Appendix S: Response to Comments

For Programmatic Environmental Impact Statement on Utility-Scale Solar Energy Facilities in Washington State

By

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For the

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Washington State Department of Ecology

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State of Washington

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Acronyms and Abbreviations List

BESS	battery energy storage system
Ecology	Washington State Department of Ecology
EFSEC	Energy Facility Siting Evaluation Council
EPRI	Electric Power Research Institute
FTA	Federal Transit Administration
GHG	greenhouse gases
GMA	Growth Management Act
MW	megawatt
NABat	North American Bat Monitoring Program
PEIS	Programmatic Environmental Impact Statement
PHS	Priority Habitats and Species
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
TCP	Traditional Cultural Property
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WSRRI	Washington Shrubsteppe Restoration and Resiliency Initiative

Crosswalk with Response to Comments Report for Utility-Scale Onshore Wind Energy

Two response to comments reports are being released at the same time, one for utility-scale solar energy facilities and one for utility-scale onshore wind energy facilities. This crosswalk identifies the areas with substantial differences between the documents.

Attachment 1, Coded Comment Record, is the same across both reports as comments submitted were accepted and considered for both PEISs.

Utility-Scale Solar Energy Response to Comments Report (this document)	**Utility-Scale Onshore Wind Energy Response to Comments**
• Section 3.2 includes a concern summary and response specific to solar facility technologies • Section 3.5.1 includes a Tribal rights, interests, and resources concern summary and response specific to solar facilities co-located with agriculture	• Section 3.2 includes a concern summary and response specific to onshore wind facility technologies • Section 3.5.7 includes an environmental health and safety concern summary and response specific to onshore wind facility transformers

1 Introduction

1.1 Background

The Washington State Department of Ecology (Ecology) prepared a State Environmental Policy Act (SEPA) Programmatic Environmental Impact Statement (PEIS) to evaluate utility-scale solar energy facilities in Washington. A PEIS is a type of nonproject environmental review used for planning; it is not an evaluation of a specific project. The PEIS considers potentially significant adverse environmental impacts at a broad level. It analyzes general types of facilities—but not individual projects—to identify probable significant adverse environmental impacts and possible ways to avoid, reduce, or mitigate those impacts.

The PEIS focuses on utility-scale solar energy facilities, which are defined as facilities capable of providing at least 20 megawatts (MW) of electricity directly to the state's electrical grid. The PEIS evaluated the following types of utility-scale solar energy facilities as well as a No Action Alternative:

- **Utility-scale solar facilities:** solar energy facilities capable of generating between 20 and 1,200 MW of energy on sites between 200 to 12,000 acres in size.
- **Utility-scale solar facilities with battery energy storage systems:** facilities that also include one or two battery energy storage systems (BESSs), each capable of storing up to 500 MW of energy.
- **Utility-scale solar facilities that include agricultural uses:** dual-use facilities where agriculture would occur during facility operations and may include raising or modifying the solar panels to allow for agricultural land use.
- **No Action Alternative:** city, county, and state agencies would continue to conduct environmental review and permitting for utility-scale solar facilities under existing state and local laws on a project-by-project basis without using this PEIS as a reference.

The geographic scope for the solar PEIS includes areas in Washington where utility-scale solar facilities are likely to be developed based on available solar energy, the topographic slope, and proximity to transmission lines.

This *Response to Comments Report* provides a summary of the comments received during the public comment period for the Draft PEIS, along with Ecology's responses. Responses include factual corrections, clarification, and how substantive comments were addressed in the Final PEIS.

1.2 Comment process

The Draft PEIS was published on September 25, 2024, and interested parties and Tribes were notified of the document's availability and opportunities to comment on the Draft PEIS. Comments were accepted during a 33-day public comment period (September 25, 2024, through October 28, 2024) and 60-day Tribal comment period (September 25, 2024, through

November 25, 2024). This was a joint comment period with joint public hearings and Tribal forum for the Draft Utility-Scale Solar Energy PEIS and Draft Utility-Scale Onshore Wind Energy PEIS. Comments submitted for one document were accepted and considered for both.

The Draft PEIS and its appendices were available for public review during the public comment period on the SEPA Register and Ecology's PEIS website, with information on how to provide comments. The Draft PEIS and associated technical resource reports developed specifically for this environmental review were also available at the Ecology Headquarters in Lacey, Washington, and Ecology's Central Region Office in Union Gap, Washington. CD or additional printed copies were also available upon request. TTY or relay services, as well as Americans with Disabilities Act accommodations, were also available.

Three public hearings were held during the Draft PEIS comment period. Two were in person, and one was held virtually. One Tribal forum was held virtually. Comments were accepted through various methods, including electronic submittals using a comment form on the PEIS website, oral and written comments provided at the public hearings, and comments submitted by mail.

Ecology conducted the following public notice and outreach activities to notify Tribes, agencies, members of the public, and interested parties of the public comment period and to announce upcoming public hearing dates. Ecology offered Spanish language translation services at the public meetings and additional languages if requested. A variety of outreach and notification methods were used to communicate information about the public comment period:

- Washington State SEPA Register (202403991 for the Draft Utility-Scale Solar PEIS) legal notices for the release of the Draft PEIS, comment period, and public hearings were published on September 25, 2024.
- Legal notices were published at the start of the public comment period in the following six newspapers:
    - *The Seattle Times*
    - *Columbia Basin Herald*
    - *The Spokesman-Review*
    - *Tri-City Herald*
    - *tú Decides*
    - *Yakima Herald-Republic*
- Public and media notifications were provided, as follows:
    - Notices of the public hearing were sent via email listserv to approximately 6,845 interested people on September 25, 2024.
    - A blog post and news release were issued on September 26, 2024.
    - Information was published on Ecology's Public Input and Events website on September 25, 2024.
    - Updates were made to Ecology's PEIS website on September 25,2024.
- Tribal notifications were provided as follows:
    - Notifications were sent to Tribal leadership, cultural and natural resource directors, and Tribal associations on September 25, 2024.

    - Tribal Forums were held in March and April 2024, prior to the Draft PEIS publication, to keep Tribes informed about the process.
    - A Tribal Forum was held on November 7, 2024, to receive Tribal comments on the Draft PEIS.
- Agency notifications were provided as follows:
    - State, local, and federal agencies were notified by email, listserv, and SEPA Register notices.
- Public hearings provided a forum for Ecology to present an overview of the PEIS and to receive comments on the Draft PEIS. Attendees were able to provide written or oral comments and were also provided with instructions on how to submit written or electronic comments. Public hearings were held as follows:
    - At Ecology Central Region Office on October 15, 2024.
    - At Red Lion Hotel Pasco Airport & Conference Center on October 16, 2024.
    - Virtually on October 22, 2024.

1.3 Comment analysis process

A comment analysis process was developed to organize and track the comments received during the Draft PEIS comment period. First, a coding structure was developed to identify each commenter and each of their concerns or questions. Each comment was entered in a database along with these codes, referred to as comment codes. At the conclusion of the comment period, electronic copies of the comments and the comment log were provided to Ecology technical experts to review and consider.

1.4 Report overview

While the comment analysis process captured the full range of comments received, it is important to note that this *Response to Comments Report* provides a summary of the comments rather than a statistical analysis of general public opinion. The commenting process should not be viewed as a vote-counting process; SEPA emphasizes responding to the content of the comments received.

All comments submitted during the public comment period were reviewed and considered in the development of this report and the Final PEIS. Where relevant and appropriate, revisions identified in the comments, as well as other substantive changes to the Draft PEIS, have been incorporated into the Final PEIS. This report includes reponses to all substantive comments on the Draft PEIS.

Chapter 2 of this report provides summary information about the commenters and comments received on the Draft PEIS.

Chapter 3 includes comments sorted into groups by common topic and presented as concern summaries. Each concern summary is followed by a brief response and a list of the comment codes reflected in the concern summary.

Attachment 1 includes a complete record of all the comments, with numbering that corresponds to the comment codes shown in the concern summaries. An index of the comment record is also presented in Attachment 1.

2 Comment Analysis

2.1 Draft PEIS comments

During the comment period for the Draft PEIS, 16 communications (letters, emails, and online forms) were received from 13 commenters, consisting of federal and state agencies, Tribes, organizations, and businesses. Within the communications received, there were approximately 221 comments. Of those comments, 107 related to both the solar and onshore wind Draft PEISs; 87 comments were specific to the Draft Solar PEIS; and 27 comments were specific to the Draft Onshore Wind PEIS. Comments received on either PEIS were considered for both PEISs.

Table 1 summarizes the communications received and Table 2 lists the Tribes, agencies, organizations, and businesses who commented on the Draft PEIS. Ecology appreciates the time and attention that commenters committed to reviewing the Draft PEIS.

Table 1. Summary of communications

Commenters	Communications received
Tribes	1
Agencies	5
Organizations	9
Businesses	1

Table 2. Tribes, agencies, organizations, and businesses who commented on the Draft PEIS

Type	Commenter
Tribes	The Confederated Tribes of the Colville Reservation
Agencies	Washington State Department of Archaeology and Historic Preservation
	Washington State Department of Natural Resources
	U.S. Department of the Interior (2 communications and 1 duplicated submittal)
	Washington Department of Fish and Wildlife
Organizations	Committee For A Constructive Tomorrow
	Conservation Northwest (2 communications)
	Renewable Northwest
	Audubon Washington
	Climate Solutions
	Blue Mountain Audubon Society
	Sierra Club (2 communications)
Businesses	Puget Sound Energy

3 Comment Responses

All comments submitted during the public comment period were reviewed and considered in the development of the Final PEIS. Where relevant and appropriate, revisions identified in the comments, as well as other substantive changes to the Draft PEIS, have been incorporated into this Final PEIS.

Sections 3.1 through 3.6 of this report provide responses to commenters' substantive concerns, organized by topic. Comments were summarized in the concern summaries for each topic. A complete record of all comments received is provided in Attachment 1 of this report, with numbering that corresponds to the comment codes in this section.

Substantive comments are those that question a point of fact or analysis in the PEIS (such as the accuracy of information or the adequacy of analysis), suggest alternatives to those evaluated in the PEIS, or request or provide additional information or studies. Comments concerning corrections to errors or updates to materials referenced in the Draft PEIS are discussed in Section 3.7.

3.1 Environmental process, procedures, and agency coordination

The Washington State Legislature directed Ecology to prepare nonproject environmental reviews of utility-scale onshore wind energy facilities, utility-scale solar energy facilities, and green electrolytic and renewable hydrogen facilities in Washington by June 30, 2025. The reviews are being prepared pursuant to SEPA. The Draft PEIS was prepared under Revised Code of Washington (RCW) 43.21C.030(2)(c) per Chapter 197-11 Washington Administrative Code (WAC) procedures. See PEIS Section 1 for more information on the SEPA process.

Concern summary: Requested additional opportunities to comment on the Draft PEIS, including an extension of the comment period, and that Ecology provide a comprehensive summary of comments from interested parties and how they were incorporated into the Final PEIS.

Comment codes: IND-001-4, GOV-004-1, ORG-003-1, ORG-005-9

Response: The Legislative directive to develop this study set a deadline of June 30, 2025. To meet this deadline the Draft PEIS comment period was not extended. A scoping document was prepared and released for public review and comment (Ecology 2023). This robust document described many of the impacts that are described in the Draft PEIS. During SEPA scoping, meetings with the public and interested parties and Tribal Forums were held to gather feedback, and Ecology held an extended 30-day public scoping comment period. After scoping, Ecology continued engagement and meetings with interested parties and Tribal engagement and Tribal forums for additional input and information gathering for preparation of the PEIS.

For the Draft PEIS, Ecology held a comment period of 33 days and used numerous methods to collect public comments, as described in Section 1. Information was provided in a variety of

formats and at different levels of detail. This *Response to Comments Report* provides a comprehensive summary of interested party comments and responses.

Concern summary: Raised concerns that the Draft PEIS would result in a more complicated SEPA process and hinder a streamlined project-level review process. Specifically, the concerns were that the Draft PEIS would commit lead agencies and project developers to a review that exceeds the level of the inquiry/analysis that is currently required for many solar facilities.

Comment codes: IND-001-3, IND-001-13, IND-001-14

Response: The PEIS is intended to result in a more effective environmental review process because subsequent project-specific EISs can tier from the PEIS. Tiering avoids duplicative analysis for projects by first considering relevant issues at a broad or programmatic level. This means that impacts that were already analyzed and disclosed in the PEIS will not have to be repeated in a project-level EIS.

Siting and design considerations identified in the PEIS are informational and would help developers avoid and minimize impacts. Measures to avoid, reduce, and mitigate impacts would be needed for projects only if applicable to a project. Developers could use mitigation measures identified in the PEIS to develop mitigation plans for project-specific significant impacts. The sections "Measures to avoid, reduce, and mitigate impacts" have been revised in the Final PEIS and technical resource reports to more directly tie potential significant impacts to mitigation measures. A complete list of measures is provided in Appendix A.

Concern summary: Requested that the Washington State University *Least-Conflict Solar Siting on the Columbia Plateau* report (WSU 2023) be more strongly recommended or required for use in siting and design for solar facilities using the PEIS. Commenters also suggested that the Washington Shrubsteppe Restoration and Resiliency Initiative (WSRRI) strategy (WDFW 2024) and county conservation priorities should be referenced more prominently in the PEIS. In contrast, another commenter suggested that the Draft PEIS is overly reliant on the *Least-Conflict Solar Siting on the Columbia Plateau* report maps and appears to encourage compliance with those maps for purposes of mitigating impacts.

Comment codes: ORG-004-2, ORG-006-1, ORG-006-5, ORG-006-12, ORG-006-19, ORG-006-21, ORG-006-27, ORG-008-8, ORG-009-1, ORG-009-2, ORG-009-10, IND-001-22, IND-001-23, IND-001-24

Response: The PEIS directs developers to the *Least-Conflict Solar Siting* report and the WSRRI strategy to inform site selection. The WSRRI and county conservation priorities have a regulatory basis and, therefore, would have requirements for developers to implement when planning a project, where required. The *Least-Conflict Solar Siting* report was developed to identify risks and opportunities and can be used to inform site selection relative to the criteria evaluated in that report. Additional qualitative language was added to the PEIS about the importance of considering these and other tools to address local concerns. Section 3.4.3.2 of the *Biological Resources Technical Report* (Appendix G) has been revised in the Final PEIS and directs developers to use resources including the Washington State Least-Conflict Solar Siting Study maps conservation layer as a recommended measure for siting and design. The *Biological Resources Report* for the Draft PEIS described the WSRRI purpose and strategy and included an example map of shrubsteppe habitat priority areas. The report has been revised in the Final

PEIS to include reorganization in Section 3.2.1.6.2.1 and additional information on shrubsteppe priority habitat, the WSRRI strategy, and additional example maps of shrubsteppe habitat priority areas. In addition, information was added to the *Biological Resources Technical Report* (Appendix G) Section 3.2.2.6 and Section 3.2.4.6 in the Final PEIS to describe how species of local importance are determined by county or municipal regulations, and to clarify that species of local importance are considered in the analysis.

Concern summary: Requested a clearer explanation of the SEPA tiering process and how agencies will assess a proposed facility using elements of the PEIS, such as how quantitative site-specific information will be evaluated by comparison to the impact assessment in the PEIS. Also requested additional clarification about the role of the PEIS and the development of clean energy zones, and how these zones would relate to existing local land use planning and zoning.

Comment codes: ORG-003-2, ORG-003-3, ORG-003-6, ORG-005-6

Response: Additional information regarding tiering and use of the PEIS has been added to Sections 1.5 and 4.1.4 of the Final PEIS. The PEIS evaluates potential impacts and mitigation at a broad level. It analyzes general types of solar energy facilities—but not individual projects—to identify likely environmental impacts and possible ways to avoid and reduce those impacts. Mitigation measures designed to reduce impacts are also identified at a high level. The PEIS does not approve, authorize, limit, or exclude any projects.

Under SEPA, developers will need to do a separate environmental review for each utility-scale solar energy project. During that review process, site-specific information and project-specific effects will be evaluated. The information in the PEIS is intended to help a developer identify a suitable site, design a project, and submit a proposal that has considered potential environmental impacts. It can also help a developer design mitigation plans to reduce potentially significant impacts.

The PEIS will be used to help develop clean energy zones as a subsequent planning step. Per RCW 43.21C.535, clean energy preferred zones will be addressed by the interagency clean energy siting coordinating council following completion of the PEIS.

Concern summary: Ecology should coordinate closely with the Energy Facility Siting Evaluation Council's (EFSEC) statewide transmission PEIS process.

Comment code: ORG-005-8

Response: Ecology and EFSEC have coordinated during the clean energy and transmission PEIS processes, including reviews of applicable draft documents.

Concern summary: The PEIS should direct project developers to the Washington Department of Fish and Wildlife's (WDFW's) guidelines for solar energy development. Requested information about how those guidelines would be incorporated into the Final PEIS and requested additional outreach be conducted related to WDFW's guidelines.

Comment codes: ORG-003-7, ORG-004-3, ORG-009-3

Response: Ecology has been coordinating closely with WDFW for review of the PEIS and their solar guidelines. The Final PEIS directs developers to use the most recent and relevant WDFW guidelines for siting and project-level reviews.

3.2 Types of facilities evaluated/alternatives

The PEIS focuses on utility-scale solar facilities as described in Section 1.3 of the PEIS. After consideration of public comments and input received during scoping, Ecology identified three types of utility-scale solar facilities and a No Action Alternative to be evaluated in this PEIS. These facility types are described in Chapter 2 of the Draft PEIS.

Concern summary: The No Action Alternative is incorrectly characterized per the SEPA Rules, and No Action should be lack of solar energy development.

Comment codes: IND-001-9, IND-001-10

Response: The SEPA Rules refer to an agency's action, in this case Ecology's action as directed by the Legislature to prepare nonproject environmental reviews. The No Action alternative assumes that the ongoing activity or the "status quo," would continue.

Under the No Action Alternative, agencies would continue to conduct environmental review and permitting for utility-scale solar energy development under existing state and local laws on a project-by-project basis as is currently conducted, without the use of the PEIS.

Concern summary: Ecology should broaden the scope to include smaller-sized installations. Not including smaller-sized installations could preclude smaller options that can provide meaningful contributions to Washington's clean energy future.

Comment codes: ORG-007-3, ORG-008-3

Response: The Legislature directed Ecology to analyze utility-scale facilities. Ecology published the Scoping Document in September 2023 that included information on possible types of facilities that could be analyzed in the PEIS, and considered comments received during scoping to refine the sizes and types of facilities to be studied in the PEIS (Ecology 2023). Based on scoping comments, the range for utility-scale was broadened in the Draft PEIS to include facilities capable of providing at least 20 MW of electricity directly to the state's electrical grid (Appendix R).

The PEIS states that it does not approve or preclude other projects. It could be used for evaluating smaller-sized facilities as appropriate based on project- and site-specific conditions. The impact analysis included in the PEIS could be used as a guide for facilities outside the size range considered in the PEIS. While distributed solar, community solar, and home rooftop solar systems are not considered utility-scale facilities, Ecology acknowledges the meaningful contributions that these installations can make.

Concern summary: Suggested that although site characterization is included with construction activities in the PEIS, site characterization activities may be completed prior to SEPA review.

Comment code: IND-001-25

Response: Site characterization includes a variety of actions as described in Section 2.5.1 of the PEIS. These actions would typically occur as part of a project's development and have been evaluated in the PEIS. The lead agency would make a decision about which activities are applicable to a proposal during a project-level review.

Concern summary: Suggested that the PEIS should recommend manual/robot cleaning of panels for water conservation wherever practicable.

Comment code: GOV-006-1

Response: The Draft and Final PEIS include discussion of waterless solar panel cleaning options in Section 2.5.3. The Final PEIS was revised to include a recommended measure to consider water-conserving options for cleaning solar panels (refer to Appendix A, Section 7.3).

3.3 Scope of analysis

The scope of study for utility-scale solar energy development was defined by considering areas where facilities could be built (geographic bounds) and the time period in which facilities may be constructed and operational (time scale or temporal bounds). The decision regarding where to site a utility-scale solar energy facility would be determined by developers based on their needs. As allowed by law and landowners, facilities could be sited throughout Washington. Utility-scale solar energy facilities could be built on lands owned or managed by private, city, county, state, or federal entities. For projects on Tribal reservation lands, each federally recognized Tribe would determine use of their lands. In all cases, developers would need to work directly with the landowner(s) or land manager(s) for individual facilities. The PEIS does not approve, authorize, limit, or exclude facilities on a site-specific basis. An approximate 50-year time period (July 2025 through June 2075) is used for resource analyses. Additional details on the scope of analysis can be found in Section 3 of the PEIS.

