the electrical power system, which entails the delivery of electricity to the load. After electricity is generated and moved along the high-voltage transmission system, it comes off the transmission grid at local distribution substations where the voltage is reduced by transformers. The primary role of this stage is to carry the electricity from the transmission lines to customers.[14]

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[10] CAISO. ATC. Available Transfer Capability Implementation Document (caiso.com)

[11] Law Insider. Contracted Power. Contracted Power Definition | Law Insider

[12] C2ES. Decarbonizing U.S. Power. Decarbonizing U.S. Power — Center for Climate and Energy Solutions (c2es.org).

[13] Washington State Legislature. RCW 19.405.020 Definitions. RCW 19.405.020: Definitions. (wa.gov).

[14] U.S. Energy Information Administration. Electricity Explained. Delivery to consumers - U.S. Energy Information Administration (EIA).

EFSEC: The Energy Facility Site Evaluation Council provides siting processes for major energy facilities in the State of Washington.

Firm energy resources: Technologies that can supply electricity reliably, on demand, and sustain output for weeks or months at a time. Firm energy resources provide reliability and meet electricity demand at different times of the year.[15]

Flow-based: Flow-based methodology determines impacts on predefined flowgates, which are transmission elements such as a line or a transformer that can account for contingencies.

Flow control: The laws, regulations, and economic incentives or disincentives used by waste managers to direct waste generated in a specific geographic area to a designated landfill, recycling, or waste-to-energy facility.[16]

Fossil fuels: An energy source formed in the Earth's crust from decayed organic material. The common fossil fuels are petroleum, coal, and natural gas.[17]

HEAL Act: Healthy Environment for All Act (2021) SB 5141 defines 'environmental justice' in state law, outlines how agencies should consider community needs and environmental justice (EJ) in their work, establishes a permanent EJ Council to work with these agencies and help create EJ legislation, and expands equitable community participation. The HEAL Act aims to accelerate a Just Transition toward climate and environmental justice. [18]

HVDC: A high-voltage direct current (HVDC) system converts power from alternating current (AC) to direct current (DC) at the sending end, transmits the power using DC, converts power back from DC to AC at the receiving end, and delivers the power to the receiving end AC grid. Contrary to AC lines, HVDC links are fully controllable. The HVDC line as such allows the operator to adjust the system, based on the objective of the operator. Objectives may include minimization of losses, keeping a fixed transfer, minimizing the consequences of contingencies, etc.[19]

Journey-Level Lineworker (Qualified Electrical Employee[20]): A person who is familiar and knowledgeable in the construction and operation of the electric power generation, transmission, and distribution equipment involved, and such lines and/or equipment that concerns his/her position and who is fully aware of the hazards connected therewith, or, one who has passed a journey status examination for the particular branch of the electrical trades with which he/she may be connected.

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[15] Jenkins, Jesse. Firm Low-Carbon Energy Resources. Firm low-carbon energy resources | MIT Energy Initiative

[16] U.S. Energy Information Administration. Glossary. Glossary - U.S. Energy Information Administration (EIA)

[17] U.S. Energy Information Administration. Glossary. Glossary - U.S. Energy Information Administration (EIA)

[18] Front and Centered. Heal Act. Healthy Environment For All (HEAL) Act - Front and Centered.

[19] P.S.R. Murty, High-Voltage Direct Current Line, Electrical Power Systems, 2017

[20] Chapter 295-45 WAC

NEPA: National Environmental Policy Act, requires federal agencies to assess and disclose the environmental effects of their proposed actions and alternatives prior to making decisions.

Non-emitting: Non-emitting electric generation indicates electricity from a generating facility or a resource that provides electric energy, capacity, or ancillary services to an electric utility and that does not emit greenhouse gases as a by-product of energy generation. Non-emitting does not include renewable resources.[21]

Overburdened Communities: Minority, low-income, Tribal, or indigenous populations or geographic locations in the United States that potentially experience disproportionate environmental harms and risks. This disproportionality can be as a result of greater vulnerability to environmental hazards, lack of opportunity for public participation, or other factors.[22]

Peak demand: The maximum electrical load during a specified period of time.

Production cost modelling: Used to conduct detailed simulations of grid operations and costs. Production cost modeling uses optimization to find the least-cost dispatch of grid resources.[23]

Regional Transmission Organizations: RTO's operate the transmission systems and develop innovative procedures to manage transmission equitably. RTO's have energy and ancillary services markets in which buyers and sellers can bid for or offer generation. RTOs use bid-based markets to determine economic dispatch. While major sections of the country operate under more traditional market structures, two-thirds of the nation's electricity load is served in RTO regions. The Northwest includes the Northwest Power Pool (NWPP), the Rocky Mountain Power Area (RMPA) and the Western Electricity Coordinating Council (WECC), a regional entity.[24]

Renewable Energy: Energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include hydro, geothermal, solar, wind, ocean thermal, wave action, and tidal action.[25]

Security-Constrained Economic Dispatch (SCED): Security-constrained economic dispatch is an area-wide optimization process designed to meet electricity demand at the lowest cost, given the operational and reliability limitations of the area's generation fleet and transmission system. [26]

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[21] Washington State Legislature. RCW 19.405.020 Definitions. RCW 19.405.020: Definitions. (wa.gov).

[22] EPA. EJ 2020 Glossary. https://www.epa.gov/environmentaljustice/ej-2020-glossary.

[23] Union of Concerned Scientists. Grid Modeling Overview. Grid Modeling Overview: Four Types of Models Guiding the Transition to Clean Electricity - Union of Concerned Scientists (ucsusa.org)

[24] FERC. RTO's and ISO's. RTOs and ISOs | Federal Energy Regulatory Commission (ferc.gov)

[25] U.S. Energy Information Administration. Glossary. Glossary - U.S. Energy Information Administration (EIA)

[26] Department of Energy. SCED. ECONOMIC DISPAH (energy.gov)

SEPA: State Environmental Policy Act, process to assess, disclose, and mitigate the environmental effects of proposed actions and alternatives in Washington State prior to making decisions.

Transmission corridor: A tract of land owned, occupied, or leased by a transmission provider, or covered by an easement or right-of-way held by a transmission provider, where an electric transmission line is constructed, operated, or maintained.[27]

Transmission of electricity: Electrical transmission is the process of delivering generated electrical energy from a generating site, such as a power station or power plant, to an electrical substation where voltage is distributed to consumers and populated areas. Transmission power lines are commonly for long-distance, high-voltage electricity transportation.

Western Electricity Coordinating Council (WECC): Non-profit corporation that exists to assure a reliable Bulk Electric System in the geographic area known as the Western Interconnection. WECC has been approved by the Federal Energy Regulatory Commission (FERC) as the Regional Entity for the Western Interconnection.

Wheeling: The movement of electricity from one system to another over transmission facilities of interconnecting systems. Wheeling service contracts can be established between two or more systems.[28]

[27] Adapted from Law Insider

[28] U.S. Energy Information Administration. Glossary. Glossary - U.S. Energy Information Administration (EIA)

Appendix 3: TCWG Charter

Please see here to view the TCWG charter.

Appendix 4: TCWG Final Roster

Please see here to view the TCWG membership roster.

Appendix 5: Meeting Summaries

Meeting	Link
Meeting 1 (September 22, 2021)	Meeting 1 Link
Meeting 2 (October 20, 2021)	Meeting 2 Link
Meeting 3 (December 8-9, 2021)	Meeting 3 Link
Meeting 4 (February 9-10, 2022)	Meeting 4 Link
Meeting 5 (April 13-14, 2022)	Meeting 5 Link
Meeting 6 (June 8-9, 2022)	Meeting 6 Link