Comments about a perceived lack of specificity in the PEIS requested Ecology provide more certainty with regard to future potential impacts, effectiveness of mitigation measures, and mapping. The SEPA Rules in WAC 197-11-442 acknowledge "The lead agency shall have more flexibility in preparing EISs on nonproject proposals, because there is normally less detailed information available on their environmental impacts and on any subsequent project proposals." The PEIS explains that project- and site-specific analyses will be done at the time a project is proposed.

Concern summary: Requested maps and opportunities to review such maps before they are included in the Final PEIS. Comments stated that the Legislature calls on Ecology to provide maps in RCW 43.21C.535.

Comment codes: ORG-003-5, ORG-004-1, ORG-005-5, ORG-005-6

Response: RCW 43.21.535 states:

> Maps must be prepared with the intention to illustrate probable, significant impacts, creating a tool that may be used by project proponents, tribes, and government to inform decision making.
>
> The maps may not be used in the place of surveys on specific parcels of land or input of a potentially affected federally recognized Indian Tribe regarding specific parcels.

The PEIS considers impacts at a broad scale and not at a site-specific level. The PEIS uses existing data sources for analysis and no surveys were conducted. There are many existing publicly available mapping and data sources, and the PEIS is not intended to duplicate or replace those sources. The Draft PEIS included maps in the following technical resource reports specific to the resources analyzed. The Final PEIS includes more information about these mapping data sources and includes additional maps to illustrate examples of the types of information available.

- *Environmental Justice Technical Resource Report* (Draft PEIS Appendix P, Final PEIS Appendix C)
- *Earth Resources Technical Report* (Draft PEIS Appendix B, Final PEIS Appendix D)
- *Water Resources Technical Report* (Draft PEIS Appendix D, Final PEIS Appendix F)
- *Biological Resources Technical Report* (Draft PEIS Appendix E, Final PEIS Appendix G), with additional maps added to the Final PEIS
- *Energy and Natural Resources Technical Report* (Draft PEIS Appendix F, Final PEIS Appendix H)
- *Environmental Health and Safety Technical Resource Report* (Draft PEIS Appendix G, Final PEIS Appendix I)
- *Land Use Technical Resource Report* (Draft PEIS Appendix I, Final PEIS Appendix K)
- *Recreation Resources Technical Report* (Draft PEIS Appendix K, Final PEIS Appendix M), with additional maps added to the Final PEIS
- *Historic and Cultural Resources Technical Report* (Draft PEIS Appendix L, Final PEIS Appendix N)
- *Transportation Resources Technical Report* (Draft PEIS Appendix M, Final PEIS Appendix O)
- *Public Services and Utilities Technical Resource Report* (Draft PEIS Appendix N, Final PEIS Appendix P)
- *Cumulative Impacts Technical Report* (Draft and Final PEIS Appendix Q)

Additionally, the PEIS is intended to be used over a long time period, and because site-specific data change over time, including static maps in the PEIS would not be useful in the long term.

Impacts will also vary greatly depending on the design of specific facilities and the site-specific conditions of project locations, and therefore cannot be mapped at broad scale in the PEIS.

Concern summary: Suggested that the geographic scope of study should be expanded or condensed for several different reasons. For example, some stated that the PEIS should not limit the study area to areas within 25 miles of a major transmission line, the study area should include lands in urban areas, more areas of western Washington should be included in the study area, and Superfund and brownfield sites should be included in the study area.

Comment codes: IND-001-35, IND-001-36, ORG-005-7, ORG-007-4, ORG-007-5, ORG-008-4, ORG-008-5, ORG-008-6, ORG-008-7

Response: The study area was determined based on the following direction from the Legislature in House Bill 1216, which states:

> The scope of a nonproject environmental review shall be limited to the probable, significant adverse environmental impacts in geographic areas that are suitable for the applicable clean energy type. The department of ecology [*sic*] may consider standard attributes for likely development, proximity to existing transmission or complementary facilities, and planned corridors for transmission capacity construction, reconstruction, or enlargement. The nonproject review is not required to evaluate geographic areas that lack the characteristics necessary for the applicable clean energy project type.

The geographic scope of study was defined in accordance with the stated legislation, and was revised based on input received during the scoping process. The geographic scope of study is also broader than where facilities are currently being built because new technologies could allow development of solar facilities in areas not considered before. Some minor changes were made to the study area between the Draft and Final PEIS, and the revised geographic scope of study is described in Section 3 of the Final PEIS. The study area contains brownfield sites. The study area contains six Superfund sites, which are discussed in the *Environmental Health and Safety Technical Resource Report* (Appendix I). The PEIS does not approve, authorize, limit, or exclude facilities on a site-specific basis, and projects could be sited anywhere in Washington.

Concern summary: Noted that the PEIS contains many general statements that a larger facility will result in greater impacts and that this analysis does not properly consider site-specific conditions.

Comment code: IND-001-26

Response: Ecology acknowledges that the size of a facility is important when considering impacts, but is not the only factor to consider when determining impacts. Language has been added to the Final EIS to indicate where impacts may be greater for larger facilities. The PEIS identifies potential impacts to be considered early and each facility proposal would be required to have its own SEPA environmental review. During that process, site-specific information and facility-specific effects would be evaluated.

Concern summary: Suggested adding quantitative thresholds for all evaluated resources to allow for better comparison and understanding of potential facility impacts. Also recommended linking significant impacts to specific mitigation measures that could be required or recommended to reduce the impact to less than significant.

Comment code: ORG-003-8

Response: Quantitative thresholds are included for those resource areas where there is a regulatory basis. For example, air quality contains a quantitative threshold for emissions under which air permitting requirements would be triggered. For resources that do not have regulatory standards, qualitative information has been included that describes the circumstances that would result in a potentially significant impact. The technical resource report for each resource describes the methodology and significance thresholds used for purposes of this PEIS.

The Final PEIS was revised to link potential significant impacts to the applicable mitigation measures and includes a rationale for the measure.

Concern summary: Noted that Asotin County should be included in the study area.

Comment code: ORG-006-2

Response: The Final PEIS includes a revised study area map (Figure 3-1 of the Final PEIS). Areas within Asotin County that meet the criteria described in Section 3.1 of the PEIS have been added.

3.4 Mitigation

WAC 197-11-768 defines mitigation as the avoidance, minimization, rectification, compensation, reduction, or elimination of adverse impacts on built and natural elements of the environment. Mitigation may also involve monitoring and taking appropriate corrective actions. The PEIS evaluated measures to avoid, reduce, and mitigate impacts. Mitigation measures would need to be developed with more details specific to each facility design and site location. Developers can use the measures in the PEIS in developing mitigation plans for potential significant impacts.

Concern summary: Requested additional details and guidance be provided on the mitigation measures, how mitigation requirements would be determined, and how to determine whether mitigation measures would be sufficient to avoid project-specific review.

Comment codes: IND-001-5, IND-001-7, ORG-003-4, ORG-003-10, ORG-003-11, ORG-005-1, ORG-005-3

Response: Because the PEIS evaluates impacts at a broad level, project-specific mitigation measures cannot be determined until a facility is proposed. Section 4.1.4 of the Final PEIS describes the use of the PEIS and measures to avoid, reduce, and mitigate impacts at the project level.

Concern summary: Requested that the PEIS include a comprehensive list of mitigation measures, requested that the mitigation measure be tied directly to the impact, and provided suggestions for organizing the mitigation measures.

Comment codes: ORG-003-9, ORG-003-12, ORG-003-15, ORG-005-2

Response: The Final PEIS includes an appendix with measures to avoid, reduce, and mitigate impacts, and ties the impacts to the mitigation measures for all resource areas with potentially significant impacts (Appendix A: *Measures to Avoid, Reduce, and Mitigate Impacts*). The measures were further reorganized based on implementation workshops held with developers, Tribes, organizations, and local governments.

3.5 Elements of the environment

This PEIS is organized to provide information in three ways. The Summary provides brief, high-level information on key findings and probable significant adverse impacts. The PEIS chapters provide high-level information on the impact analysis and findings. The appendices contain the technical resource reports with detailed methods and technical information. For sections of the PEIS that have a related technical resource report, the report is the official technical documentation for this PEIS. If there is conflicting information between the Summary, PEIS chapters, or the technical resource report, the technical resource report is the controlling document.

Many comments received requested the PEIS include more detailed information. These comments appeared to be based on language in the PEIS chapters. The response to comments below includes details on where to find the detailed methods and technical information for the elements of the environment within the PEIS chapters and technical resource reports.

Concern summary: Stated that some sections of the PEIS are broad or vague and defer much of the analysis to project-level review. Recommended the PEIS should include more concrete conclusions related to potential impacts.

Comment codes: IND-001-1, IND-001-2, ORG-005-4

Response: The PEIS evaluates potential impacts and mitigation at a broad level. It analyzes general types of solar energy facilities—but not individual projects—to identify likely environmental impacts and possible ways to avoid and reduce those impacts. As recognized in the SEPA Rules (WAC 197-11-442), there is "normally less detailed information available on their environmental impacts [for non-project or programmatic EISs]." As is noted in PEIS Section 1.5, SEPA analyses for specific solar facility proposals would tier to this PEIS. Because the alternatives are not project-specific, the depth and detail of the impact analyses are general, focusing on major impacts in a qualitative manner. More quantitative evaluations would occur through subsequent tiered project-level environmental reviews to identify the site- and project-specific impacts associated with specific facilities.

3.5.1 Tribal rights, interests, and resources and historic and cultural resources

Tribes are recognized as unique sovereign people that exercise self-government rights that are guaranteed under treaties and federal laws. Tribal rights, interests, and resources refer to the collective rights and access to traditional areas and times for gathering resources associated with an Indian Tribe's sovereignty since time immemorial. They include inherent rights or formal treaty rights associated with usual and accustomed territories. Tribal resources include Tribal cultural lands, archaeological sites, sacred sites, fisheries, and other rights and interests in Tribal lands and lands within which a Tribe or Tribes possess rights reserved or protected by federal treaty, statute, or executive order. Resources include plants, wildlife, or fish used for commercial, subsistence, and ceremonial purposes.

Cultural resources analyzed in the PEIS include the following:

- Archaeological resources, both recorded and unrecorded
- Historic architectural buildings and structures listed or eligible for listing in a historic register
- Human remains and cemeteries
- Sacred sites
- Documented and undocumented Traditional Cultural Properties (TCPs)

Refer to PEIS Sections 4.3 and 4.15, the *Tribal Rights, Interests, and Resources Technical Report* (Appendix B), and the *Historic and Cultural Resources Technical Report* (Appendix N) for additional details.

Concern summary: Requested additional engagement with Tribes on projects that may impact Tribal resources. Requested early, meaningful consultation with federally recognized and unrecognized Tribes and suggested including requirements for a Tribal consultation on archaeological surveys, plant surveys, and TCP surveys. One stated that Tribal consultation should not be required prior to land acquisition because it would be inconsistent with how acquisition happens and compromises the process.

Comment codes: GOV-001-2, GOV-001-5, IND-001-39, ORG-007-1, ORG-007-2, ORG-008-1, ORG-008-2

Response: The *Tribal Rights, Interests, and Resources Technical Report* (Appendix B) and the *Historic and Cultural Resources Technical Report* (Appendix N) both identify early coordination and consultation with Tribes as measures to avoid and reduce impacts to Tribal or cultural resources during the siting and design process. Tribal engagement and government-to-government consultation with all potentially affected, federally recognized Tribes should begin early to provide information and identify potential project impacts. Examples of recommended measures for siting and design include:

- Contact potentially affected Tribes early in the siting process, ideally before land is acquired for a project or before permit applications are developed and offer information relevant to Tribal technical staff to help identify potential impacts to Tribes.

- Include Tribal treaty-reserved rights, Tribal reservations, off-reservation rights, trust lands, other Tribal-owned land, and other areas of significance to Tribes in consideration of potential impacts and mitigation.
- Consider including a Tribal monitor from each potentially affected Tribe on archaeological survey crews to provide input on TCPs, sacred sites, and culturally significant sites.

Concern summary: Requested that the PEIS acknowledge that mitigation may not be possible for Tribal cultural resources.

Comment code: GOV-001-9

Response: The following statement was added to Section 3.5.5 of the *Tribal, Rights, Interests, and Resources Technical Report* (Appendix B) "Determining if mitigation options would reduce or eliminate impacts below significance would be dependent on the specific project and site." This statement was also added to the Final PEIS summary and Section 4.3 of the PEIS.

Concern summary: Requested that the PEIS acknowledge that impacts on Tribal resources could impact the Tribe's ability to continue their culture today and in the future.

Comment code: GOV-001-4

Response: The *Tribal Rights, Interests, and Resources Technical Report* (Appendix B) describes potential impacts from construction, operation, and decommissioning over a timeframe of 2025 to 2075. The significance of impacts to Tribal rights, interests, and resources can only be understood from within the context of an affected Tribe and the PEIS does not make a finding of a Tribe's ability to continue their culture today and in the future.

Concern summary: Noted that changes in light, dust, and human presence could affect cultural resources for which visual integrity is a component of a site's significance. Added that potential sun-bleaching impacts on pictographs, from increased light levels resulting from land clearing, should be considered.

Comment code: GOV-001-8

Response: Section 3.4.1 of the *Historic and Cultural Resources Technical Report* (Appendix N) details impacts that could affect cultural resources for which visual integrity is a component of sites' significance.

Concern summary: Requested that the PEIS more clearly define a standardized process for SEPA Tribal engagement, impact analysis, and mitigation. Expressed concern that a lack of clarity and the deference to project-level review would result in a process that works at cross purposes with the legislative intent.

Comment codes: IND-001-15, IND-001-16

Response: Creating or defining a standardized process for Tribal engagement for projects is outside the scope of this impact analysis. Project proposals may involve potential impacts to the rights, interests, and resources of multiple Tribes. Site-specific mitigation measures would be developed during project-specific reviews and permitting for each facility proposed in the future. Mitigation may be developed through consultation with affected Tribes as part of the

SEPA process. Mitigation may also be developed under federal Section 106 of the National Historic Preservation Act; this is a separate, federal process outside of the state's SEPA process.

The PEIS provides recommendations for Tribal engagement in the sections titled "Measures to avoid, reduce, and mitigate impacts." These include early Tribal engagement and government-to-government consultation with all potentially affected, federally recognized Tribes to provide information and identify potential project impacts. Timely and frequent communication about project changes should be provided to Tribes.

Concern summary: Health and well-being of Tribal members appears beyond the scope of an EIS and elements of the environment as described in WAC 197-11-440(6)(e) and WAC 197-11-444. Requested clarification and examples of how Tribal health and well-being applies to a SEPA analysis.

Comment code: IND-001-37

Response: RCW 43.21C.535(3)(a)(v) directs the scope of the PEIS to consider probable significant adverse environmental impacts to "cultural resources and elements of the environment relevant to tribal rights, interests, and resources including tribal cultural resources, and fish, wildlife, and their habitat."

The *Tribal Rights, Interests, and Resources Technical Report* (Appendix B) Section 1.1 discusses that energy facilities could affect Tribal interests, treaty rights, and resources in and around the areas where facilities are built or the affected resources could extend well beyond the proposed footprint of a facility. Impacts during facility construction, operations, and decommissioning could occur from land disturbance that affects TCPs or archaeological sites; changes in access to areas where traditional hunting, fishing, gathering, or other traditional practices occur; impacts on plants, animals, and ecological communities in areas used by Tribal members for purposes including harvesting first foods; or interruption of spiritual practices. Any of these impacts may disrupt and degrade the health and mental well-being of Tribal members.

Concern summary: Stated that the affected environment section should include consideration of whether Tribes or Tribal members currently have access to lands, and suggested opening access to currently closed lands as a mitigation measure.

Comment codes: IND-001-38, IND-001-39

Response: Section 3 of the *Tribal Rights, Interests, and Resources Technical Report* (Appendix B) and Section 4.3 of the PEIS describe construction, operation, and decommissioning activities that could limit Tribal access and the potential impacts.

Measures to avoid, reduce, and mitigate impacts (Section 3.5 of the *Tribal Rights, Interests, and Resources Technical Report* [Appendix B] and Section 4.3.3.2 of the PEIS) include a recommended measure for siting and design that states: "maintain open Tribal access routes during construction, operations, and decommissioning and consider timing of activities to avoid disrupting Tribal access to sites and resources." Additional project-specific mitigation measures to be determined after engagement and consultation with Tribes.

Concern summary: Stated that a protocol is needed for ensuring effective and ongoing communication and consultation during site selection, construction, and throughout the project life cycle. Stated that Tribes must receive timely notification of any changes to the Area of Potential Effects throughout the project life cycle. Emphasized that any changes to water resources or habitats should require Tribal consultation, and that consultation should occur at the government-to-government level.

Comment codes: TRB-001-1, TRB-001-6

Response: Creating a communications protocol is outside the scope of this PEIS. The PEIS describes that determining the significance of impacts and development of site-specific mitigation measures would occur during project-specific reviews and permitting.

Concern summary: Stated that the PEIS should require project-specific assessments to be conducted to ensure minimal impact on Tribal lands and resources and that such assessments must involve the Tribes early in the process.

Comment code: TRB-001-2

Response: The PEIS identifies that project-level analysis will be needed. One of the general measures for siting and design is to conduct Tribal engagement early in the planning process (see Section 3.5 in the *Tribal Rights, Interests, and Resources Technical Report* [Appendix B] and Section 4.2 in the Final PEIS).

Concern summary: Requested that the PEIS section for solar co-located with agriculture include provisions to allow Tribal access to traditional foods, medicines, gathering places, and sacred sites, even if the sites will be restricted/fenced for security purposes.

Comment code: TRB-001-3

Response: Measures to avoid, reduce, and mitigate impacts (Section 3.5 of the *Tribal Rights, Interests, and Resources Technical Report* [Appendix B] and Section 4.3.3.2 of the PEIS) include a recommended measure for siting and design that states: "maintain open Tribal access routes during construction, operations, and decommissioning and consider timing of activities to avoid disrupting Tribal access to sites and resources."

Concern summary: Stated that any land disturbance during construction should be restored using native plants.

Comment code: TRB-001-4

Response: The Final PEIS includes a general measure for restoration and decommissioning to revegetate disturbed areas with native and pollinator-supporting plants (see Section 4.2 of the Final PEIS and Section 3.5 of the *Tribal Rights, Interests, and Resources Technical Report* [Appendix B]).

3.5.2 Environmental justice and overburdened communities

Washington State defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies" (RCW 70A.02.101). This resource section evaluated whether potential impacts identified in this PEIS disproportionately affect people of color populations and low-income populations, and

identified where overburdened community areas are located in the study area. Refer to PEIS Section 4.4 and the *Environmental Justice Technical Resource Report* (Appendix C) for additional details.

Concern summary: Stated that the analysis does not consider the non-energy benefits of solar facilities, including both economic and non-economic benefits. Asserted that this is a requirement of the Clean Energy Transformation Act.

Comment codes: IND-001-17, IND-001-18

Response: RCW 43.21C does not require consideration of benefits. Additional studies, such as economic analysis, may be conducted and considered by the SEPA lead agency.

Concern summary: Stated that the analysis does not specifically address overburdened communities and that Ecology should provide guidance on evolving issues related to overburdened communities.

Comment code: IND-001-20

Response: Overburdened community areas, as defined by the Office of Financial Management's Overburdened Communities of Washington dataset, are included in the *Environmental Justice Technical Resource Report* (Appendix C). Refer to Section 2 of the report for description of the technical and impact analysis approach. Section 3.2.2 of the report describes these areas in the affected environment and includes maps identifying where these communities are located. Section 3.4.3 of the report also includes measures to avoid, reduce, and mitigate impacts to overburdened community areas.

Concern summary: Stated concern that the determination of significance was insufficiently defined and lacks details, such as what constitutes "located near." Requested clarification of how significant impacts to environmental justice and overburdened communities should be treated when there are also significant impacts to the general population, and whether and how environmental justice impacts can be mitigated.