Appendix 6: Meeting Agendas

Meeting	Link
Meeting 1 (September 22, 2021)	Meeting 1 Link
Meeting 2 (October 20, 2021)	Meeting 2 Link
Meeting 3 (December 8-9, 2021)	Meeting 3 Link
Meeting 4 (February 9-10, 2022)	Meeting 4 Link
Meeting 5 (April 13-14, 2022)	Meeting 5 Link
Meeting 6 (June 8-9, 2022)	Meeting 6 Link

Appendix 7: Background & Context: Presentations/Resources provided to the TCWG

Meeting 1
Washington State Energy Strategy and Clean Electricity Standard 2019 Clean Energy Transformation Act: Glenn Blackmon, Department of Commerce Glenn Blackmon, manager of the Energy Policy Office at the Department of Commerce, provided an overview of the 2019 Clean Energy Transformation Act (CETA), which provides for clean, affordable, reliable, and equitable electricity services for the state of Washington. Blackmon detailed CETA's requirements to transition to 100% clean electricity by over the coming 25 years.
Transmission Overview How Transmission Works in the State of Washington: Anders Johnson, Bonneville Power Administration Anders Johnson, with Bonneville Power Administration (BPA), provided an overview of how transmission works within the State of Washington and an in-depth understanding of transmission benefits, reliability and safety standards, design considerations, and generation interconnections.
Transmission Permitting Transmission Line Permitting in Washington State: Joseph Wood, Energy Facility Site Evaluation Council Joseph Wood provided a high-level overview of transmission line permitting and an outline of Federal, State, and Local options for transmission line permitting in the state of Washington.
Meeting 2
Energy and Transmission Needs and Opportunities Needs and Opportunities: Rob Lothrop, Columbia River Intertribal Fish Commission Rob Lothrop, a representative from the Columbia River Intertribal Fish Commission (CRITFC), presented information to 1) expand the work group's understanding of the impacts of transmission on the region's waterways and tribal interests, and 2) provide an overview of energy and transmission needs and opportunities according to the CRITFC energy vision for the Columbia Basin.

Panel #1

Tom Flynn, Puget Sound Energy; Nicolas Garcia, Washington Public Utility District; Ian Hunter, Snohomish County Public Utility District

Tom Flynn, with Puget Sound Energy (PSE) provided an overview from the investor-owned utilities' perspective on CETA transmission needs. Flynn shared the importance of level-setting needs driven from CETA to discuss the hurdles around securing transmission in the region. Ian Hunter (Snohomish PUD) and Nicholas Garcia (WPUDA) presented an overview on the Northwest Electrical System and grid reliability, sharing that there are 28 public utility districts (PUDs) in the state, with 24 providing electricity.

Panel #2

Katie Ware, Renewable Northwest; Vlad Gutman-Britten, Climate Solutions; Anders Bisgard, Avangrid

Katie Ware shared Renewable Northwest's mission to decarbonize the region and transition to clean energy. Vlad Gutman Britten, with Climate Solutions, works towards accelerating solutions to the climate crisis and focuses on decarbonizing the energy economy. Bisgard shared the challenges for developers in lining up internal processes with BPA, transmission, and other stakeholders to move through development process

Meeting 3

Contracted Transmission Service Rights vs Actual Power Flows

BPA's Transmission Offerings and Study Process: Chris Jones, BPA Transmission Planning

Chris Jones, Supervisory Public Utilities Specialist with Bonneville Power Administration (BPA), shared an overview of BPA's Transmission Offerings and Study Process. Jones commented that BPA's process for evaluating and responding to transmission service requests offers two transmission service types: point-to-point and network integration transmission service.

Labor Challenges

Challenges/Opportunities to improving the existing transmission system: Will Power, IBEW 77

Will Power, a journey-level lineman and Business Representative with the International Brotherhood of Electrical Workers Union, spoke to the challenges in the aging workforce of journey-level linemen. Power shared the current challenge in labor shortage due to high retirement rates, level of investment required for training and apprenticeships, and a lack of large-scale investment in infrastructure in the energy sector.

Sustainability Initiatives and ROW Policies

Challenges and Opportunities to Improving the Existing Transmission System: Ahmer Nizam, Washington State Department of Transportation

Ahmer Nizam, Technical Services Manager, and Justin Zweifel, NEPA/SEPA Program Manager, introduced Washington State Department of Transportation (WSDOT) requirements for siting utility infrastructure within state highway rights of way. The presentation provided an overview of primary siting and occupancy considerations, as well as WSDOT's sustainability initiatives.

Meeting 4

Boardman to Hemingway

Federal and State-Level Transmission Line Permitting: Boardman to Hemingway transmission Line Project: Sarah Esterson, Oregon Department of Energy

Sarah Esterson, Senior Policy Advisor with Oregon Department of Energy, provided an overview on the Boardman to Hemingway Transmission Line Project (B2H) and the NEPA and SEPA permitting processes that the project was required to follow.

Cascade Crossing

Tim McMahan, Stoel Rives; Doug Young, USDA Forest Service

Tim McMahan, Energy Facility Permitting Attorney with Stoel Rives Law Firm, provided an overview of a range of case studies, including NW Natural Gas South Mist Pipeline Extension, Ruby Pipeline, Western Spirit Clean Line Energy and finally Cascade Crossing Transmission Line.

Panel #1: Permit Reviewer Perspectives on State-level Transmission Line Permitting

Brenden McFarland, WA State Department of Ecology; Steven Moses, Snoqualmie Tribe; Dana Miller; Yakama National Tribal Council; Allyson Brooks, WA Department of Archaeology and Historic Preservation; Scott Nelson, WA Department of Natural Resources; Benjamin Blank, WA Department of Fish and Wildlife

Six panelists representing a range of perspectives, including tribal interests, historic preservation, land management and wildlife protection, were invited to share their experiences in SEPA environmental review and the opportunities and challenges they see relative to environmental review streamlining.

Panel #2: Permit Applicant Perspectives on NEPA, SEPA, and Local Permitting Environmental Review

Brian Fritz, PacifiCorp; Joe Stippel, Idaho Power; Lorna Luebbe, Puget Sound Energy

Three panelists were invited to share their experiences in NEPA, SEPA, and local permitting and the opportunities and challenges they see relative to expediting the environmental review process.

Meeting 5

Contracts vs Flow-Based modeling and planning on transmission grid

Contract Path versus Flow-Based Method Concepts: Vic Howell, Director of Reliability Risk Management, WECC

Vic Howell, with the Western Electricity Coordinating Council (WECC), provided an overview of flow-based modeling versus contract path methodology. Howell commented that there are two approaches used to determine how much power can be reliably transferred. The contract path methodology uses a path that can be designated to form a single continuous electrical path. Flow-based methodology determines

Importance of Regional Transmission Cooperation and Shift to a Regional Transmission Operator (RTO)

Importance of Regional Transmission Cooperation: Megan Decker, Oregon Public Utilities Commission

Megan Decker, with the Oregon Public Utility Commission, provided an overview of transmission planning and development coordination, which allows the state to have more confidence in decisions regarding cost, impact, and policy goals.

Near-Term Regional Transmission Needs

Pacific NW Transmission Needs: Randy Hardy, Hardy Consulting (former BPA CEO)

Randy Hardy, independent consultant, provided an overview of energy needs in the Northwest, sharing that both Washington and Oregon legislation requires investor-owned utilities (IOUs) to reach 80% clean energy by 2030. He shared the perspective that the current trajectory for increasing transmission capacity may fall short of achieving this goal, and suggested potential remedies.

Overburdened Communities

Mariel Thuraisingham, Front and Centered

Mariel Thuraisingham, with Front and Centered, presented on utilities' direct responsibilities for driving an equitable transition towards clean electricity goals.