Comment codes: IND-001-19, IND-001-21, IND-001-41

Response: Refer to Section 2 of the *Environmental Justice Technical Resource Report* (Appendix C) for a description of the technical and impact analysis approach. Data were gathered and analyzed to determine whether people of color populations, low-income populations, or overburdened community areas are present within the study area. Potentially significant adverse environmental impacts were overlaid with census tracts with people of color populations and low-income populations to determine the relative type and severity of effects and determine the potential for environmental impacts to disproportionately affect those populations. Determinations of significance were defined at a programmatic level and as required by RCW 43.21C.535. The PEIS includes measures to avoid, reduce, and mitigate impacts. Additional project-level analyses will be required, and site-specific measures would be developed during project-specific reviews and permitting for each facility proposed in the future based on project-specific facility design and site conditions. Determining if mitigation options would reduce or eliminate impacts below significance would be dependent on the specific project and site.

Concern summary: Requested information on how conversion of natural resource lands of long-term commercial significance relates to environmental justice.

Comment code: IND-001-42

Conversion of natural resource lands of long-term commercial significance could impact local communities, including rural communities as described in the *Land Use Technical Resource Report* (Appendix K). As described in Section 3.4.2 of the *Environmental Justice Technical Resource Report* (Appendix C), many of the census tracts overlapping the study area that have people of color populations and low-income populations identified are also rural communities. Changes to rural character resulting from operation of a new utility-scale energy facility would range from less than significant impacts to potentially significant adverse impacts depending on whether plans and development regulations are in place to protect rural character and how they consider utility-scale energy facilities. If a facility is located near people of color populations or low-income populations, this would potentially result in disproportionate impacts on these populations.

Concern summary: Requested that the analysis of impacts include a consideration that many rural census tracts cover a large geographic area and may not be indicative of the population near the site.

Comment code: IND-001-40

Response: Additional text has been added to Section 2.1 of the *Environmental Justice Technical Resource Report* (Appendix C). While census tracts are an appropriate unit of measurement at the programmatic level, project-level analyses could use census block groups to more accurately characterize the populations residing close to project sites.

3.5.3 Earth

The earth section of the PEIS evaluates geologic resources and geologic hazards. Refer to PEIS Section 4.5 and the *Earth Resources Technical Report* (Appendix D) for additional details.

Concern summary: Requested clarification about what geologic hazards require avoidance versus mitigation. Suggested that suitable topography should be considered during the project design and siting to avoid significant topographical features rather than by prioritizing potential site locations based on suitable topography.

Comment code: IND-001-43

Response: Section 1.1 in the *Earth Resources Technical Report* (Appendix D) discusses the need for site-specific evaluation and mitigation cost considerations during potential site screening. Unsuitable topography (or other features/hazards) may not preclude development; however, site development costs and impacts may increase with less suitable site topography. The Final PEIS includes a general measure to choose a project site and a project layout to avoid and minimize disturbance, including minimizing land disturbances such as clearing and alterations to natural topography. Additionally, a recommended measure for siting and design in Section 3.4.3.2 of the *Earth Resources Technical Report* (Appendix D) is to avoid geologic hazard areas such as mapped seismic hazards, landslide hazard areas, surface fault rupture hazard areas, and volcanic flow hazard areas to reduce risk of erosion or damage.

Concern summary: Requested that the earth resource section include an analysis of impacts to agriculturally important soils. Reduction of critical agricultural lands by energy projects and impacts to co-located agricultural lands or agricultural lands displaced by facility development are not addressed in adequate detail in the Draft PEIS *Earth Resource Report*.

Comment codes: ORG-003-13, ORG-003-16

Response: Impacts identified in Section 3.6 of the *Earth Resources Technical Report* (Appendix D) apply to facilities that are co-located with agricultural use, but are not meant to provide an analysis of impacts to agricultural lands that are displaced by facility development. Text has been added to Section 3.4.1.1 of the *Earth Resources Technical Report* (Appendix D) for the Final PEIS regarding potential impacts to agricultural soils following site decommissioning and to note that impacts may include changes to agriculturally significant lands that make them less suitable for later agricultural use. Additional information on changes to land uses and impacts to agricultural lands is included in the *Land Use Technical Resource Report* (Appendix K). Section 3.5.9 of this *Response to Comments* report further responds to portions of these comments specifically related to the land use section and report.

3.5.4 Air quality and greenhouse gases

Air quality refers to the condition of the breathable air and the presence of pollutants. Pollutants can be local and affect a small area, or regional, such as ozone. Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the earth and keep it within the atmosphere, much like how a greenhouse retains heat. Increasing amounts of GHGs trap more heat in the atmosphere and decrease the amount that escapes into space, resulting in an increased global average temperature and climate change impacts to people and the environment. Refer to PEIS Section 4.6 and the *Air Quality and Greenhouse Gases Technical Resource Report* (Appendix E) for additional details.

Concern summary: Asserted that the GHG analyses must include the benefit of GHG reduction associated with operation of solar facilities relative to the operation of existing power-generating facilities, such as fossil fuel power plants. Suggested that these analyses include the reduction in GHG emissions that would result during operations compared to other types of power-generating facilities.

Comment codes: IND-001-11, IND-001-12

Response: RCW 43.21C does not require analysis of benefits, and the PEIS does not evaluate potential benefits; however, reduced GHG emissions associated with operation of solar facilities relative to the operation of coal- and natural gas-fired power-generating facilities are acknowledged in the context of a life-cycle assessment in Section 3.4.3 of the *Air Quality and Greenhouse Gases Technical Resource Report* (Appendix E).

3.5.5 Water resources

Water resources include surface water (e.g., streams, rivers, lakes, reservoirs, estuaries, and marine waters), groundwater, wetlands (e.g., swamps, marshes, bogs, and fens), and floodplains. The PEIS resource analysis evaluates water quality, water quantity (flows and

levels), water availability, and water rights. Refer to PEIS Section 4.7 and the *Water Resources Technical Report* (Appendix F) for additional details.

Concern summary: Requested that the discussion of avoidance measures for critical areas be more specific about which resources should be avoided and suggested that compliance with applicable critical areas regulations should be deemed adequate mitigation. Suggested specific edits to some of the mitigation measures.

Comment code: IND-001-45

Response: The measures to avoid, minimize, and mitigate impacts were revised in the Final PEIS to provide clarity on recommended and required measures and to tie mitigation measures to potential significant impacts. The measures were further reorganized based on implementation workshops held with developers, Tribes, organizations, and local governments. Several measures address critical areas, including a general measure to consider critical areas when siting and designing a project and obtaining required environmental permits from local governments, including compliance with critical areas regulations.

Concern summary: Requested that the language be clarified in the condition statement that BESSs should be sited "away from" surface waters.

Comment code: IND-001-46

Response: Measures to avoid, minimize, and mitigate impacts were revised in the Final PEIS to provide clarity. The measure was revised to: "BESS facilities and associated infrastructure should be located so as to prevent contamination of surface waters, floodplains, and wetlands, as well as buffer areas from runoff that may contain chemicals released from a fire and/or integrated fire suppression agents." Siting distances would need to be determined at the project-level based on site and project-specific conditions, including consideration of local regulations for resource buffers.

Concern summary: Noted that transformers used in energy facilities contain substantial amounts of oil, posing risks to water resources and habitats in the event of spills.

Comment code: TRIB-001-8

Response: Section 3.4.2 of the *Water Resources Technical Report* (Appendix F) has been revised to include the potential impacts from releases of oil from facility transformers. Impacts related to spills are also discussed in the *Earth Resources Technical Report* (Appendix D) and the *Environmental Health and Safety Technical Resource Report* (Appendix I). Additional information on spills in response to this comment is provided in Section 3.5.7 of this *Response to Comments* report.

3.5.6 Biological resources

The biological resources section of the PEIS evaluates potential impacts and mitigation related to aquatic and terrestrial species and habitats. Terrestrial habitats refer to non-aquatic or upland areas of the landscape that support plants and wildlife. Terrestrial species are plants or animals that live on or use these habitats for the majority of their life functions. Aquatic species are those that require water for some or all of their life cycles, such as fish, amphibians, turtles, mollusks, and crustaceans. Aquatic habitat includes areas that have flowing or still surface

water either year-round (perennial), seasonally (intermittent), or for short periods after rainfall or snowmelt events (ephemeral), such as rivers, streams, lakes, ponds, wetlands, estuaries, and marine waters. Refer to PEIS Section 4.8 and the *Biological Resources Technical Report* (Appendix G) for additional details.

Concern summary: Several recommendations related to the bird and bat analyses in the Draft PEIS and the Draft *Biological Resources Report*. Suggestions included using mortality data from publicly available studies; additional considerations of bird and bat collision risks with solar panels and associated best management practices and mitigation measures; inclusion of collision risks with facility infrastructure such as power lines and fences; inclusion of potential solar panel impacts on bat behavior; and inclusion of the Birds of Conservation Concern list.

Comment codes: GOV-005-5, GOV-005-6, GOV-005-11, GOV-006-4, GOV-006-5, GOV-006-15, GOV-006-16, GOV-006-17, GOV-006-18, GOV-006-19, GOV-006-20, GOV-006-21, GOV-006-22, GOV-006-24, GOV-006-25, GOV-006-26, GOV-006-27

Response: The PEIS evaluates potential impacts and mitigation at a broad level. It analyzes general types of solar energy facilities—but not individual projects—to identify likely species and habitat impacts (such as those to birds and bats) and possible ways to avoid and reduce those impacts. As recognized in the SEPA Rules (WAC 197-11-442), there is "normally less detailed information available on their species and habitat impacts [for non-project or programmatic EISs]." SEPA analyses for specific solar energy facility proposals would tier to this PEIS and address site and project-specific conditions. Because the PEIS is not project-specific and the impact analyses on birds and bats are general, the analysis focused on major impacts in a qualitative manner. Additional discussion about operations impacts to wildlife from collision with solar panels was added to the *Biological Resources Technical Report* (Appendix G). More quantitative evaluations would occur through subsequent project-level species and habitat reviews to identify the site- and project-specific bird and bat impacts associated with proposed facilities.

The Final PEIS includes additional information about bald and golden eagle permitting, and provides resources such as the North American Bat Monitoring Program (NABat) survey tool, WDFW Priority Habitats and Species (PHS) on the Web, Endangered Species Act Critical Habitat mapping, and other resources that provide information on bird and bat habitat. The Final PEIS also includes revised measures to avoid, reduce, and mitigate impacts to align with WDFW's guidelines. The measures require implementing a Bird and Bat Conservation Strategy and Avian Protection Plan, as applicable, in consultation with U.S. Fish and Wildlife Service (USFWS) and WDFW.

Concern summary: Stated concern about vulnerable species, including the sage grouse. Requested additional consideration of how existing and future power lines and renewable energy infrastructure can impact sage grouse populations and how the timing of construction can impact vulnerable species.

Comment codes: GOV-005-9, GOV-006-29, ORG-009-13

Response: Additional detail on sage grouse and its associated habitat has been added to Section 3.2 of the *Biological Resources Technical Report* (Appendix G). The *Cumulative Impacts*

Technical Report (Appendix Q) also contains information about the cumulative impacts to biological resources when considering reasonably foreseeable future actions in combination with the types of facilities considered in the PEIS.

As noted in the prior concern summary response, the PEIS evaluates potential impacts and mitigation at a broad level. It analyzes general types of solar energy facilities—but not individual projects—to identify likely species and habitat impacts (such as those to sage grouse) and possible ways to avoid and reduce those impacts. The PEIS is not project-specific and the depth and detail of the impact analyses on sage grouse are general, focusing on major impacts in a qualitative manner. More quantitative evaluations would occur through subsequent project-level species and habitat reviews to identify the site- and project-specific sage grouse impacts associated with proposed facilities.

Concern summary: Provided feedback on the organization and how species were grouped in the affected environment section of the Draft PEIS *Biological Resources Report*.

Comment codes: GOV-006-09, GOV-006-11, GOV-006-12, GOV-006-13, GOV-006-14

Response: The *Biological Resources Technical Report* (Appendix G) for the Final PEIS was revised to follow U.S. Department of the Interior-recommended species groupings to reflect the four recognized bird initiatives (waterfowl, waterbirds, shorebirds, and landbirds).

Concern summary: Expressed concerns about potential impacts on shrubsteppe habitat and stated that specific lands identified by the Least-Conflict Solar Siting on the Columbia Plateau report and WSRRI are unsuitable for solar development. One stated appreciation that the Draft PEIS *Cumulative Impacts Report* addressed impacts on several species that are dependent on shrubsteppe habitat. Some stated that shrubsteppe habitat does not reestablish easily on disturbed sites and that as an imperiled ecosystem of concern, it should be avoided for development.

Comment codes: ORG-002-1, ORG-006-18, ORG-009-2, ORG-009-14, ORG-009-15

Response: The *Biological Resources Technical Report* (Appendix G) and Chapter 5 of the Final PEIS were revised to include more thorough discussion concerning shrubsteppe habitat based upon the WSRRI report and additional reference to discussion in the *Cumulative Impacts Technical Report* (Appendix Q).

Concern summary: Requested the inclusion of additional mapping resources, including the Teradapt Spatial Priorities mesic habitat map, maps of state candidate bat species, and maps of critical and priority habitats, species of concern, and endangered species.

Comment codes: GOV-005-1, GOV-005-8, ORG-007-6, ORG-007-7

Response: The *Biological Resources Technical Report* (Appendix G) for the Final PEIS has been updated to include additional example resource maps including WSRRI Mesic Spatial Priorities, shrubsteppe habitat (PHS), and elk habitat (PHS). Additional mapping sources that could be used for individual project-level analysis are also noted in the Final PEIS.

Concern summary: Requested that Ecology consider using NABat to query bat data, provide survey methods, and serve as a shielded data repository for bat survey data.

Comment codes: GOV-005-12, GOV-006-28

Response: The PEIS is a planning document. The requested analysis may be done at the project level in coordination with applicable federal and state wildlife agencies on survey methodologies. The Final PEIS includes revised measures to avoid, reduce, and mitigate impacts to clarify that developers would follow applicable federal and state agency survey methodologies. A reference to NABat was added to Section 3.2.1.3 of the *Biological Resources Technical Report* (Appendix G) for the Final PEIS.

Concern summary: Requested additional information and guidance on thresholds for significance and methods for definitively mitigating those impacts.

Comment code: IND-001-6

Response: Section 2.3 of the *Biological Resources Technical Report* (Appendix G) identifies the thresholds for potentially significant impacts used in this programmatic analysis. Sections 3.4.3 and 3.6.2 list measures to avoid, reduce, and mitigate impacts. Therefore, the PEIS evaluates potential impacts and mitigation at a broad and qualitative level. Specific information on the threshold and mitigation would be addressed at the project level based on site- and project-specific conditions and using the most current guidance.

Developers should refer to the most recent WDFW mitigation guidelines available. The guidelines outline strategies for avoiding, minimizing, and mitigating impacts to wildlife and habitat resources from early project planning through operations. In addition to WDFW guidance, the USFWS Land-Based Wind Energy Guidelines (USFWS 2012), the Avian Protection Plan Guidelines (APLIC and USFWS 2005), and forthcoming Suggested Practices For Avian Protection on Power Lines (APLIC 2024), have been noted in updates to the Final PEIS, although these are generally broader than state guidelines.

Concern summary: Requested reconsideration of the conclusion that impacts always increase based on project size and notes that facilities may preserve large land areas from other more intensive development. Also asked for greater differentiation between short-term/temporary impacts and long-term/permanent impacts.

Comment code: IND-001-47

Response: The *Biological Resources Technical Report* (Appendix G) was revised for the Final PEIS in Section 3.4.1 to acknowledge that impacts are not necessarily proportionally greater with the size of the facility. This section also provides an example of when this may occur.

The text in the PEIS noting that larger solar facilities would generally result in greater impacts than smaller ones is based on the area of construction and presence of structures required for the facilities including access roads, transmission lines, and substations, which would be proportionately greater. Other forms of more intensive development are not in the scope of the PEIS.

The Draft PEIS described the approach to characterizing short-term and temporary impacts versus long-term impacts at a programmatic level in Section 2.2 (Technical approach) of the technical resource reports. The purpose of a PEIS is to disclose the potential adverse effects at a

programmatic level and not evaluate the potential benefits of a facility in place compared to other potential development uses.

Concern summary: Stated that the Forest Practices Act rules should not be included in the impacts discussion unless their relationship to impacts on terrestrial habitats is specifically addressed.

Comment code: IND-001-48

Response: As noted in the *Biological Resources Technical Report* (Appendix G), a permit is not required for every forest practice, but the forest practices rules must be followed when conducting all forest practices activities. A permit is required for timber removal and conversion of forested land to non-forest use, and one may be required for forest road construction activities. More detailed evaluations would occur through project-level species and habitat reviews to identify the site- and project-specific impacts associated with proposed facilities. Potential impacts could be avoided or minimized through compliance with applicable laws, regulations, and permits, and with the implementation of compensatory mitigation measures.

Concern summary: Requested additional clarification of what activities would have impacts that are less than significant, and how the size and severity of impacts factor into the determination of a significant impact. Stated that, as written, an EIS would be triggered if any suitable habitat is impacted.

Comment code: IND-001-49

Response: The threshold for what constitutes a potentially significant impact is included in Section 2.3 of the *Biological Resources Technical Report* (Appendix G). The PEIS describes the outcome of activities that would result in potentially significant adverse impacts on terrestrial and aquatic species and habitats and wetlands. The PEIS evaluates potential impacts at a broad level, the depth and detail of the impact analyses are general, focusing on major impacts in a qualitative manner. More quantitative evaluations would occur through subsequent project-level species and habitat reviews to identify the site- and project-specific impacts associated with proposed facilities.

Concern summary: Requested that the PEIS replace the word "possible" with "practicable" in the context of impact avoidance and refinement of compensatory mitigation and differentiation of construction versus operation impacts. Asked for clarification of whether the screening process is being used to determine which resources are being evaluated or to screen for suitability. Recommended reviewing the newly released draft update of the 2009 WDFW mitigation guidelines in the context of the Final PEIS.

Comment code: IND-001-50

Response: Ecology coordinated with WDFW in the development of the Draft and Final PEIS. The section of measures to avoid, reduce, and mitigate impacts was revised in the Final PEIS to be consistent with WDFW's guidelines. Section 3.4.3.5 of the *Biological Resources Technical Report* (Appendix G) directs the developer to use the most current WDFW guidelines for mitigation strategies for temporary and permanent impacts to wildlife and habitat.

Concern summary: Recommended changing the height of fencing to be at least 6 inches off the ground to allow small to medium animals adequate passage.

Comment code: ORG-006-20

Response: Ecology coordinated with WDFW in the development of the Draft and Final PEIS. The section of measures to avoid, reduce, and mitigate impacts was revised in the Final PEIS to be consistent with WDFW's guidelines, which includes guidelines for fencing.

Concern summary: Recommended that the PEIS clearly state that the goal of siting and design considerations is to avoid and reduce impacts to habitats and species.

Comment code: ORG-009-5

Response: The section of measures to avoid, reduce, and mitigate impacts was revised in the Final PEIS to be consistent with WDFW's guidelines. A recommended measure for siting and design includes following WDFW's guidelines as the guidelines outline strategies for avoiding, minimizing, and mitigating impacts to wildlife and habitat resources from early project planning through operations. Another recommended measure is to site and design projects to avoid and minimize impacts to special-status habitat or species, habitat loss, fragmentation, and resulting edge habitat, and impacts to wildlife corridors and landscape connectivity. The Final PEIS also includes several general measures for siting and design that focus on avoiding and reducing impacts to resources.

Concern summary: Suggested that the value of agricultural lands as waterfowl habitat should be included in the discussion.

Comment code: ORG-009-12

Response: Additional mentions of agricultural lands as habitat have been added to Sections 1 and 3 the *Biological Resources Technical Report* (Appendix G) for the Final PEIS.

Concern summary: Stated that decommissioning should be considered if a facility negatively impacts critical flora or fauna. Requested that decommissioning plans be required prior to the implementation of any project to avoid unnecessary conflict at the end of the project's life cycle. Stated that the plans should also have an enforcement mechanism.

Comment code: TRB-001-5

Response: The Final PEIS includes a general measure to implement a Site Restoration Plan for interim reclamation following temporary construction and operations disturbance and a Decommissioning Plan for site reclamation at the end of a project. Plans would address timelines for restoration and decommissioning actions, monitoring, and adaptive management measures. Permitting authorities may also require a financial security as part of a decommissioning plan and this would be determined during the project permitting phase.

Concern summary: Stated that the protection of threatened, endangered, and candidate species and their habitat must be a priority and stringent safeguards must be in place. Requested that monitoring reports on avian death and wildlife migration corridor impacts be regularly submitted to the Colville Tribe.