Meeting 6
Regional Planning in the Northwest with 20-year Outlook Transmission Planning Overview: Arne Olson, E3 Arne Olson, with E3, provided an overview of transmission planning and key challenges. Olson walked members through four transmission use cases emerging from deep decarbonization including connection of remote renewables, load and resource diversity, reliability and grid strengthening, and electrification.
State Coordination for Federal Transmission Sarah Vorpahl, Department of Commerce Sarah Vorpahl, representing Washington Department of Commerce, shared an overview of the Transmission Facilitation Program (TFP) within the Infrastructure Investment and Jobs Act (IIJA) and its role in the state's clean energy goals.

Additional information resources provided to TCWG members:

Why Renewable Electricity Powers Decarbonization — and Pays Off | InvestigateWest (invw.org): Region-focused presentation on the importance of import/export of power to meeting Washington's clean energy targets.

Can the West learn to share renewable power? | InvestigateWest (invw.org): Region-focused presentation on the importance of import/export of power to meeting Washington's clean energy targets.

2021 State Energy Strategy - Washington State Department of Commerce (Chapter F – Electricity)

Why the US isn't ready for clean energy: The grid needs to change for solar and wind energy (Vox) -NW-specific content starts at 3min

WSDOT policy for tribal approvals shared by TCWG member Justin Zweifel (WSDOT)

Low-Carbon Energy Project Siting Improvement Interim Legislative Report (wa.gov)

One big detail could derail Northwest's clean-energy goals: Context on how the inability to secure renewable energy from producers to users has planners worried about meeting mandates.

Appendix 8: TCWG Member Comments on Report

A final draft of the Report was distributed to all TCWG members to review in July 2022. Members were asked to (1) acknowledge whether the report accurately reflects the TCWG's deliberations, and (2) if not, they were invited to add comments for inclusion in the table below.

TCWG members individually affirmed that the TCWG Report accurately reflects the group's deliberations, with two exceptions: one member (Columbia Riverkeeper) stepped away from participation in the TCWG due to capacity issues and did not respond to the request for affirmation. The other member, Yakama Nation, chose to neither agree nor disagree that the report accurately reflects the TCWG deliberations.

Some members provided comments that either added emphasis to areas of importance for them and/or suggested improvements to the Report. Those providing comments did so while affirming the accuracy of the report--except Yakama Nation, who chose to remain neutral.

Readers are strongly encouraged to review this brief table.

Name and Affiliation	Comments
Tribal Council Dana Miller, Yakama Nation	For Tribal consultation to yield meaningful input from Tribal entities, proposed project information needs to be provided early and with known project specifications that allow for responses on likely cultural impacts. This is essential and applies to all the recommendations in this Report. ***C. Principles for Expediting Environmental Review and Permitting without Compromising Protections.*** • *Principle C.8:* We believe not only "should" project applicants assume responsibility for identifying creative solutions, applicants "must" assume this responsibility. It is also important to note that project applicants do not have an assumed property right for the destruction of cultural properties. • *Principle C.10:* The increased staffing levels described in Principle C.10 need to be consistent with the volume of project applications and cultural resource review work production timelines—the level of staffing must be able to meet the demand for Tribal cultural resources review and completion of ethnographic studies. ***D. Principles for Siting and Constructing New or Upgraded Transmission Infrastructure*** *Principle D.1*: It is essential to add that project applicants understand they will not receive ownership of information generated by information from a Tribal entity. *Principle D.2:* We believe the Legislature should codify resource-protective elements from the Governor's Executive Order 21-02 (Apr. 7, 2021) and the Presidential Memorandum of January 26, 2021, regarding Tribal Consultation and Strengthening Nation-to-Nation Relationships.

Glenn Blackmon, Washington Department of Commerce	The use of the words “interregional” and “regional” (in the context of transmission systems and planning) may be confusing for some people. “Regional” often refers to the Pacific Northwest area where Bonneville Power Administration (BPA) operates, but in this context “regional” should refer to the area covered by the NorthernGrid planning organization. “Interregional” should refer to the geographic area known as the Western Interconnection (WECC planning organization).
Diane Butorac, Washington Department of Ecology	Environmental impacts and mitigation should be considered as part of all planning efforts and project siting. This topic was part of the group discussion and while there were no specific items developed for this, Ecology would like to emphasize the importance of considering environmental impacts and mitigation in the various phases of transmission corridor planning and siting. For Overarching Principle A.2, agencies should also be included in early and ongoing discussions to allow for sufficient lead time.
Nicolas Garcia, Washington Public Utility Districts Association	1. There is not actual identification of potential transmission corridors. 2. Principles for Transmission System Planning a. Principles for Transmission Planning b. Principles 3 & 9 the word 'practicable' seems too broad. Replace with a less demanding objective such as 'reasonable.' c. Principles 4, 5, & 8 are effectively duplicative. 3. Some of the language may not fully reflect the actual challenges of transmission siting: It may not be possible to "Expedit[e] Environmental Review and Permitting without Compromising Protections." 4. It is unclear who is to "identify specific geographic areas for siting transmission as part of regional planning for grid-critical transmission investments/projects." 5. It is unclear who the "Principles for Siting and Constructing New or Upgraded Transmission Infrastructure" apply to. If it is intended to apply to transmission developers, what standard will be used to judge compliance/consistency with the principles. Absent some standards, transmission developers face an open-ended level of uncertain requirements that will delay projects and increase costs. Which, in turn, will dissuade the development of the new transmission necessary for the state to achieve its carbon reduction goals.
Elizabeth O’Connell Washington Utilities and Transportation Commission	**Transmission related Challenges:** • *Challenge #4: No single source exists for comprehensive transmission planning*: The discussion mentions Northern Grid – which is the regional transmission planning entity under FERC Order 1000 for the region. If comprehensive means something different than planning that should be explained further to explain the shortcomings of Northern Grid or the regional planning process. FERC is currently undergoing several rulemakings to address shortcomings with regional planning, cost allocation and generator interconnection practices. Also, the discussion

	closes with the statement that neither NorthernGrid nor WECC are organizations that site transmission. This is true, because planning and siting are different functions. Siting authority is a state or local authority or federal in the case of federal law/agencies. Even RTOs that conduct transmission planning are not organizations responsible for siting. The premise of this section should be clarified further. **Principles for Transmission Planning:** • *Principles B.4 and B.6:* Clarify how these are different. • *Principle B.8:* The definition of an RTO should be a definition. Information about the Northwest should be included in text with Principle B.8--suggest removing the last sentence from the definition and including the following text under that principle: The only RTO/ISO in the Western Interconnection is the California Independent System Operator. There are efforts by the CAISO, Southwest Power Pool, and other organizations to develop an RTO in the Western Interconnection, but these are still in formational stages. In the absence of an RTO in the West, there are several organizations currently responsible for transmission planning–the Western Power Pool (formerly the Northwest Power Pool), which provides support for NorthernGrid, a FERC Order 1000 regional planning organization for the Northwest region, West Connect, an Order 1000 planning organization for the SouthWest, and the Western Electric Coordinating Council (WECC). **Principles for Expediting Environmental Review and Permitting without Compromising Protections** • Principle C.1: The UTC assumes this also means coordinating with federal agencies and ensuring coordination with any coordinated federal siting organizations or committees. **Principles for Siting and Constructing New or Upgraded Transmission Infrastructure:** • Principle D.4: Does this mean the communities impacted by the siting, whether overburdened or not? **Appendix 2: Acronyms and Definitions:** • Renewable Energy: UTC suggests citing also to the definition in CETA as to what is defined as renewable.
Ahmer Nizam, WSDOT	**Overarching Principles** • A-2: Consider replacing the last sentence with “This should include early and ongoing consultation with Tribes, the military, local governments, and applicable federal, state, and local permitting authorities. Similarly, sufficient lead time should be provided when new property rights must be acquired for siting purposes.”