Comment code: TRB-001-7

Response: The *Tribal Rights, Interests, and Resources Technical Report* (Appendix B) describes that mitigation may be developed through consultation with affected Tribes as part of the SEPA process or National Historic Preservation Act Section 106 process.

The significance of impacts to Tribal rights, interests, and resources can only be understood from within the cultural context of an affected Tribe. This will depend on the project and the potentially affected Tribes. Additional project-specific mitigation measures to be determined after engagement and consultation with Tribes.

Concern summary: Noted that the timing of construction (for example, disturbance during nesting season) can permanently deter some species from returning or could cause permanent site abandonment.

Comment code: ORG-006-17

Response: The *Biological Resources Technical Report* (Appendix G) Section 3.4.1 discusses construction disturbances to species. Section 3.4.3.4 was revised to include a recommended measure to consult WDFW and other appropriate federal, state, and local agencies for spatial and temporal buffers during construction and operations activities. Any buffers established would be based on site-specific factors determined during coordination with WDFW and other appropriate agencies.

3.5.7 Environmental health and safety

Environmental health and safety refers to the risks or hazards that threaten the well-being of people or other elements of the environment. Refer to PEIS Section 4.10 and the *Environmental Health and Safety Technical Resource Report* (Appendix I) for additional details. Comments related to emergency response services are discussed in Section 3.5.12 (Public Services and Utilities) of this *Response to Comments* report.

Concern summary: Requested a more robust evaluation of fire risk. Raised concerns that the risk of battery fires was underestimated. Another commented that the adverse impacts during construction should not be considered significant based on the current analysis in the Draft PEIS, and that wildland fire investigation data be used to determine the frequency and risks. Also requested that consideration of actions to reduce fire be considered when evaluating risk.

Comment codes: IND-001-51, ORG-001-02

Response: The Final PEIS has been revised to include additional discussion of fire risk. As noted in the *Environmental Health and Safety Technical Resource Report* (Appendix I), a statewide energy safety workgroup established by the Washington Department of Commerce is developing risk maps for natural hazards including wildfire. In recognition that fire risk is site specific and of ongoing concern in Washington state, it is expected that future decision makers will rely on site-specific risk evaluation (at the local/project level) in addition to using the information provided in the PEIS and its technical resource reports.

Regarding the risk of battery fires posed by solar facilities with co-located BESSs, the *Environmental Health and Safety Technical Resource Report* (Appendix I) acknowledges that

construction, operation, and decommissioning of utility-scale solar facilities with BESSs may result in potentially significant and unavoidable adverse impacts related to wildfires if there are new ignition sources in remote locations with limited response capabilities.

Recommendations for measures to avoid, reduce, and mitigate impacts specific to co-located BESSs are provided in Section 3.5.3 of the technical resource report.

PEIS statements that fires at BESSs are rare are supported by evidence. According to data published by the Electric Power Research Institute (EPRI), the BESS Failure Incident Database has recorded approximately 85 BESS failure events worldwide over the past decade, ranging from minor to major, with an average of 10 such failure events occurring annually even as global battery deployments have increased 20-fold (EPRI 2024). Additionally, past BESS installations were completed under previous regulations, and current requirements include additional strategies to mitigate fire risk, such as those required by National Fire Protection Association 855.

Concern summary: Recommended that siting and design considerations for fire breaks be considered more broadly than perimeter fencing and buildings to include facility features like access roads that could act as fire breaks.

Comment code: IND-001-52

Response: The *Environmental Health and Safety Technical Resource Report* (Appendix I) has been revised to further note that clearing and maintaining access roads can also provide a constructed fire break and improve access for emergency responders.

Concern summary: Requested the PEIS include a discussion of emergency responder risks associated with hazardous air emissions in the event of a fire, as well as response methods to mitigate risk.

Comment code: IND-001-53

Response: Emergency response guidance for lithium-ion battery incidents is included in the *Public Services and Utilities Technical Resource Report* (Appendix P). The *Environmental Health and Safety Technical Resource Report* (Appendix I) provides details on the potential health and safety hazards associated with BESS facilities and incidents, and includes information on actions and conditions that could expose emergency responders to hazards including air emissions. For example, both technical resource reports note that battery manufacturers typically advise against extinguishing battery fires, as this can increase exposure to hazardous smoke or vapors, and that only fully trained firefighters in appropriate personal protective equipment should enter the site of a battery fire. Also see Attachment 1 of the *Public Services and Utilities Technical Resource Report*, *First Responders Guide to Lithium-Ion Battery Energy Storage System Incidents*. Section 3.4.3.5 of the *Public Services and Utilities Technical Resource Report* (Appendix P) includes mitigation measures for potential significant impacts, including coordinating with local emergency responders to provide specialized training and equipment to address fire risks.

Concern summary: Requested that BESS evaluations consider battery technology-specific differences in risk and impact. Also stated that compliance with existing standards (e.g., fire code, building code) should be sufficient to mitigate for these impacts.

Comment code: IND-001-54

Response: A discussion of the various BESS types, including differences in materials and their relative hazard risks, was provided in Section 3.5.1.1 of the *Environmental Health and Safety Technical Resource Report* (Appendix I); see also *Public Services and Utilities Technical Resource Report* (Appendix P) *Attachment 1, First Responders Guide to Lithium-Ion Battery Energy Storage System Incidents.* The measures to avoid, reduce, and mitigate impacts were also revised in the Final PEIS to clarify required measures related to BESSs under current regulations and codes.

Concern summary: Concern about fire risk and the adequacy of fire response resources and request for specific parameters for assessing the level of risk and capacity of available resources.

Comment code: ORG-003-18

Response: Specific parameters for assessing the level of fire risk and the available resources for emergency response capacity will be determined by local jurisdictions at the project level based on relevant current fire risk information and response capacities pertaining to those jurisdictions.

Concern summary: Recommended discouraging the use of lithium-ion batteries in BESS systems due to fire risks.

Comment code: TRB-001-9

Response: The PEIS is a disclosure document, which identifies potential impacts and mitigation measures designed to reduce impacts at a high level. The PEIS is not intended to determine specific types of technologies and materials to be utilized in renewable energy facilities or BESSs, but rather to disclose potential impacts associated with the facilities. A discussion disclosing potential effects associated with lithium-ion batteries in BESS systems is provided in the *Environmental Health and Safety Technical Resource Report* (Appendix I); see also *Public Services and Utilities Technical Resource Report* (Appendix P) *Attachment 1*, *First Responders Guide to Lithium-Ion Battery Energy Storage System Incidents*. Further, see the related response in this section regarding the incidence of BESS failure events.

Concern summary: Stated that solar facilities may be exempt from some state safety regulations regarding lithium batteries. Requested that fire impacts be assessed further due to risks of multi-battery fires.

Comment code: ORG-001-1

Response: Pursuant to WAC 51-54A-0322, lithium BESSs are subject to specific standards for construction, storage, setbacks, fire safety, and fire protection, among other permit requirements. There are limited exceptions to these requirements that would not apply to operational energy facilities with co-located BESSs. The *Environmental Health and Safety Technical Resource Report* (Appendix I) acknowledges that there are potential risks associated with co-located BESSs. As disclosed in the technical report and the PEIS, depending on the

specific location, severity, and fire response capacity, there is potential that construction, operations, and decommissioning of a project would have less than significant to potentially significant adverse impacts of wildfire due to risk of ignition. A thermal runaway event due to damage or battery management system failure at a project with a co-located lithium-ion BESS would have potentially significant adverse impacts related to hazardous air emission risks for emergency responders. The measures to avoid, reduce, and mitigate impacts were also revised in the Final PEIS to clarify required measures related to BESS under current regulations and codes. The measures include mitigation measures to address potential significant impacts.

3.5.8 Noise and vibration

Noise is unwanted sound that can affect people, fish, and wildlife. Vibration is motion through something solid, like the ground, which can affect living creatures or damage buildings. Refer to PEIS Section 4.11 and the *Noise and Vibration Technical Resource Report* (Appendix J) for additional details.

Concern summary: Disagreed with the noise analysis, particularly the reliance on Federal Transit Administration (FTA) methods and the way in which background noise was incorporated into the analysis. Stated that the analysis does not consider established state policy that exempts daytime construction noise from limitations on noise.

Comment code: IND-001-55

Response: As described in Section 3.4.1.1 of the *Noise and Vibration Technical Resource Report* (Appendix J), most local jurisdictions and the noise standards in Chapter 173-60 WAC exempt temporary construction site noise between the hours of 7:00 a.m. and 10:00 p.m. Outside of these times, construction activities would be required to meet noise limits.

The analysis in the PEIS conservatively considers that the potential exists for construction noise to result in a significant adverse noise impact even if the activity is exempted by local or state ordinance. The FTA criteria are for the construction noise and vibration assessment and not operational noise assessment. The assessment of construction noise employs FTA's criteria under its General Assessment methodology, which is specific to construction and is not dependent on existing noise exposure (FTA 2018). This methodology identifies quantitative criteria for noise exposure to land uses, which may then be used to estimate distances where impacts may occur.

Concern summary: Stated that the construction noise analysis does not consider important factors, such as duration, frequency, and terrain, when making determinations, and that the effect determination is not supported by state policy. Questioned why the analysis assumes that larger facilities will have greater noise impacts and has different noise standards for large facilities than smaller facilities. Suggested that effects should be better quantified based on site characteristics and also noted that the substation noise analysis should consider state policy that specifically exempts them from noise standards.

Comment code: IND-001-56

Response: The PEIS analysis notes that construction noise impacts would depend on the activities, terrain, vegetation, and local weather conditions, as well as distance to the nearest

sensitive receptors. Noise and vibration impact distances identified in the programmatic analysis are based on proxy projects and unspecified existing conditions and locations of sensitive receptors. Each facility would need to conduct facility- and site-specific modeling to determine the applicable distances necessary to avoid a significant noise impact.

As described in Sections 1.2 and 3.5.2 of the *Noise and Vibration Technical Resource Report* (Appendix J), Chapter 173-60 WAC exempts noise from electrical substations. Larger facilities would likely require a larger, and potentially louder, substation transformer. However, regardless of facility size, the impact findings are based on the location of stationary equipment relative to noise-sensitive land uses and receptors.

There could be circumstances in which a larger project, with a greater power-generating capacity, could result in lesser impacts than a smaller project if located on a larger project site with greater buffer distances from sensitive receptors and land uses than a smaller project. Text has been added to Section 4.11.3 of the Final PEIS to clarify this concept.

Concern summary: Requested clarification of how the quantitative thresholds for significant and unavoidable adverse impacts were used to make the effect determinations for noise and vibration.

Comment code: ORG-003-14

Response: As discussed in the introduction to Section 4 of the PEIS, potentially unavoidable significant adverse impacts are those that cannot be mitigated to a non-significant level. Although there could be potentially significant adverse impacts related to noise, it is expected that through compliance with laws and permits, and with implementation of measures to avoid and mitigate significant impacts, there would be no significant and unavoidable adverse impacts.

3.5.9 Land use

Land use refers to how land is developed for various human uses or preserved for natural purposes. Major land types and land uses in the study area include agricultural, rural residential, forestry, wildlife conservation, and undeveloped recreation areas. Major categories of land ownership include private, public, federal, state-managed, and state trust. Refer to PEIS Section 4.12 and the *Land Use Technical Resource Report* (Appendix K) for additional details.

Concern summary: Requested that the Draft PEIS include the loss of natural or semi-natural lands and habitats as a significant concern in the discussion of adverse impacts from land use change. Requested that the impacts to land use incorporate those associated with high value areas for natural landscapes and vegetation, open space, and fish and wildlife habitats, as well as undeveloped recreation, and should not focus on commercially important resource lands.

Comment codes: ORG-006-8, ORG-006-9, ORG-006-10, ORG-006-24, ORG-006-25, ORG-009-7, ORG-009-8

Response: Natural resources lands of "long-term commercial significance" is a Washington State Growth Management Act (GMA) term used in local land-use planning documents, as

described in Section 1.2.2.2 of the *Land Use Technical Resource Report* (Appendix K). It is not intended to diminish the potential value of such lands for other purposes, such as open space and wildlife habitat. Section 3.4.1.1 of the report has been updated to acknowledge that other low-density uses may also be affected. The *Land Use Technical Resource Report* (Appendix K) evaluates potential impacts to rural character and describes how the GMA defines rural character, and the role of local governments in planning for and protecting rural areas.

Section 1.1 of the *Land Use Technical Resource Report* (Appendix K) was updated to include a cross reference to other technical resource reports that have overlapping impacts. Potential impacts to wildlife and habitats are addressed in the *Biological Resources Technical Report* (Appendix G); potential impacts to recreation are addressed in the *Recreation Resources Technical Report* (Appendix M).

Concern summary: Requested greater differentiation of the impacts of land use conversion during construction compared to during operation.

Comment code: IND-001-27

Response: The *Land Use Technical Resource Report* (Appendix K) discusses land use conversion under construction impacts, as that is the phase at which the conversion would occur.

Concern summary: Recommended the analysis of impacts from dust, noise, traffic, aviation, and visual changes be considered under other resource analyses, not in land use.

Comment codes: IND-001-57, IND-001-59

Response: Considerations of dust, noise, traffic, and visual changes are often included in local land use codes and therefore are included in the *Land Use Technical Resource Report* (Appendix K). Land use-related aspects of military and aviation facilities are briefly discussed; the *Transportation Resources Technical Report* (Appendix O) provides additional detail. Dust, noise, and visual impacts are also discussed in the *Air Quality and Greenhouse Gases Technical Resource Report* (Appendix E), *Noise and Vibration Technical Resource Report* (Appendix J), and *Aesthetics/Visual Quality Technical Resource Report* (Appendix L), respectively.

Concern summary: Disagreed with the analysis and impact determination associated with conversion of lands of long-term commercial significance. Suggested that additional analyses are needed that consider factors such as whether uses are allowed and/or considered compatible land uses. Recommended, at a minimum, changing impacts from "would" occur to "could" occur, based on specific circumstances of the project.

Comment code: IND-001-58

Response: The impact assessment approach is described in the *Land Use Technical Resource Report* (Appendix K). For the purposes of this assessment, a potentially significant impact would occur if a facility resulted in the following:

- Actions would cause permanent conversion or changes to existing low-intensity uses (rural, agricultural, or resource land uses) and result in land use conflicts.
- Actions would be incompatible with or would preclude achievement of the stated goals/objectives for existing plans, policies, or regulations.

Text in Section 3.4.2 of the *Land Use Technical Resource Report* (Appendix K) and Section 4.12.3.1 of the Final PEIS has been edited to include land use planning considerations.

The PEIS identifies potential significant adverse environmental impacts and relevant mitigation applicable to a facility in general. The effects of location- and facility-specific factors cannot be fully anticipated or addressed in a programmatic analysis. The PEIS identifies potential impacts to be considered early, and each solar facility proposal would be required to have its own SEPA environmental review. During that process, site-specific information and facility-specific effects would be evaluated.

Concern summary: Stated concern that the Draft PEIS does not provide detailed analysis of potential effects on agricultural lands, including critical agricultural lands and prime farmlands.

Comment code: ORG-003-16

Response: As described in Section 2.3 of the *Land Use Technical Resource Report* (Appendix K), "conversion of land" includes conversion of prime farmland and other types of agricultural lands. The *Land Use Technical Resource Report* (Appendix K) describes the types of agricultural lands in the study area, plans and regulations that address agricultural uses, potential impacts, and measures to avoid, reduce, and mitigate impacts. Site-specific information and facility-specific effects would be evaluated during project-level environmental review.

See also the response to relevant portions of this comment in Section 3.5.3, Earth, of this *Response to Comments* report.

Concern summary: Although they are addressed under operations, the construction and conversion of land use sections are missing a discussion of impacts on rural character, native species, and functioning ecosystems.

Comment codes: ORG-006-11, ORG-006-26, ORG-009-9

Response: The Final PEIS Section 4.12 and Sections 3.4.1 and 3.4.2 of the *Land Use Technical Resource Report* (Appendix K) were reorganized to clarify the impacts on rural character and conversion of existing land uses from construction, operations, and decommissioning. Potential impacts to wildlife and habitats are discussed in the *Biological Resources Technical Report* (Appendix G).

Concern summary: Requested that the Impact Assessment Approach (Section 2.3) of the Draft PEIS *Land Use Resource Report* be updated to include a definition of agricultural and resource lands for clarity.

Comment code: ORG-006-22

Response: Section 2.3 of the *Land Use Technical Resource Report* (Appendix K) has been revised to cross reference these definitions, which are provided in Section 3.2.3 of the report.

Concern summary: Suggested that significant and unavoidable impacts to native plant-dominated landscapes and wildlife habitats should be identified in this resource section.

Comment code: ORG-009-6

Response: Section 1.1 of the *Land Use Technical Resource Report* (Appendix K) was updated to include a cross reference to other technical resource reports that have overlapping impacts. Potential impacts to wildlife and habitats are discussed in detail in the *Biological Resources Technical Report* (Appendix G).

Concern summary: Stated that the impact assessment in the Draft PEIS *Land Use Resource Report* should be updated to clearly indicate that actions would cause permanent conversion and result in conflicts.

Comment code: ORG-009-16

Response: Section 3.4.2.1 in the *Land Use Technical Resource Report* (Appendix K) addresses the potential impacts of permanently converting resource and rural lands to higher intensity utility uses, including conflicts with existing and surrounding land uses and with local, state, and federal programs, plans, and regulations. As described in the report, the impacts of converting land use to a utility-scale solar facility would depend on factors including the existing use of the site, whether solar facilities are an allowed use according to current and future land use plans, and compatibility of current and future land uses with solar facilities.

3.5.10 Aesthetics/visual quality

Visual resources refer to all objects (built and natural, moving and stationary) and features (e.g., landforms and waterbodies) that are visible in a landscape. Visual quality, or aesthetics, refers to natural and human landscapes and how people see them. Visual quality is the value that people place on observing their surrounding environment. Refer to PEIS Section 4.13 and the *Aesthetics/Visual Quality Technical Resource Report* (Appendix L) for additional details.

Concern summary: Stated that rural character was not appropriately addressed as a visual resource. Asserted that visual resources are only one aspect of rural character, and that rural character should only be addressed in one environmental resource report.

Comment code: IND-001-60

Response: Potential impacts to visual elements of rural character are addressed in the *Aesthetics/Visual Quality Technical Resource Report* (Appendix L) and Section 4.13 of the PEIS to consolidate discussion related to aesthetics/visual quality. Additional analysis of rural character is discussed in the *Land Use Technical Resource Report* (Appendix K) and Section 4.12 (Land Use) of the PEIS.

Concern summary: Stated that the presence of workers and vehicles for maintenance activities is not appropriately considered as a visual impact. Stated that characterization of visual impacts must include existing landscape features, including built features.

Comment code: IND-001-61

Response: The action and movement of workers, vehicles, and equipment are addressed in Section 4.13.3.1 of the PEIS and in the *Aesthetics/Visual Quality Technical Resource Report* Appendix L). Text has been added to Section 4.13.2 of the Final PEIS and Section 2.3 of the *Aesthetics/Visual Quality Technical Resource Report* (Appendix L) to clarify that the presence of workers and vehicles could constitute a visual impact during construction, maintenance, or decommissioning activities.

As stated in Sections 2.3 and 3.4 of the *Aesthetics/Visual Quality Technical Resource Report* (Appendix L), the degree of visual impact is determined in part by the existing visual landscape. Existing features are identified and discussed at a programmatic statewide level in Section 3.2 of the technical resource report (Affected Environment). The natural and built features of the surrounding landscape would be more fully identified, discussed, and evaluated in project-specific environmental analyses tiering from this PEIS. Text was modified in the report for the Final PEIS to further clarify that impacts will depend on both natural and built elements of the existing visual landscape.

Concern summary: Stated that this resource section lacked thresholds for determining when visual impacts are significant.

Comment code: ORG-003-17

Response: Section 2.3 of the *Aesthetics/Visual Quality Technical Resource Report* (Appendix L) identifies criteria that would result in a potentially significant impact to aesthetics/visual quality:

- Long-term changes in visual quality that would substantially contrast with the existing visual or rural character or with designated scenic resources, including:
  - Large-scale permanent clearing of vegetation
  - Construction of a large structure in a previously undeveloped area
  - Construction of a structure that would block views
- Creation of a new source of light or glare that would adversely affect views in the area continuously or for most day or night hours and be visible to a substantial number of people

Section 2.3 of the technical resource report also identifies potential site- and project-specific factors that could influence the magnitude of impacts, such as the size of a facility and viewer characteristics, and states that these factors would be evaluated during project level environmental review.

3.5.11 Recreation

Recreation provides people with the opportunity to engage with and enjoy both the natural and built environments. Washington has vast opportunities for outdoor recreation, from mountains to deserts, including both land- and water-based activities. Recreation opportunities include activities in parks, rivers, on state and federally managed lands, and on privately owned lands. Outdoor recreation is an important aspect of life and provides economic and health benefits to communities in the study area. Refer to PEIS Section 4.14 and the *Recreation Resources Technical Report* (Appendix M) for additional details.

Concern summary: Stated concern that the analysis, as written, concludes that any recreational impact is a significant impact, without consideration of the size or severity of that impact. Requested clarification of how to determine whether mitigation is sufficient to offset impacts.

Comment codes: IND-001-8, IND-001-62

Response: Section 4.14 of the PEIS and the *Recreation Resources Technical Report* (Appendix M) describe potential significant impacts to recreation. A potentially significant adverse impact would occur if:

- The facility results in the loss of recreation resources or crowding of alternative recreational opportunities
- Increased use of neighboring recreational opportunities throughout the operations phase were to result in overcrowding and overuse of those resources
- The facility results in segmentation of recreational facilities, such as severing trail connections, and recreationists no longer have access to the full activity

The Final PEIS includes mitigation measures to address potential significant impacts for recreation, including providing new opportunities for recreational activities and alternative linkage connections. Section 4.1.4 of the PEIS describes how the PEIS and measures to avoid, reduce, and mitigate impacts would be used during project-level reviews.

3.5.12 Public services and utilities

Public services and utilities include basic services and facilities that support development and protect public health and safety. Public services include fire and emergency response, law enforcement, hospitals, emergency management, and public schools. Utilities include electrical, water, wastewater, solid waste, natural gas, and communications. Refer to PEIS Section 4.17 and the *Public Services and Utilities Technical Resource Report* (Appendix P) for additional details.

Concern summary: Requested that the fire response analyses include a more comprehensive description of the impacts and how they would reach a level of significance. Suggested using fire data on solar facility construction and operation in that analysis.

Comment code: IND-001-63

Response: The technical analysis that supports the conclusions reached in the PEIS findings (Final PEIS Section 4.17.3.1) is provided in the *Public Services and Utilities Technical Resource Report* (Appendix P). Additional information on fire data is provided in responses to comments in Section 3.5.7 of this report, and in the *Environmental Health and Safety Technical Resource Report* (Appendix I).

3.6 Cumulative impacts

Cumulative impacts are effects that would result from the impacts of utility-scale solar energy facilities added to the impacts from other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from incremental, but collectively significant, actions that occur over time. Refer to PEIS Section 5 and the *Cumulative Impacts Technical Report* (Appendix Q) for additional details.

Concern summary: Stated that the cumulative impacts analysis does not provide clear significance determinations. Also noted that the report does not provide the likelihood of cumulative impacts and does not describe how implementation of mitigation measures would reduce impacts.

Comment code: ORG-003-19

Response: As described in the "Key findings" text box in Section 5.1 of the PEIS, the potential cumulative impacts resulting from future solar energy facilities considered in the PEIS could range from less than significant to potentially significant depending on several factors. Variables that influence the significance of the potential cumulative impact include specific time- and location-based existing conditions near any future solar energy facility development; the specific location, design, configuration, size, and construction timing of a future solar energy facility; and the location and number of reasonably foreseeable future activities as well as the distance the activities are from each other. The analysis of individual solar energy facilities and other local and regional actions to cumulative impact assessments would be conducted as part of project-specific environmental reviews. Mitigation measures that may reduce the impacts of solar energy facilities on the environmental resources evaluated in the PEIS are described and appended to the PEIS in the *Measures to Avoid, Reduce, and Mitigate Impacts* (Appendix A).

3.7 Updates and corrections

Concern summary: Submittals included corrections and updates to information presented in the PEIS. Examples of this type of information included suggested wording changes, inclusion of additional species information, information on recently updated studies, suggestions for reorganization of information, and suggested edits to definitions.

Comment codes: GOV-001-1, GOV-001-3, GOV-001-6, GOV-001-7, GOV-002-1, GOV-002-2, GOV-002-3, GOV-005-4, GOV-005-7, GOV-005-10, GOV-005-13, GOV-006-2, GOV-006-3, GOV-006-6, GOV-006-7, GOV-006-8, GOV-006-10, GOV-006-23, GOV-006-30, IND-001-29, IND-001-30, IND-001-31, IND-001-32, IND-001-33, IND-001-34, IND-001-44, ORG-006-3, ORG-006-4, ORG-006-6, ORG-006-7, ORG-006-13, ORG-006-14, ORG-006-15, ORG-006-16, ORG-006-23, ORG-009-4, ORG-009-11

Response: Ecology reviewed and considered all comments received during the public comment period and made edits to the PEIS where appropriate as a result of input received. Updated studies or other references were added to the following reports:

- *Tribal Rights, Interests, and Resources Technical Report* (Appendix B)
- *Water Resources Technical Report* (Appendix F)
- *Biological Resources Technical Report* (Appendix G)
- *Energy and Natural Resources Technical Report* (Appendix H)
- *Environmental Health and Safety Technical Resource Report* (Appendix I)
- *Land Use Technical Resource Report* (Appendix K)
- *Transportation Resources Technical Report* (Appendix O)
- *Public Services and Utilities Technical Resource Report* (Appendix P)

4 References

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Appendix S, Attachment 1. Coded Comment Record

This attachment includes a complete record of all comments received during the Draft PEIS comment period. To aid in locating responses to particular comments, numbering was added to the page margins of comments that corresponds with the comment codes in the concern summaries in the *Response to Comments Report*.

Comments are grouped in the following order: Tribes, agencies, organizations, and businesses. An index of commenters within each group is provided at the start of the attachment.

Comment Code Index

Commenter code	Commenter (as submitted in comments)	Date comments received	Comment submittal method
Tribes			
TRB-001	The Confederated Tribes of the Colville Reservation	November 21, 2024	Email
Agencies			
GOV-001	Washington State Department of Archaeology and Historic Preservation	October 11, 2024	Online
GOV-002	Washington State Department of Natural Resources	October 24, 2024	Online
GOV-003	United States Department of the Interior	October 25, 2024	Online (Draft/duplicate of letters in GOV-005 and GOV-006)
GOV-004	Washington Department of Fish and Wildlife	October 28, 2024	Online
GOV-005	United States Department of the Interior	October 25, 2024	Online
GOV-006	United States Department of the Interior	October 25, 2024	Online
Organizations			
ORG-001	Committee For A Constructive Tomorrow	October 26, 2024	Online
ORG-002	Conservation Northwest	October 28, 2024	Online
ORG-003	Renewable Northwest	October 28, 2024	Online
ORG-004	Audubon Washington	October 28, 2024	Online
ORG-005	Climate Solutions	October 28, 2024	Online
ORG-006	Blue Mt Audubon Society	October 28, 2024	Online
ORG-007	Sierra Club	October 28, 2024	Online
ORG-008	Sierra Club	October 28, 2024	Online
ORG-009	Conservation Northwest (Jordan Ryckman)	October 29, 2024	Email
Businesses			
IND-001	Puget Sound Energy	October 28, 2024	Online

Coded Comment Record: Tribes

TRB-001_CTCR

The Confederated Tribes of the Colville Reservation

Colville Business Council
P.O. Box 150, Nespelem, WA 99155

(509) 634-2200
FAX: (509) 634-4116

11/21/2024

Clean Energy Coordination
Department of Ecology
PO Box 47709
Olympia, WA 98504-7709

Re: Programmatic Environmental Impact Statements (PEISs) for utility-scale solar and onshore wind energy facilities.

The Confederated Tribes of the Colville Reservation (CTCR) provides the following comments and concerns on the Programmatic Environmental Impact Statement (PEIS) for Utility-Scale Solar Energy Facilities in Washington. The Colville Tribes' response specifically calls in to focus the distinctions made between protections and consultation requirements based on how tribal rights are protected (executive order, statutes, treaties etc.). The Courts have held that there is no difference between such rights. The Colville Tribes has affirmed rights in its traditional territories both inside and outside of the Reservation. Additionally, the Colville Tribes is recognized to have cultural interests and ties throughout eastern Washington (burial grounds, sacred sites, etc), that have been recognized by federal and state entities. While we acknowledge the potential benefits of renewable energy projects, we emphasize the need for a careful and respectful approach to mitigate impacts on our cultural and natural resources keeping tribal protected rights in mind.

The CTCR's primary concerns regarding the proposed clean energy development impacts are:

1 • **Consultation, Coordination, and Communication**: A protocol for consultation during site selection and construction is necessary. Any changes to water resources or habitats require tribal consultation. We insist on effective and ongoing communication to ensure that tribal concerns are adequately addressed throughout the project lifecycle. Official Government to Government Consultation may only occur with the Colville Tribes' governing body, the Colville Tribal Business Council. Unofficial consultation, or collaboration/information sharing, may occur at the tribal program level. Such communications and coordination should begin early in specific project consideration in order to avoid unnecessary delays and damage due to a need to push a project through without appropriate consideration.

2 • **Environmental Impact**: The PEIS broadly considers potential adverse environmental impacts but lacks specific project details, making it difficult to assess impacts on resources important to the CTCR. We request that detailed project-specific environmental assessments be conducted to ensure minimal impact on our land and resources. We also request that such assessments include tribal involvement early in the process.

3 • **Land Use and Access**: Combining solar energy facilities with agricultural land use could be beneficial if it does not impact cultural or natural resources. It is crucial that

native people have access to "fringe" landscapes with traditional plants. Any fencing or access restrictions for security purposes should not obstruct tribal access to traditional foods, medicines, and sacred sites. Provisions should be made to allow access to these areas.

4 • **Restoration and Access**: Any land disturbed during construction should be restored with native plants. Tribal members should have access to gathering places and sacred sites, with minimal disruption during construction. We emphasize the need for restoration plans that prioritize the reestablishment of native flora.

5 • **Decommissioning**: If solar facilities negatively impact critical plants, fish, or animals, decommissioning should be considered. It is essential that decommissioning plans are in place to address any long-term environmental impacts. Should wind turbines negatively impact critical plants, fish, or animals, decommissioning should be considered to mitigate these effects. Decommissioning plans should be in place prior to the implementation of any project in order to avoid unnecessary conflict at the end of the project's lifecycle. Such plans must have an enforcement mechanism in case the project applicant does not follow through, so that the resources can be restored.

6 • **Notification**: The tribe must be notified of any changes to the Area of Potential Effect during construction, operation, or decommissioning for their review. Timely and transparent notification is crucial for us to provide informed feedback and take necessary actions.

7 • **Species Protection**: The initiative must protect threatened, endangered, and candidate species and their habitats. Any significant impacts on these species or habitats should prioritize protection. The CTCR expects stringent measures to be implemented to safeguard these species. Wind turbines, which can be up to 710 feet tall with rotor diameters of up to 525 feet, pose significant risks to birds and other flying mammals. We request that monitoring reports on avian deaths and impacts on wildlife migration corridors be regularly submitted to the Colville Tribe.

8 • **Oil Spills**: Transformers used in wind facilities contain substantial amounts of oil, posing risks to our water resources and habitats in the event of spills.

9 • **Battery Storage Risks**: We discourage the use of lithium-ion batteries in Battery Energy Storage Systems (BESS) due to fire risks, especially in wildfire-prone areas like Eastern Washington and the Colville Reservation.

The CTCR asserts our sovereignty and the need for federal oversight to ensure the protection and welfare of our lands and people. We urge the Washington State Department of Ecology and its stakeholders to respect these legal frameworks and tribal sovereignty. We look forward to working collaboratively to develop projects that are environmentally sustainable and respectful of our cultural heritage.

Thank you for your attention to these matters.

Sincerely,

Jarred-Michael Erickson, Chairman
Colville Business Council

Coded Comment Record: Agencies

The Washington State Department of Archaeology and Historic Preservation (DAHP) provided comments via marked-up copies of the Draft *Tribal Rights, Interests, and Resources Report* and the main body of the Draft PEIS. The Washington State Department of Natural Resources (DNR) provided comments via a marked-up copy of the Draft *Land Use Resource Report.* To improve readability and navigation of the Coded Comment Record, pages from these marked-up copies that did not have comments from DAHP or DNR have been deleted from this attachment.

Additionally, DAHP's comments that are coded as GOV-001-1 through GOV-001-9 and DNR's comments that are coded as GOV-002-1 through GOV-002-3 were originally provided as comments in the PDF comment pane. These comments have been converted to text annotations on the page, in order to be accessible to readers in the final publication format.

The original DAHP and DNR mark-up submittals are available in the project records.

WaDAHP

Please see the attached files for mark up and comments offered by DAHP. This is being reviewed under DAHP tracking code 2023-09-06083.

Appendix O: Tribal Rights, Interests, and Resources Report

For Programmatic Environmental Impact Statement on Utility-Scale Solar Energy Facilities in Washington State

By

Anchor QEA

For the

Shorelands and Environmental Assistance Program

Washington State Department of Ecology

Olympia, Washington

September 2024

DEPARTMENT OF ECOLOGY
State of Washington

focused on ethnographic information, prior interviews with Tribal members, TCPs and possible TCPs, and resource use areas.

Specific projects and site-specific resources, impacts, and mitigation strategies are not addressed by the PEIS—it is a planning document that takes a broad look at resources and impacts. Therefore, the analysis in this report focused on identifying Tribal rights, interests, and resources considerations broadly.

Publicly available federal, state, and local project and nonproject environmental impact statements and planning documents on utility-scale solar energy also form a robust library to inform the PEIS documents.

This has been updated & finalized.

The following sources relate to Tribal rights, interests, and resources:

1

- Accounts and direct input as provided by affected Tribes
- Bureau of Land Management's National Environmental Policy Act *Draft Programmatic Environmental Impact Statement for Utility-Scale Solar Energy Development* (BLM 2024)
- Tribal and regional planning documents, such as the *Energy Vision for the Columbia River Basin* prepared by the Columbia River Inter-Tribal Fish Commission (CRITFC 2022)
- Indian Claims Commission decision library
- Ethnographic accounts (e.g., Waterman 2001; Smith 1969; Ray 1939; Teit 1928)
- Government Land Office Public Land Survey maps and notes
- Cultural resources records contained within the Washington State Department of Archaeology and Historic Preservation's (DAHP's) Washington Information System for Architectural and Archeological Records Data (WISAARD) and identified in the *Historic and Cultural Resources Report* for the PEIS
- Other resource reports for the PEIS for identification of plants, wildlife, and areas important to traditional cultural practices and those associated with treaty rights related to usual and accustomed territories, as well as potential impacts to Tribes, including the following:
    - *Biological Resources Report*
    - *Historic and Cultural Resources Report*
    - *Water Resources Report* (ESA and Anchor QEA 2024)
    - *Recreation Resource Report* (ESA 2024b)
    - *Environmental Health and Safety Resource Report* (ESA 2024c)
    - *Noise and Vibration Resource Report* (ESA 2024d)
    - *Aesthetics/Visual Quality Resource Report* (ESA 2024e)
    - *Transportation Resource Report* (ESA 2024f)
    - *Air Quality and Greenhouse Gases Resource Report* (ESA 2024g)
    - *Environmental Justice Resource Report* (Anchor QEA 2024b)
- Scoping comments

restoration of vegetation to pre-facility conditions, along with the return of species and functioning habitats, may take years, with some habitats, such as shrubsteppe, potentially taking decades. Invasive species may colonize newly and recently reclaimed areas and could produce visual contrasts. Vegetation restoration at some decommissioned facilities may be more challenging due to factors such as region, soil degradation, the extent of invasive species colonization, a change in seed dispersal patterns, or degradation of adjacent habitats. The length of time it takes for native vegetation to reestablish varies greatly depending on location, weather patterns, soil fertility, surrounding land use, and the type of vegetation planted or recruited.

It is assumed that wildlife habitat disturbance would primarily occur in the previously disturbed areas, but the degree of impact could vary depending on how much the previously disturbed habitat had recovered during the operational phase. Wildlife could be affected by changes depending on the extent of infrastructure that would need to be removed and site restoration activities. Similar to construction, decommissioning could also result in disturbance or mortality of species if those species are unable to avoid the decommissioning activities.

3.4 Actions to avoid or minimize impacts

Site-specific mitigation actions would be developed during project-specific reviews and permitting for each facility proposed in the future. Project proposals may involve potential impacts to the rights, interests, and resources of multiple Tribes. Tribal engagement and government-to-government consultation with all potentially affected, federally recognized Tribes should begin early to provide information and identify potential project impacts. Timely and frequent communication about project changes should be provided to Tribes.

Mitigation may be developed through consultation with affected Tribes as part of the SEPA process. Mitigation may also be developed under federal Section 106 of the National Historic Preservation Act; this is a separate, federal process outside of the state's SEPA process.

3.4.1 Siting and design considerations

- Contact potentially affected Tribes early in the siting process, ideally before land is acquired for a project or before permit applications are developed and offer information relevant to Tribal technical staff to help identify potential impacts to Tribes.
- Include Tribal treaty reserved rights, Tribal reservations, off-reservation rights, trust lands, other Tribal-owned land, and other areas of significance to Tribes in consideration of potential impacts and mitigation.
- Consider requiring a Tribal monitor for each potentially affected Tribe on archaeological survey crews to provide input on TCPs, sacred sites, and culturally significant sites.
- Design and site projects to avoid, to the maximum extent, impacts to Tribal interests, treaty rights, and resources.

2

Also recommend offering Tribes the opportunity to monitor or conduct plant surveys.

State Environmental Policy Act Draft Programmatic Environmental Impact Statement

For Utility-Scale Solar Energy Facilities in Washington State

Shorelands and Environmental Assistance Program

Washington State Department of Ecology

Olympia, Washington

September 2024, Publication 24-06-011

DEPARTMENT OF ECOLOGY
State of Washington

Acronyms and Abbreviations List

AC	alternating current
BESS	battery energy storage system
BLM	Bureau of Land Management
BMP	best management practice
CCA	Climate Commitment Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	Compatible Energy Siting Assessment
CETA	Clean Energy Transformation Act
CO_2e	carbon dioxide equivalent
CSZ	Cascadia Subduction Zone
DAHP	Washington State Department of Archaeological and Historic Preservation
dBA	A-weighted decibel
DC	direct current
DNR	Washington State Department of Natural Resources
DOC	Washington Department of Commerce
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
Ecology	Washington State Department of Ecology
EDNA	environmental designation for noise abatement
EFSEC	State of Washington Energy Facility Site Evaluation Council
EHS	environmental health and safety
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GHG	greenhouse gas
GHI	global horizontal irradiance
GMA	Growth Management Act
HVAC	heating, ventilation, and air conditioning
kV	kilovolt
kWh	kilowatt-hour
$kWh/m^2/day$	kilowatt-hour per square meter per day
LCA	life-cycle assessment
MW	megawatt
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration/Act
PEIS	Programmatic Environmental Impact Statement

3 This should be "Archaeology" here and throughout the rest of the document.

4.1.2 How impacts were analyzed

The significance of resources can only be understood from within the cultural context of an affected Tribe. The impact assessment considered comments provided by Tribes for early drafts of the *Tribal Rights, Interests, and Resources Report* (Appendix O) and the Final PEIS will consider comments provided on the Draft PEIS. Specific project impacts and determinations of significance or non-significance will be determined with engagement and in consultation with each potentially affected Tribe at the project level.

The analysis of impacts on Tribal resources considered the following:

4

- Impacts on plant and animal species used by Tribal members, including loss or modification of habitats, fragmentation of migration corridors, and loss of medicinal and traditional plants and foods
- Loss of access to traditional hunting, fishing, or gathering areas, to an area where other traditional practices occur, and recreation areas
- Impacts to TCPs, historical sites, and archaeological sites and objects
- Interruption of spiritual practices
- Changes in transportation routes that may interfere with access to culturally significant resources, health and safety, or economic activity
- Disruption and degradation of the health and mental wellbeing of Tribal members

4.1.3 Findings for all solar facility types evaluated in the PEIS

All these reflect individual components of cultural continuity. The impact of projects on any of these necessarily implicates projects' effects on Tribes' abilities to continue their own culture today and in the future. The PEIS should acknowledge this.

4.1.3.1 Impacts

Impacts from construction and decommissioning

Most site characterization activities would involve little or no ground disturbance. However, some ground-disturbing activities, such as drilling deep soil cores and building access roads, could result in impacts on historic and cultural resources.

Activities that could impact Tribal resources during construction and decommissioning include ground disturbance, restricted access, and degradation of visual quality. Other activities could cause noise and interruption of the landscape, habitats, and species. Tribal spiritual practices could be interrupted by construction impacts to land areas and cultural or sacred sites. Access to traditional gathering areas for medicinal and traditional plants and foods could be restricted during construction or permanently lost. Impacts to archaeological sites, sacred sites, TCPs, burials, and specific habitats for culturally important species could result from clearing, grading, and excavation. These could also be affected from construction or decommissioning of facilities and associated infrastructure.

Potential impacts on habitats and species include alteration of species migration routes, loss of biodiversity, and habitat fragmentation. Construction and decommissioning could have impacts to plants and changes in water chemistry and soil compaction. Mortality of species and changes to habitats could impact wildlife and plants important to Tribes. These impacts could disrupt traditional subsistence practices. Access to treaty-reserved fishing areas and food harvesting

Recommend contracting with affected Tribes to conduct culturally important plant and TCP surveys, as those are best identified by the Tribes themselves.

GOV-001_WaDAHP

5 **Siting and design considerations**

- Contact potentially affected Tribes early in the siting process, ideally before land is acquired for a project or before permit applications are developed and offer information relevant to Tribal technical staff to help identify potential impacts to Tribes.
- Include Tribal treaty-reserved rights, Tribal reservations, off-reservation rights, trust lands, other Tribal-owned land, and other areas of significance to Tribes in consideration of potential impacts and mitigation.
- Consider requiring a Tribal monitor for each potentially affected Tribe on archaeological survey crews to provide input on TCPs, sacred sites, and culturally significant sites.
- Design and site projects to avoid, to the maximum extent, impacts to Tribal interests, treaty rights, and resources.
- Tribal preferred aesthetic or visual quality mitigation practices may vary from those considered for other visual quality mitigation; consult with potentially affected Tribes on any aesthetic or visual quality mitigation practices.
- Consider maintaining open Tribal access routes and aligning construction, operations, and decommissioning to avoid disrupting Tribal access to sites and resources.
- Additional actions to be determined after engagement and consultation with Tribes.

4.1.4 Findings for the No Action Alternative

Facilities developed under the No Action Alternative would be subject to the same regulatory standards as those noted for the types of facilities considered in this PEIS. It is expected there would be similar types of impacts on Tribal rights, interest, and resources from site characterization, construction, operation, and decommissioning for solar facilities under the No Action Alternative.

4.12.7 Unavoidable significant adverse impacts

Through compliance with laws and permits, and with implementation of actions to avoid and mitigate significant impacts, utility-scale solar facilities would have **no significant and unavoidable adverse impacts** on recreation resources from construction, operation, or decommissioning.

4.13 Historic and cultural resources

Key findings

Each historic or cultural resource's significance is unique to that resource; therefore, the impact analysis will also be unique and would need to be conducted during future project-level review for facilities. The significance of Tribal cultural resources can only be understood from within the cultural context of an affected Tribe. Accordingly, impact assessment and determinations of significance or non-significance would be done with engagement and in consultation with potentially affected Tribes and DAHP at the project level.

The land in Washington state has been utilized since before glaciers retreated at the end of the Pleistocene era. During the succeeding millennia, people have used a wide variety of strategies and approaches to interact with the landscape and its resources. As the environment has changed, so have those approaches. This has resulted in a history of human use and occupation that is reflected in historic and cultural resources. The *Historic and Cultural Resources Report* (Appendix L) includes the analysis and technical details used to evaluate historic and cultural resources in this PEIS. This section contains a summary of the affected environment, how impacts were analyzed, and the key findings.

4.13.1 Affected environment

The study area includes a diverse range of geological formations, animals, and plants. Each of these regions has a unique geological history that has formed the current landscape, and which plays an important role in archaeological site formation. The presence of an archaeological site means there was past human activity and physical objects or remains have been preserved there. Archaeological resources are typically identified through archaeological survey work.

Throughout the study area there are lands and shorelines where Tribes have lived for thousands of years and continue to live and use. Archaeological sites, historic properties, and Tribal place names exist throughout the study area. They include areas connected to Tribal cultural and spiritual practices and are represented within oral tradition stories and historic documents. Historic architectural resources include buildings, sites, structures, objects, or districts that have reached a particular age threshold to be considered for eligible for listing in a historic register. Many of these resources are present in the study area.

6 A Traditional Cultural Property (TCP) is a property or a place that is inventoried or determined to be eligible for inclusion on the National Register of Historic Places or the Washington

Check this definition. I think it's correct, but should also refer to Tribal designations.

"Unrecorded" rather than "undiscovered."

land areas and cultural or sacred sites, including degradation of visual quality, noise, and interruption of access.

Construction could result in damage or destruction of historic and cultural resources from the clearing, grading, and excavation of the site and from building facilities and associated infrastructure. Construction will likely include subsurface infrastructure (e.g., foundations, pilings, utility trenches). Ground disturbance during construction is likely to impact
7 undiscovered archaeological resources because there are many such sites throughout the study area and because most of the study area has not been archaeologically surveyed.

Degradation and destruction of historic and cultural properties could result from changes to the landscape and water flow patterns. The removal of soils, erosion of soils, and runoff into adjacent areas could also affect resources. Oil or other contaminant spills could affect resources.

Increased light levels resulting from land clearing could also negatively impact pictographs (painted rock art) by sun bleaching the paint used to create the rock art. It is unsure, however, to what degree this impact would occur.

Increased human access and subsequent disturbance such as looting, vandalism, and trampling of cultural resources could result from creating corridors or facilities in otherwise intact and
8 inaccessible areas. Visual changes, changes in light, dust, and human presence could affect cultural resources for which visual integrity is a component of sites' significance, such as Tribal sacred sites, historic structures, trails, and historic landscapes.

Construction noise would depend on the activities, terrain, vegetation, and local weather conditions but may involve blasting and the use of equipment such as impact pile drivers and vibratory rollers. These can generate substantial noise and vibration. Cultural resources that are susceptible to noise impacts include TCPs or sacred sites because the cultural uses or practices that occur at these locations could be interrupted or diminished. Construction vibration could adversely affect cultural resources by damaging rock features or archaeological sites.

Decommissioning would involve similar types of activities as for construction. Site restoration activities may include recontouring, grading, seeding, planting, and perhaps stabilizing disturbed surfaces. The types of impacts would be similar to those associated with facility construction.

Impacts from operation

Operational activities that could affect historic and cultural resources include changes in access to natural and cultural resources and increased human activity with associated noise, light, dust, and human presence. Ongoing operations and maintenance are anticipated to include little new ground disturbance because the use of maintenance vehicles and equipment would generally be limited to access roads and areas already developed during construction.

Archaeological sites could still be affected by the increase in activity during operation of a facility. This includes increased vehicle traffic, vegetation management, or other activities, as well as the presence of people who might disturb surface artifacts. Ongoing ground disturbance could reveal previously unrecorded archaeological sites that are associated with TCPs.

Visual degradation of settings associated with cultural resources could result from the presence of utility-scale solar energy facilities and associated land disturbances. Visual changes could include the presence of rectangular solar arrays and structures. These could also include lighting, fencing, roads, vehicles, and workers conducting maintenance activities. These could affect cultural resources for which visual integrity is a component of sites' significance, such as Tribal sacred sites and landscapes, historic structures, trails, and historic landscapes.

Facility fencing and ongoing operations could impact access and travel paths traditionally utilized by Tribes for significant historic and cultural resources. This is most likely to impact TCPs, sacred sites, cemeteries, or precontact period archaeological sites where setting, feeling, and association are key aspects of the site.

4.13.3.2 Actions to avoid and reduce impacts

9 Mitigation would be done with engagement and in consultation with potentially affected Tribes and DAHP at the project level. Mitigation may be developed through consultation with affected Tribes as part of the SEPA process. Mitigation may also be developed under federal Section 106 of the National Historic Preservation Act. This is a separate, federal process.

Mitigation may not be possible for Tribal cultural resources. The PEIS should acknowledge this fact.

The following are some actions to avoid and reduce impacts of utility-scale solar facilities. See Appendix L, *Historic and Cultural Resource Report*, for typical mitigation measures that may be included in plans or permit conditions and additional measures that may apply for facilities.

Siting and design considerations

- Design and site projects to avoid to the maximum extent impacts on cultural and historic resources. Begin with the use of the DAHP predictive model, then refine through the development of site-specific environmental and cultural context and Tribal coordination.
- Contact potentially affected Tribes early in the siting process, ideally before land is acquired for a project or before permit applications are developed, and offer information relevant to Tribal technical staff to help identify potential impacts on Tribes.
- Consider potential impacts on Tribal treaty-reserved rights, Tribal reservations, off-reservation rights, trust lands, other Tribal-owned land, and other areas of significance to Tribes during project design and in siting decisions.
- Conduct a site-specific cultural survey to evaluate potential impacts in accordance with DAHP and federal requirements and guidance. Offer DAHP and cultural experts from potentially affected Tribes the option to help develop the survey strategy.
- Consider requiring a Tribal monitor for survey crews to provide input on TCPs, sacred sites, and culturally significant sites during site selection.
- Provide cultural resource survey results to potentially affected Tribes for early review.
- Use previously disturbed lands and lands determined by archaeological inventories to be devoid of historic properties to the maximum extent possible.
- In areas where homesteading was a prevalent historic activity, contact the local assessors and historic museums to determine if the area includes known homestead sites.

WADNR

1 DNR briefly reviewed each PEIS's land-use chapter to make sure items Uplands program has been tracking were addressed. In short, DNR does not see any issues from the PSL Clean Energy purview in the draft final versions of the attached land-use appendices. There is one suggestion, see the embedded comment on p. 43 of each PDF suggesting a brief, cosmetic edit in the references section of each document to clearly distinguish which Clean Energy references Ecology is citing

Appendix I: Land Use Resource Report

For Programmatic Environmental Impact Statement on Utility-Scale Solar Energy Facilities in Washington State

By

Anchor QEA

For the

Shorelands and Environmental Assistance Program

Washington State Department of Ecology

Olympia, Washington

September 2024

DEPARTMENT OF ECOLOGY
State of Washington

4 References

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2 DNR, 2024f. Clean Energy Parcel Screening Tool. Accessed April 2024. Available at: https://www.dnr.wa.gov/programsservices/product-sales-and-leasing/energy

ESA (Environmental Science Associates), 2024a. *Transportation Resource Report for Programmatic Environmental Impact Statement on Utility-Scale Solar Energy Facilities in Washington State.* Prepared for the Washington State Department of Ecology. September 2024.

Website is the PSL Clean Energy program's main external facing website, not the clean energy parcel screening tool, which is listed in the previous DNR, 2024e reference.

Appendix I: Land Use Resource Report

For Programmatic Environmental Impact Statement on Utility-Scale Onshore Wind Energy Facilities in Washington State

By

Anchor QEA

For the

Shorelands and Environmental Assistance Program

Washington State Department of Ecology

Olympia, Washington

September 2024

DEPARTMENT OF ECOLOGY
State of Washington

Website is the PSL Clean Energy program's main external facing website, not the clean energy parcel screening tool.

3 DNR, 2024e. Clean Energy Parcel Screening Tool. Accessed April 2024. Available at: https://www.dnr.wa.gov/programsservices/product-sales-and-leasing/energy.

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U.S. Department of the Interior

Attached please find the Department of the Interior's comments.

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
911 NE 11th Avenue, Suite 661
Portland, Oregon 97232

IN REPLY REFER TO:
ER24/0418
4111

October 25, 2024

Mark Daniel
Clean Energy Coordination
Department of Ecology
P.O. Box 47709
Olympia, Washington
mark.daniel@ecy.wa.gov

Subject: PEIS Utility-Scale Solar Energy Programmatic Environmental Impact Statement, Washington State

Dear Mr. Daniel,

The Department of the Interior (Department) has reviewed the PEIS Utility-Scale Solar Energy Programmatic Environmental Impact Statement, Washington State. The Department offers the attached specific comments for use in developing the final environmental impact statement for this project.

We appreciate the opportunity to comment. If you have any questions or concerns, please don't hesitate to contact me at (503) 720-1212.

Sincerely,

T. Allison Hall
Regional Environmental Officer

Document	Section	Page/para/ line	Comment
Draft Solar PEIS	2.5.3	Pg. 25	Appreciate description of water use for cleaning - given the aridity of the PEIS coverage area, suggest recommending manual/robot cleaning of panels for water conservation wherever practicable.
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	4.6.3.1	Pg. 85	Include bats in Migratory Species.
	4.6.3.1	Pg. 86	Description of operation impacts is missing potential collision mortality with panels themselves. Water-dependent avian species, such as grebes and loons, are known to collide with panels, presumably mistaking it for a water body. Recommend including this potential impact in the list of adverse effects.
	4.6.3.1	Pg. 86	Insects and bats may mistake panels for a water body due to their smooth acoustic surface (bats) and/or reflection (bats/insects), see comment above. Recommend including these impacts in the list of adverse effects.
	7.1	Pg. 182	Recommend revising first bullet on the Eagle Act as follows - "Bald and Golden Eagle Protection Act (USFWS): Prohibits the take of bald and golden eagles without prior authorization from USFWS. An Eagle Disturbance Take Permit may be needed for construction activities near nesting sites. A Power Line Incidental Take Permit may be recommended for collision and electrocution take associated with operation of a facility's power lines."
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United States Department of the Interior

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Office of Environmental Policy and Compliance
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Portland, Oregon 97232

IN REPLY REFER TO:
ER24/0419
4111

October 25, 2024

Mark Daniel
Clean Energy Coordination
Department of Ecology
P.O. Box 47709
Olympia, Washington
mark.daniel@ecy.wa.gov

Subject: PEIS Utility-Scale On-Shore Wind Energy Programmatic Environmental Impact Statement, Washington State

Dear Mr. Daniel,

The Department of the Interior (Department) has reviewed the PEIS Utility-Scale On-Shore Wind Energy Programmatic Environmental Impact Statement, Washington State. The Department offers the attached specific comments for use in developing the final environmental impact statement for this project.

We appreciate the opportunity to comment. If you have any questions or concerns, please don't hesitate to contact me at (503) 720-1212.

Sincerely,

TRISHA HALL

Digitally signed by TRISHA HALL
Date: 2024.10.25 07:04:59 -07'00'

T. Allison Hall
Regional Environmental Officer

Document	Section	Page/para/ line	Comment
Draft Wind PEIS summary	4.6.1.1	Pg. 81	Recommend including the Teradapt Spatial Priorities mesic habitat map to accompany these figures. Having the sole xeric map without it's accompanying "wet" habitat map provides incomplete picture of two of many important habitats within eastern Washington. The mesic model also does an excellent job delineating potential winter habitat areas for Columbian sharp-tailed and greater sage grouse. There is a greater sage grouse spatial priorities map that would be helpful to include within this section as well.
Draft Wind PEIS	2.2	Pg. 9	Update image to include calculation of aerial acres of rotor-swept area per turbine size.
	2.2.1.1	Pg. 14	Update tower and wind turbine blade sections to better account for projected technologies and include the aerial acres of rotor-swept area per turbine size.
	Biological Information (Table 3)	Pg. 15	A new Periodic Status Review for Pygmy Rabbit in Washington was released in 2024. Recommend citing and linking to this report over the 2018 report which does not address recent habitat losses and population declines due to wildfire.
	4.6.3	Entire	Resolve with comments made in App E for bats.
	4.6.3.1	Pp. 88-89	Edit throughout dEIS and App E for bats: Most publicly available studies estimate between three to five bird fatalities per MW per year **but can vary greatly by site, with some sites reporting more than 30 bats per MW per year while others closer to 1 bat per MW per year.** (from p. 14 of the in-line link provided). https://www.nwf.org/-/media/Documents/PDFs/NWF-Reports/2019/Responsible-Wind-Power-Wildlife.ashx
Draft Wind PEIS App. E Biological Resources Report	3.2.1.2	Pg. 19	Suggested edit in bold: Bats utilize snags, trees, crevices in rocks, **talus**, tunnels, buildings, bridges, caves, and mine shafts for roosting or hibernation.
	3.2.1.6.2	Pg. 24	Recommend including the Teradapt Spatial Priorities mesic habitat map to accompany this figure. Having the sole xeric map without its accompanying "wet" habitat map provides an incomplete picture of two of many important habitats within eastern Washington. The mesic model also does an excellent job delineating potential winter habitat areas for Columbian sharp-tailed and greater sage grouse. There is a greater sage grouse spatial priorities map that would be helpful to include within Appendix E as well.

	3.2.2.2.3	Pg. 28	Powerlines from dams on the Columbia River have already set up an electricity grid through historic greater sage grouse breeding (leking) areas that has severely impacted breeding success (e.g., raven habitat, noise, stress) and resulted in reduced population numbers. While Appendix E does mention habitat degradation, loss, and further fragmentation, it fails to address the compounding interacting factors the existing power grid has on these birds. What's missing is how increasing renewable energy infrastructure, particularly in Douglas County where many sites have had siting studies and these birds are spatially constrained due to the current energy infrastructure, effects will be more concentrated than in other areas. It is understood that such considerations will be given when siting potential wind projects, but worth mentioning just how important this consideration is for this species.
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Washington Dept of Fish and Wildlife

1 The Washington Department of Fish and Wildlife provided many comments and edits to various versions of the PEISs prior to the public release. We appreciated those opportunities provided by the Department of Ecology and would like to commend the Department on the effort it took to prepare the PEISs. We had intended to submit comments by the end of today and will submit comments to you by Friday November 1. Thank you

United States Department of the Interior

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October 25, 2024

Mark Daniel
Clean Energy Coordination
Department of Ecology
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Olympia, Washington
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Date: 2024.10.28 15:14:46 -07'00'

T. Allison Hall
Regional Environmental Officer

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U.S. Department of the Interior

The Department of the Interior provides updated comments on the Solar energy PEIS.

United States Department of the Interior

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October 28, 2024

Mark Daniel
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Department of Ecology
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Olympia, Washington
mark.daniel@ecy.wa.gov

Subject: PEIS Utility-Scale Solar Energy Programmatic Environmental Impact Statement, Washington State

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Sincerely,

TRISHA HALL

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Coded Comment Record: Organizations

CFACT

Attached please find Comments of David Wojick, Ph.D. for CFACT on the Washington Department of Ecology "draft PEIS for wind and solar" regarding the potential impact of grid scale battery fires

Comments of David Wojick, Ph.D. for CFACT on the Washington Department of Ecology "draft PEIS for wind and solar" regarding the potential impact of grid scale battery fires

Submitted October 26, 2024

1 The wind and solar PEIS address the very serious issue of spontaneous fire in the huge battery complexes that often accompany wind and solar projects.

In particular section 3.6.1.1 of appendix G in both PEIS says this:

"*WAC 51-54A-0322 includes requirements for storage of lithium-ion and lithium metal batteries. Permits are required when more than 15 cubic feet of most battery types are accumulated. A fire safety plan is required and must include emergency responses to be taken upon detection of a fire or possible fire. Where required by the fire code official, a technical opinion and report complying with Section 104.8.2 should be prepared to evaluate the fire and explosion risks associated with the storage area and to make recommendations for fire and explosion protection. The report must be submitted to the fire code official and should require the fire code official's approval prior to issuance of a permit. In addition to the requirements of Section 104.8.2, the technical opinion and report should specifically evaluate the potential for deflagration of flammable gases released during a thermal runaway event.*"

Unfortunately it is highly likely that this regulation does not apply to wind and solar battery complexes. It covers battery storage while these complexes are batteries in use. Thus they are likely exempt under this exception listed in section 322.1:

"*2. New or refurbished batteries packed for use with the equipment, devices, or vehicles they are designed to power.*"

In this case the equipment being powered is the grid, including stabilization.

It appears that this regulation is either not applicable to wind and solar battery complexes or it is being ignored. In either case this raises the reasonably likely impact of a huge multi-battery fire. That impact needs to be properly assessed, not just mentioned in passing as these draft PEIS seem to do.

An example may be helpful. I recently wrote an article on the desperate national need for standards of design and emergency preparedness for grid scale battery complexes. The title is "*Grid scale battery fires loom large*."

By coincidence my example is the Washington State wind-solar-battery project at Horse Heaven. Lax permitting of a very dangerous project is my focus.

Here is the relevant excerpt :

"*Now let's turn to permitting these facilities where I have another example that speaks volumes. This is a facility that just got permitted by Washington State. It is a combined wind, solar and battery project with a proposed storage capacity of 300 MW.... It might have 200 huge lithium battery units. That number is not disclosed.*

The project is named the Horse Heaven Wind Farm despite its massive solar and battery components. The name, usually shortened to Horse Heaven, is truly ironic because it will be no place for horses. Horse Hell might be better.

The permitting authority is the Washington Energy Facility Site Evaluation Council or EFSEC for short. The permit is called a Site Certification Agreement or CSA and Horse Heaven just got one, with a big push from the Governor.

The astounding point is that there was no discussion, or even recognition, of the fire threat posed by this enormous lithium battery facility. The CSA has numerous requirements for lots of issues, big and small, right down to the facility having water to keep the road dust down. There is nothing on having a million or so gallons to prevent a catastrophic conflagration, nor on the environmental impact of such.

This is wildfire country so there should be liability insurance for harm to others from a fire. Other potential sources of harm are huge amounts of contaminated water runoff as well as toxic air emissions, especially if the whole facility burns.

This neglect no doubt flows from the Horse Heaven Application. The App is over 500 pages long and I can find just one sentence about battery fires. Buried in a long paragraph on PDF page 366 we read "Lithium-ion battery storage may pose a risk of fire and explosion due to the tendency for lithium-ion batteries to overheat."

This single sentence does not even refer to the project. For that matter there are only a few paragraphs about the battery facility in the entire App, mostly just describing it in general terms. There is nothing about the number of giant battery containers or that it is a huge project in its own right, posing an equally huge fire threat. In fact the App says they might double deck these container sized battery units which is absurd given the risk of setting off a chain reaction in the whole complex.

One can easily think from the Application that the batteries are of no significance and that appears to be exactly what has happened at the EFSEC.

This systematic neglect looks to be what is happening around the country. We desperately need a national code or standard covering this issue. The National Fire Protection Association says it is working on one, but it is up to the permitting authorities to make something happen.

The growing threat of grid scale battery fires is a very serious issue calling for equally serious action."

See https://www.cfact.org/2024/10/01/grid-scale-battery-fires-loom-large/

To continue, Horse Heaven is in dry, wildfire prone country and I have read that 100,000 people live within 5 or 6 miles of it. Clearly there is a real threat of enormous property damage and even loss of life if a battery fire gets out of control. This potential impact needs to be included in the PEIS assessment as it is likely to be true for many battery complexes throughout much of the State. Most of the State is dry.

I therefore recommend as follows:

Washington State needs to quickly promulgate and enforce fire safety regulations specifically for grid scale battery complexes. These should cover emergency planning and preparedness, where the latter includes both facility design and material readiness. Design includes container spacing and other necessary engineering features. The material readiness includes having a supply and delivery system for water and/or fire suppressants as needed to prevent a chain reaction of container fires.

2 In closing I disagree with the PEIS statements that grid scale battery fires are "very rare" as this makes it sound like the threat is not serious which it surely is. There are relatively few battery complexes in America yet there have been a significant number of fires. See for example https://www.firetrace.com/fire-protection-blog/us-has-suffered-second-highest-number-of-major-storage-fires

A large number of grid scale battery complexes are presently proposed for Washington State and the scale of the threat is correspondingly enormous.

I am happy to discuss any of the above issues or to provide additional information.

Respectfully submitted,

David Wojick, Ph.D., exPE

Policy analyst and advisor to CFACT
https://www.cfact.org/
Committee For A Constructive Tomorrow

Conservation Northwest

Please accept our comments submitted by mail in hard copy.

1 We strongly support the conclusions of the PEIS that to several species in the Columbia plateau, expansion Utility Scale Solar in any shrub-steppe native habitats will be terminal to the local populations.

We immensely appreciate the consideration of Appendix Q, as this is the only opportunity for the people and government of Washington state to diminish cumulative impacts that will significantly effect the landscape into the future.

Renewable Northwest

Please see attached file.

October 28, 2024

Mark Daniel
Senior Planner
Clean Energy Coordination Section
Department of Ecology
P.O. Box 47709
Olympia, WA 98504-7709

Re: Renewable Northwest's comments regarding the Draft Programmatic Environmental Impact Statements for Utility-Scale Onshore Wind Energy Facilities and Utility-Scale Solar Energy Facilities

Dear Mr. Daniel:

Renewable Northwest ("Renewable NW") thanks the Washington State Department of Ecology ("Ecology") for the opportunity to comment on the agency's Draft Programmatic Environmental Impact Statements (PEIS) for Utility-Scale Onshore Wind Energy Facilities and Utility-Scale Solar Energy Facilities in Washington State. Renewable NW is a regional, non-profit renewable energy advocacy organization, dedicated to decarbonizing the region by accelerating the transition to renewable electricity. Our members are a combination of renewable energy businesses and environmental and consumer groups.

Ecology's comment submittal website states, "Comments on one document will be considered for the other, so you only need to make comments once." Renewable NW would like to note that due to the short review window, we have not been able to review both PEIS documents. The comments in this letter are based on our review of the Wind PEIS, but also apply to the Solar PEIS. Overall, the PEIS development process requires additional time and research, especially to establish greater certainty regarding the applicability of mitigation measures and how project-specific State Environmental Policy Act (SEPA) analyses will tier to the PEIS. As Renewable NW is actively involved in reviewing and providing feedback on the updated Washington Department of Fish and Wildlife (WDFW) Guidelines, which will be included in the Final PEIS, the one-month window to review both the WDFW Guidelines and the Draft PEIS documents limits our ability to conduct a complete review of the Draft PEIS and provide detailed technical comments. We propose extending the Draft PEIS comment deadline to ensure adequate engagement with all interested parties. Additionally, we request that Ecology provide a

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comprehensive summary of all stakeholder comments and how they were incorporated into the Final PEIS.

The following sections provide general feedback on the use and process for the PEIS, as well as the identification of impacts and proposed mitigation measures presented in the Draft PEIS. The identified areas of controversy and uncertainty within the PEIS Summary document, along with their resolutions, are also addressed.

Use and process

In its current form, the Draft PEIS lacks clarity on its intended use for the renewable energy industry and decision-makers.

2 The Draft PEIS states that it is intended to help developers identify suitable sites, design projects, and develop mitigation plans. While it assesses potential environmental impacts and provides a list of potential mitigation measures, it is not clear how industry members and decision-makers are supposed to apply this information to specific projects. For example, the Draft PEIS indicates that future SEPA analyses for specific wind energy projects will tier to it. The Draft PEIS also states that each agency is tasked with determining which PEIS elements are relevant to a proposed project and addressing project circumstances and potential impacts not covered in the PEIS. Renewable NW requests that Ecology please provide a clearer explanation of the tiering process and how an agency would assess a proposed project against elements in the PEIS and determine the areas of applicability.

3 Further, the Draft PEIS identifies potential significant environmental impacts of utility-scale onshore wind energy projects in a high-level, qualitative manner. This makes it challenging to compare a project's potential impacts to the PEIS's findings, or to determine how a project might be covered within the scope of the PEIS. We request that Ecology please provide clarification on how agencies will evaluate the relationship between specific project impacts (measured quantitatively) and the general qualitative impact assessments in the PEIS.

The Draft PEIS states in Section 1.1 (PEIS Overview) that it provides information to help avoid or minimize environmental impacts and identify high-level potential mitigation measures. The Draft PEIS also suggests that developers use these measures as a reference for creating mitigation plans. However, it is unclear if agencies will *require* any of the listed mitigation measures. It is also unclear how developers should select from the extensive lists of mitigation activities, and if there would be potential penalties or risks associated with not following the PEIS for mitigation

4 planning. Renewable NW requests that Ecology clarify whether the mitigation measures in the PEIS are recommendations or requirements, how developers should follow mitigation measures in the PEIS for mitigation planning, and how PEIS mitigation measures will differ from (or add to) the mitigation measures identified during project-specific SEPA analyses. This information would help developers understand their obligations and plan accordingly.

According to RCW 43.21C.535, the PEIS should include maps identifying significant adverse environmental impacts.[1] While environmental conditions are depicted in maps in the appendices, there do not appear to be maps showing significant adverse environmental impacts or areas that may require additional mitigation measures. We request Ecology clarify if the significant adverse impacts maps are included in the Draft PEIS, or if they will be included in the Final PEIS. If the latter, Renewable NW requests that these maps be circulated for public review, prior to publishing them as final. Also, per RCW 43.21C.535, the Final PEIS is expected to be published by June 30, 2025, and its findings will be used by the interagency clean energy siting coordinating council to make recommendations for clean energy zones to the legislature and the governor. The council and clean energy zones are not discussed in the Draft PEIS, nor is it explained how the council will use the PEIS to inform its decision. Renewable NW requests that Ecology explain if and/or how the council will use the Final PEIS to develop clean energy zones. Further, please explain how the "Ecology designated" clean energy zones will interplay with existing local land use planning, including city and county comprehensive plans and existing zoning.

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Impact identification and mitigation measures

The Draft PEIS does not provide consistent actionable guidance on how impacts should be analyzed, how mitigation measures should be selected, and how the implementation of mitigation measures reduces impacts.

7 Section 4.6.3.2 of the Draft PEIS states that the mitigation guidelines being developed by WDFW will be incorporated into the Final PEIS. Renewable NW has submitted significant comments on WDFW's draft mitigation guidelines, which may necessitate further collaboration and review among stakeholders. Consequently, there is a possibility that the WDFW mitigation guidelines may not be finalized or ready to be incorporated into the Final PEIS by the publication deadline. As currently written, the draft WDFW guidelines may not provide agencies with clear criteria to determine whether impacts from wind and solar energy projects have been reduced to less than significant levels. Additionally, WDFW has indicated that its guidelines are intended to be used as nonregulatory recommendations, which might limit their suitability as SEPA decision criteria in the PEIS. In light of these concerns, we request that Ecology and WDFW conduct additional consultation with stakeholders to ensure that the WDFW mitigation guidelines are predictable and appropriate. Furthermore, we seek clarification on how the WDFW guidelines will be integrated into the SEPA process prior to their inclusion in the Final PEIS.

8 Section 4.9 (Noise and Vibration) in the Draft PEIS is the only section that provides quantitative thresholds for significant and non-significant impacts. It would be beneficial to have similar

[1] "Final nonproject environmental review documents for the clean energy projects identified in subsection (1) of this section, where applicable, shall include maps identifying probable, significant adverse environmental impacts for the resources evaluated. Maps must be prepared with the intention to illustrate probable, significant impacts, creating a tool that may be used by project proponents, tribes, and government to inform decision making. The maps may not be used in the place of surveys on specific parcels of land or input of a potentially affected federally recognized Indian tribe regarding specific parcels" (RCW 43.21C.535).

quantitative thresholds for all evaluated resources to allow for better comparison and understanding of potential project impacts. Moreover, it would be beneficial to link specific mitigation measures to significant impacts that could be required or recommended, in order to reduce the impact to less-than-significant.

9 For clarity, Renewable NW recommends Ecology include a comprehensive summary table that outlines all resources, impacts, and corresponding mitigation measures, and whether those measures are required or recommended. As written, the Draft PEIS is confusing in that it lists the same resource impacts as both significant and non-significant.

10 The Draft PEIS identifies several resources that will have less than significant impacts as long as the laws, permits, and avoidance actions are followed (e.g., Earth Resources, Air Quality and Greenhouse Gases, Water Resources, Energy and Natural Resources, and Transportation). However, the same resource sections include additional mitigation actions for reducing impacts. Please identify if the additional mitigation actions in these sections are proposed in addition to those analyzed in the impacts analysis, or if they were included in the impacts analysis.

Similarly, the Key Findings summaries for multiple resources (e.g., Sections 4.6 [Biological Resources], 4.8 [Environmental Health and Safety], 4.9 [Noise and Vibration], 4.10 [Land Use], 4.11 [Aesthetics/Visual Quality], 4.12 [Recreation], and 4.15 [Public Services and Utilities]) are confusing in that impacts are identified to be less than significant if laws, permits, and avoidance actions are adhered to. However, the same analyses also state that significant impacts are anticipated in specific scenarios, presumably while the laws, permits, and avoidance actions are
11 being followed. Renewable NW requests that Ecology clarify how impacts are mitigated through complying with laws, permits, and avoidance actions. Please also specify when significant impacts could be expected despite adherence to laws, permits, and avoidance actions.

Additionally, several Key Findings summaries (e.g., Sections 4.2 [Environmental Justice and Overburdened Communities], 4.6 [Biological Resources], 4.8 [Environmental Health and Safety], 4.10 [Land Use], 4.11 [Aesthetics/Visual Quality], 4.12 [Recreation], and 4.15 [Public Services and Utilities]) are unclear in the relationship between proposed mitigation measures and potential impacts. The logic is presented as: *if the project implements X, impacts would be less than significant; conversely, if the project causes Y, the impacts would be significant*. The connection between implementing X and causing/reducing Y is not clearly established. In other words, it suggests that impacts could be reduced to a less-than-significant level through specific mitigation, but doesn't definitively link the mitigation measures to the actual reduction of significant impacts. We
12 recommend Ecology explain in each section how implementing the proposed mitigation measures will reduce potential impacts, and when mitigation measures are required versus recommended. For example, "*If X mitigation measures are implemented, then no significant impacts are expected.*"

13 Section 4.3 (Earth Resources) states that construction and decommissioning of facilities would likely result in less than significant impacts on soil resources. However, agriculturally important

soils are not evaluated. We recommend adding an analysis on impacts to agriculturally important soils.

14 The Key Findings piece in Section 4.9 (Noise and Vibration) provides helpful quantitative thresholds for significant impacts, but then ends by stating, "No significant and unavoidable adverse impacts related to noise and vibration would occur." This discussion is unclear, and we recommend explaining how the last statement was determined.

15 Not all mitigation actions listed in the appendices are included in Chapter 4 (Affected Environment, Potential Impacts, and Mitigation). Please provide clarity on why certain measures are included in Chapter 4, and some are not. Further, reviewing each appendix individually to identify the mitigation measures proposed by Ecology is challenging. Renewable NW recommends consolidating all mitigation measures into a single, easily accessible section.

Lastly, the order of resources evaluated in Chapter 4 (Affected Environment, Potential Impacts, and Mitigation) does not align with the order of resource reports in the appendices. We recommend aligning the appendices in the same order as Chapter 4.

Ecology-identified areas of controversy and uncertainty

The PEIS Summary document acknowledges areas of controversy and uncertainty, as shown below. While the Draft PEIS addresses these issues to an extent, it lacks specific analyses and thresholds for determining significance and resolving impacts.

16 **Land use:** Agricultural groups have expressed concern that wind energy projects reduce critical agricultural lands. This is evaluated in Section 4.10.

- While Section 4.10 (Land Use) discusses land use impacts, it fails to provide a detailed analysis of the potential effects on critical agricultural lands.
- *Appendix B. Earth Resource Report* discusses the types of activities that could lead to impacts and high-level mitigation measures for wind development combined with agricultural land use. However, it does not identify if impacts would occur to co-located agricultural lands or agricultural lands that are displaced by wind development.
- Similarly, *Appendix I. Land Use Resource Report* identifies and defines prime farmland, but does not analyze how prime farmland would be impacted by wind development.

17 **Visual quality:** People have shared concerns that rural landscapes are adversely impacted when wind energy projects are constructed. This is evaluated in Section 4.11.

- Although Section 4.11 (Aesthetics/Visual Quality) addresses the overall visual impact of wind energy projects, it lacks established thresholds for determining when these impacts become significant.

18 **Wildfire risks and emergency response:** There is concern about increased fire risks and adequacy of available response resources for wildfires related to wind energy projects and battery energy

storage systems. This is evaluated in Section 4.8 and Section 4.15.

- Sections 4.8 (Environmental Health and Safety) and 4.15 (Public Services and Utilities) examine wildfire risks and emergency response, but they do not provide specific parameters for assessing the level of risk associated with these projects, making it difficult to evaluate the potential for hazards.

19 **Cumulative impacts:** Communities, Tribes, and interested parties have raised concerns about cumulative impacts related to developing multiple energy projects in the same area. Chapter 5 describes trends and potential cumulative impacts.

- Chapter 5 (Cumulative Impacts) discusses cumulative impacts, but it fails to provide clear significance determinations and leaves this concern unresolved.
- While *Appendix Q. Cumulative Impacts Report* identifies actions that could lead to cumulative impacts, it does not provide the likelihood or significance of impacts. It also states that cumulative impacts can be avoided or minimized through siting, design, permitting, and implementation of mitigation measures and best practices, but does not state how implementation of these measures would lessen impacts.

To adequately address these concerns, we request that the PEIS should provide more detailed analyses, establish clear thresholds for determining significance, and offer specific mitigation measures to address potential impacts.

We appreciate the opportunity to provide feedback on Ecology's Draft PEIS for utility-scale wind and solar, and we look forward to continued dialogue on developing these important documents.

Sincerely,

Kate Brouns
Washington Policy Manager
Renewable Northwest
kate@renewablenw.org

Audubon Washington

Please see attached file for Audubon Washington's comments on the draft PEISs for onshore wind and utility-scale solar.

Audubon | WASHINGTON

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October 28, 2024

Diane Butorac
Clean Energy Section Manager
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

RE: Draft Programmatic Environmental Impact Statements (PEISs) on Utility-Scale Solar and Onshore Wind Energy Facilities in Washington State

Dear Diane Butorac,

This comment letter is submitted on behalf of Audubon Washington ("Audubon"), a state field office of the National Audubon Society. The letter is in response to the request for comments on the Draft Programmatic Environmental Impact Statement (PEISs) on Utility-Scale Solar and Onshore Wind Energy Facilities in Washington State ("Draft PEISs").

Audubon supports the build-out of renewable energy infrastructure to support Washington's Clean Energy Transformation Act and its commitment to an electricity supply free of greenhouse gas emissions by 2045. Audubon's climate science shows that two thirds of North American birds are at risk of extinction if we don't limit warming associated with climate change (Bateman et al. 2020). Recent science also shows us what many bird enthusiasts know intuitively - there are 3 billion fewer birds in North America than there were 50 years ago (Rosenburg et al. 2019). We and our nearly 50,000 members and 25 affiliated chapters across the state care deeply about Washington's lands and waters, and the birds and people that depend on it.

Audubon works across the policy, planning, and project realms to support the build-out of renewable energy infrastructure that is aligned with our values related to biodiversity, landscape resilience and equity, diversity and inclusion, including Tribal interests, treaty rights and resources.

The PEISs are a central piece of our state's commitment to transitioning to clean energy while also protecting and enhancing biodiversity. The authorizing legislation (HB 1216) envisioned the PEISs being used to inform recommendations to the legislature on the creation of clean energy preferred zones for streamlined development. To that end, our expectation was that the draft PEISs would evaluate a range of alternatives that reflect full clean energy build-out scenarios across varying degrees of environmental impact, associated mitigation, and cumulative impacts.

Additionally, the Department of Ecology website states that "the information in the PEIS is intended to help a developer identify a suitable project site, design a project, and submit a proposal that has

considered potential environmental impacts. It can also help a proponent develop a mitigation plan designed to reduce potentially significant impacts."

Upon review of the draft PEISs, we are concerned that neither the intent of the authorizing legislation (HB 1216) nor Ecology's intent to support and inform project development is being met. The following areas must be strengthened for the draft PEISs to contribute meaningfully to the responsible build out of renewable energy, namely:

- Adherence to legislative intent
- Information to inform site selection
- Potential impacts to environmental resources and mitigation measures

ADHERENCE TO LEGISLATIVE INTENT

The PEISs for onshore wind and utility-scale solar are required under RCW 43.21C.535, which was enshrined in law as part of House Bill 1216, passed in the 2023 legislative session. The intent of this legislation was to "enable more efficient and effective siting and permitting of clean energy projects with policies and investments that protect the environment, overburdened communities, and tribal rights, interests, and resources, including cultural resources; bring benefits to the communities that host clean energy projects; and facilitate the rapid transition to clean energy that is required to avoid the worst impacts of climate change on Washington's people and places."

1 In Section 302 (6) of this RCW, the legislature calls on Ecology to ensure the PEISs, "where applicable, shall include maps identifying probable, significant adverse environmental impacts for the resources evaluated. Maps must be prepared with the intention to illustrate probable, significant impacts, creating a tool that may be used by project proponents, tribes, and government to inform decision making."

In Section 302 (7) of this RCW, the legislature reiterates the importance of mapping in noting that the new interagency clean energy siting coordinating council, also created in HB 1216, "must consider the findings and make recommendations to the legislature and governor on potential areas to designate as clean energy preferred zones."

The Draft PEISs for onshore wind and utility-scale solar fail to achieve the intent of HB 1216, or the requirements the legislature clearly laid out.

INFORMATION TO SUPPORT SITE SELECTION

Ecology must take a more pro-active approach to incentivizing and guiding development towards low-conflict areas to ensure that renewable energy development does not undermine existing conservation efforts.

For example, as noted in our October 27, 2023 scoping comments, the shrubsteppe ecosystem of the Columbia Plateau is one of the most threatened ecosystems in Washington, and solar projects could lead to further habitat degradation and fragmentation. The State and interested parties such as

Audubon have invested considerable resources towards the protection and recovery of shrub-steppe habitat and species most recently through the WSU Least-Conflict Solar Siting project (Least Conflict) and Washington Shrubsteppe Restoration and Resiliency Initiative (WSRRI) Long-Term Strategy. These investments and associated mapping resources should be used to guide the identification of clean energy preferred zones, rather than simply inviting developers to consider consulting them.

2 The draft solar PEIS should direct project proponents to the WSU Least Conflict mapping products to inform site selection and should employ spatial information from WSRRI landscape priorities to both inform site selection and direct off-site mitigation to priority areas as defined in WSRRI, including "Core Protection Areas", "Growth Opportunity Areas", and "Corridors" (WSRRI 2024). County conservation priorities can be addressed using the WDFW Priority Habits and Species database and local critical areas ordinances.

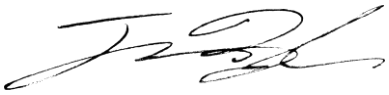
POTENTIAL IMPACTS TO ENVIRONMENTAL RESOURCES

3 The PEISs should clearly and consistently direct project proponents to the Washington Department of Fish and Wildlife (WDFW) wind and solar guidelines currently being updated for all stages of project development, including site selection, site design, assessment of potential environmental impacts, and avoidance and mitigation measures. In addition to WDFW's guidelines, the FWS Land-based Wind Turbine guidelines (USFWS 2012) and updated Avian Power Line Interaction Committee (APLIC) guidelines (APLIC and USFWS 2005; update pending) should be incorporated in the Onshore Wind PEIS.

CONCLUSION

A comprehensive final EIS for Onshore Wind and Solar Facilities that more clearly addresses HB 1216 legislative intent, directs project proponents to low impact areas, and underscores the importance of engaging with WDFW early and often is needed to support the advancement of responsible renewable energy siting in Washington. We ask that Ecology address these concerns in the final EISs for onshore wind and solar. **Together, we can lead the way in centering biodiversity, landscape resilience, community values and Tribal rights and resources in our renewable energy planning and siting decisions**. The health of Washington's lands, waters and people depend on it.

Sincerely,



Trina Bayard, Ph.D.
Interim Executive Director
Director of Bird Conservation

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October 28, 2024

Diane Butorac, Clean Energy Section Manager
Clean Energy Coordination
Department of Ecology
300 Desmond Dr SE, Lacey, WAY 98503

Re: Climate Solutions Comments on the Draft Utility-Scale Solar and Onshore Wind Energy Non-Project Environmental Impact Statements

Dear Diane Butorac,

Climate Solutions appreciates the opportunity to provide comments to the Department of Ecology ("the Department" or "Ecology") on its Draft Non-Project Environmental Impact Statements ("PEIS") for Utility-Scale Solar and Onshore Wind Energy. Climate Solutions is a clean energy nonprofit organization working to accelerate clean energy solutions to the climate crisis and we are deeply invested in the development of resources like the PEIS, which can support Washington in building clean energy and reaching our state climate mandates in an equitable and efficient way.

RCW 43.21C.535, which directs Ecology to develop a PEIS for utility-scale onshore wind and solar was a critical piece of ES2HB 1216. The bill intends to improve Washington's clean energy siting processes through improved interagency coordination, streamlined permitting, and upfront planning, coordination, and outreach. The PEISs can support all three aims if implemented successfully.

The PEISs are to be used during the evaluation of a specific project and have the potential to help the state, project applicants, and interested parties identify potential impacts at the *start* of a project's development and the potential approaches to avoiding, minimizing, and mitigating those impacts. In fact, through the inclusion of maps, the PEIS documents could help project applicants avoid sensitive lands all together.

We were glad to see that Ecology expanded the size of projects to be considered since the scoping period in 2023, and that the appendices appear to be thorough and generally cover the full scope of resources to be assessed as required by statute. However, we are concerned that the drafts, in their current form, are insufficient. To ensure that these documents are useful, include all of the required elements per statute, and provide clear guidance on addressing impacts, we offer the following comments.

Recommendations

1 **I. Make clear the interaction between impacts and mitigation options, delineate mitigation options between those that avoid, minimize, or fully mitigate impacts, and consider opportunities for including more specificity in the Key Findings sections.**

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The PEISs note that "agencies must use the information in the PEIS, along with other publicly available information and site-specific details, to support their evaluation of proposed actions, alternatives, environmental impacts, or mitigation for a proposed project." This means that these analyses will be considered for most utility-scale solar and wind project proposals in the state going forward. So it is incredibly important that the steps towards mitigating impacts of these technologies on each resource are clearly laid out and easy to reference. However, we are concerned that the draft language is not clear enough and could lead to different stakeholders and rightsholders having different interpretations of what is or is not needed to mitigate impacts and how to ensure impacts are not significant.

2 We have identified several opportunities to make both PEISs clearer and more straightforward. Currently, impacts are listed in one section, followed by a separate section of mitigation options. This segmentation may make it more difficult for agencies and project applicants to assess which mitigation options are meant to address which impacts. Ecology could make the link between impact and mitigation options more explicit by listing mitigation options directly underneath the impacts they are intended to address. Ecology could also include a table summarizing all impacts and all potential mitigation measures for each resource section, with a final table summarizing all resource impacts and mitigation measures in one.

3 Additionally, it is not consistently clear whether a certain action would avoid, minimize, or completely mitigate a potential concern. Ecology should delineate between these three where possible.

4 Finally, the "Key Findings" at the start of each section seem too broad and vague to be useful. Most include statements such as "through compliance with laws and permits, and with implementation of actions that could avoid and reduce impacts [x activity] would likely result in less than significant impacts" (see Section 4.4 in the Utility-Scale Wind PEIS as example). We recognize that this broad language is used because the specific laws and actions would differ from project-to-project. But to the extent possible, it would be useful for the Department to offer some degree of specificity.

5 **II. The PEISs are intended to include maps that highlight probable, significant adverse impacts per statute. If Ecology plans to include maps in its final product, the Department should plan to share a draft and solicit feedback.**

RCW 43.21C.535 states that, where applicable, the PEISs shall include maps identifying probable, significant adverse environmental impacts for the resource evaluated. The current PEIS drafts do not include maps nor make any mention of maps demonstrating impacts. These maps have the potential to make for a tangible change in where projects are sited in Washington and could both encourage and support – without requiring – project applicants as they seek geographic areas for projects that are not associated with probable, significant adverse environmental impacts.

We recognize that the Department may need additional time to produce maps as part of the drafting process to ensure thorough engagement and consultation with Tribes and account for

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sensitive information around tribal cultural resources. We support the Department as it takes the appropriate time needed to do so. Given these considerations, Ecology should consider sharing an additional draft that includes maps and solicit feedback. At minimum, we request that the Department share its process for developing these maps.

6 This will be critical too as the Clean Energy Siting Council ("the Council") is directed under RCW 43.21C.535 to make recommendations on clean energy preferred zones based on the results of this analysis and its maps. However, the PEIS makes no mention of this concept and how it could be applied based on the findings. We recommend including some degree of analysis around the concepts of zones to support the Council's determination.

III. Expand area of study beyond current limitation of land within 25 miles of transmission, including considerations for planned transmission expansion.

7 The study area in each PEIS is limited to geographic areas within 25 miles of existing transmission lines that can handle the energy generation of utility-scale facilities. However, we are concerned that this unnecessarily limits the area of study and could risks unintentionally excluding viable, low-conflict land—especially as the transmission landscape is likely to dramatically shift over the next decades to meet our clean electricity needs. For example, the Bonneville Power Administration alone is planning for at least eight expansion projects over the next ten years. At minimum, we urge the department to include planned corridors for transmission capacity construction, reconstruction, or enlargement per RCW 43.21C.535.

8 We also encourage Ecology to coordinate closely with the Energy Facility Siting Evaluation Council's state-wide transmission PEIS process. The results of each PEIS can and should be mutually beneficial. The utility-scale solar and wind PEISs could showcase where the greatest need for future transmission lines may be while the transmission PEIS can illustrate likely corridors and ideal types of land for new transmission lines in the state.

9 IV. Consider offering an additional public comment period in tandem with an updated draft that includes a map.

Given the potential significance of these environmental impact studies, we were disappointed that the Department offered just 30 days to provide review on both documents, which are each over 200 pages not considering the in-depth appendices accompanying them. To ensure these documents serve their intended purpose and that the Department has integrated feedback, we urge Ecology to offer an additional comment period—especially if the Department intends to include maps in its final product. We believe there will be sufficient time for an additional draft and comment period given the deadline of June 30, 2025.

Again, we appreciate the opportunity to comment on the draft nonproject environmental analyses for both utility-scale onshore wind and solar. We request that the Department provide responses

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to public comments to ensure receipt and consideration of recommendations. We look forward to continuing to work with Ecology as it implements the critical work of ES2HB 1216.

Sincerely,

Altinay Karasapan
Washington Regulatory Policy Manager
Climate Solutions

Conservation Committee of the Blue Mt Audubon Society

Please see the attached BMAS Conservation Committee comments. Thank you.

We appreciate Washington State, the Department of Ecology, and all parties involved in compiling this helpful SEPA draft PEIS for utility-scale solar development. Utility-scale solar is needed in WA, and we fully support development of solar energy development, where appropriate. This PEIS is very much needed to help guide solar development to sites that have the least conflicts with high value farmland, ranchland, and areas that have moderate or high value for conservation of native species and ecosystems. Thank you very much for your work.

There are two significant deficiencies in this PEIS because it minimizes the value of the results of the WSU Least-Conflict Solar Siting report and interactive mapping for the Columbia Plateau, and it tends to ignore or minimize the adverse effects of land use changes on native species and functioning natural ecosystems, open space, recreation, etc.

The Washington State legislature directed and funded the Washington State University (WSU) Energy Program to produce the Least-Conflict Solar Siting (Least Conflict) pilot project with the goal of identifying areas where there would be the least amount of potential conflict in the siting of utility-scale solar photovoltaics (solar PV) developments. A summary from the resulting report states that with bipartisan support, the project was included in the 2021 biennium budget, and completed by June 30, 2023. This was a collaborative effort with WDFW, DNR, Audubon Washington, and many others, over the course of about a year. The Proviso deliverables include a report and mapping system highlighting areas with the least amount of potential conflict between potential solar development sites, farmlands, ranchlands, and conservation lands in the Columbia Plateau.

That report found suitable solar development areas were mapped based on good terrain (aspect, slopes up to 8%, and substrate type), low hazards (earthquake and fire risk), close proximity to infrastructure (power grid and substations within 10 miles, and roads within 5 miles), plus exclusions for cities, protected areas, etc. Approximately 83% of the mapped Columbia Basin was considered moderately high to very high for solar development, when not accounting for areas of potential conflict with moderate and high value farmland, ranchland, and conservation lands.

The Columbia Plateau region study area has approximately 14,242,020 acres (not including Tribal reservations). Over 6,777,000 acres were deemed to have high suitability for solar development, and even more were deemed moderately suitable. Of the total study area acreage, just under 212,000 acres – approximately 1.5% of the study area – were deemed low conflict for environmental conservation, farmland, and ranchland, and ranked *"very high," "high,"* and *"moderately high"* for solar development suitability. Low-conflict environmental conservation lands and moderate-conflict ranchlands and farmlands with the same level of solar suitability as the previous example, yields 1,561,700 acres, or 11% of the total study area. More combinations with different suitability and conflict levels can be produced in the mapping programs.

1 The PEIS for utility-scale solar development mostly ignores or minimizes the value and usefulness of the Least-Conflict report and its associated interactive mapping program. In the PEIS for Utility-scale Solar, it states under 4.6.3.2 on page 88, "**Consider** use of the WSU Least-conflict Solar Siting maps and avoid areas identified as having high conservation values." This statement, which is repeated elsewhere in the draft PEIS, diminishes the high value of the Least Conflict report and mapping to help developers appropriately site utility-scale solar projects. The final PEIS should be recommending or strongly encouraging developers to use these very useful products early in their project siting and planning within the Columbia Plateau to help expedite solar development by minimizing conflicts. These comments also apply to the Appendix for Biological Resources.

This Least Conflict solar program and its potential usefulness for siting utility-scale solar in the Columbia Plateau should be emphasized and promoted in the PEIS. We urge you to emphasize and make the Least-conflict document and mapping a high priority for solar developer siting and planning within the Columbia Plateau.

Our concerns and comments regarding the lack of content on the adverse impacts of land use changes and land use construction on anything other than commercial uses of the lands are covered below under the subheading Land use. The PEIS currently mostly ignores the potential adverse effects on native species and habitats in the Land Use section and Land Use Appendix.

Our specific comments regarding various sections of the PEIS are shown below.

2 Figure 3-1 south of Highway 12, in Asotin County seems to be missing solar development potential between the town of Asotin and Anatone, WA. Please check that and explain why that area is not included on this map. It seems very odd that solar radiation north of the Snake River is included in the mapped area, but not south of the Snake River, south of the towns of Clarkston and Asotin towards Anatone.

3 4.6.1.1, page 78, first sentence – please add forbs to the list of examples of terrestrial plants because forbs are very important to maintain pollinators and many wildlife species.

4 4.6.1.2, page 81, second sentence – please include reptiles such as garter snakes, which are semi-aquatic.

5 4.6.3.2 Actions to avoid and reduce impacts, page 88, move to bullet 2, language such as "use the WSU least conflict report and mapping for planning solar projects within the Columbia Plateau" or "If considering or planning a solar development within the Columbia Plateau, it is advisable to use the WSU Least-Conflict Solar Siting Study and its maps to avoid areas identified as having moderate or higher conservation values." – either of which incorporates the existing bullet 7 here. Bullet 2, with the new language suggested, should be the second priority on the list for developers.

6 4.13 Recreation, Pg 138, second bullet

• "Informal recreation on public or private lands includes dispersed camping, wildlife viewing, backcountry driving, off-trail hiking, and shooting." This statement is missing foraging, wildflower viewing, biking, enjoying the view, etc. – and this is as common east of the cascades as in the cascades, although less concentrated. The previous statement about especially in the cascades shows a west-side bias and diminishes the high value of those activities east of the cascades.

7 Also, the bullet • "Water-based recreation is prevalent in rivers, reservoirs, and lakes. Wild and scenic rivers within the study area include the White Salmon River and Klickitat River, both located in the southern portion of the state." This statement should also point out the extremely popular Yakima River, and Snake and Columbia rivers, as other highly valued rivers in the area for water recreation.

8 4.10 Land Use – in the blue box findings – the last item - for potentially significant and unavoidable adverse impacts on natural resources **of long-term commercial significance** or rural character. This should clearly point out that significant and unavoidable adverse impacts for rural character include those associated with high value areas for natural landscapes and vegetation, open space, and fish and wildlife habitats, as well as undeveloped recreation. These comments also apply to the Appendix I for Land Use.

9 4.10.3.1 Impacts of Conversion of Existing Land use has a statement that is incomplete and seriously lacking. "Removing these lands, particularly those of high quality, from their resource uses would reduce the area available to continue producing agricultural, forestry and mining." This statement has a glaring lack of inclusion for concerns about land use changes reducing high value lands that currently serve as important wildlife habitat, and for maintaining native species and functioning natural ecosystems and open space, etc. Please include these natural or semi-natural lands as a significant concern about land use change adverse impacts, instead on solely focusing on commercial impacts.

10 Page 121 Findings. The statement that construction would have potential significant adverse impacts again only addresses resource lands of commercial significance that would be converted and ignores conversion of natural habitats and adverse effects on maintaining the natural environment (e.g. wildlife species and habitats, etc.). Without adding the impacts to natural habitats and species this statement has a glaring omission that must be fixed.

11 4.10.3.1 - Similarly, the construction and conversion of land uses ignored the adverse effects on rural character, which is only discussed for impacts of solar operations. Please include the adverse effects on rural character under construction and conversion of land uses, and point out that includes adverse impacts on native species and functioning ecosystems, and open space under rural character.

12 4.10.3.2 – Again, under siting and design considerations, the document has "**consider"** using the WSU least-conflict solar mapping. See our comments above and please modify this section to encourage use of the WSU Least-conflict report and maps, not just consider use.

Appendix E – Biological Resources

13 1.1.1, end of first paragraph, Terrestrial plants should include grasses, but please replace the term "herbs" with forbs, as herbs can be misleading to the general public.

14 3.2.1.2 – first sentence – should include shrublands or shrub-steppe and riparian vegetation.

15 3.2.1.3 – waterfowl habitat also includes small grain crops and grasses (e,g. think of geese feeding areas)

16 3.2.5.2.2 – Resident freshwater fish, page 40 – note that suckers have been documented migrating annually for long distances in WA and OR (e.g. Colden Baxter PhD Dissertation, Oregon State Univ.)

17 3.4.1.1 – last paragraph – Timing of construction can permanently deter some species from returning – such as disturbance during nesting season – and cause permanent site abandonment by some species of wildlife.

18 3.4.2.1 – Terrestrial Habitats, second paragraph, third sentence – is very speculative about greater effect on forested areas compared to grasslands and shrub-steppe. It is very difficult to return shrub-steppe and grasslands once they are disturbed because highly invasive weeds rapidly convert the vegetation, which is highly conducive to repeated fires, plus disturbed shrub-steppe is often converted to a different land use, and sagebrush does not naturally reestablish on a site readily.

19 3.4.4.1.1, page 66, 5th bullet – again, please change the word "consider" to **Use** the WSU Least Conflict maps to avoid areas identified as having moderate or higher conservation value in the Columbia Plateau. Shrub-steppe is a vegetative type and ecosystem that is highly imperiled and should be protected wherever possible. Or, we suggest that you change the sentence to: "If considering or planning a solar development within the Columbia Plateau, it is advisable to use the WSU Least-Conflict Solar Siting Study and its maps to avoid areas identified as having moderate or higher conservation values."

20 3.4.4.2.1 -page 68, fencing, second bullet – raise fencing from 4-6" that is shown in the document to at least 6 inches, or reference where less than 6" clearance under the fence is proven to be effective for allowing many or most small to medium mammals (e.g. foxes, jackrabbits, raccoons, etc.) adequate passage.

21 This appendix really needs a page that describes the results from the Least Conflict Solar Study lead by WSU, similar to the Least Conflict Solar description and table in Appendix I for Land Use; except this addition in Appendix E should focus on the results of that study regarding conservation lands of moderate and higher importance. Shrub-steppe is a habitat type/ecosystem of concern that is limited, diminishing, and imperiled.

22 **Appendix I Land Use Resource Report**

2.3 Impact Assessment, page 12, states that "significant impacts would occur if a facility would result in the following":

- "Actions would cause permanent conversion or changes to existing low-intensity uses (rural, agricultural or resource lands) and result in conflicts." It is important to clearly specify here what is included in rural and resource lands. Leaving that information until later (pages 23 and 30) is likely to cause some confusion and lack of understanding with this statement.

23 Page 15, USFS lands should include the WA portion of the Umatilla National Forest in the Blue Mts of southeastern WA, otherwise it is incomplete.

3.4.1.1 Land Use Conflicts

24 Page 34 - Conversion of Existing land use, end of first paragraph: "The study area excludes existing cities and UGAs, so it is likely that facilities would be located on lands currently zoned and used for low-density residential or designated as natural resource lands (agriculture, forestry, or mining)." This statement has a very important omission. It ignores the impacts to rural character and conservation lands (wildlife habitat, natural areas, open space, recreation areas, etc. – some of these may be designated by the County or the State/Federal government, and many may not be designated). This is an important omission that needs to be addressed.

25 This entire Appendix tends to focus mostly (almost entirely) on commercially important natural resource lands (agriculture, forestry, and mining) while mostly ignoring the importance of maintaining rural lands for conservation of wildlife, native vegetation, open space, recreation, etc. This Appendix has a serious bias because of its lack of thorough consideration and discussion of lands that are important to maintaining rural character (e.g. native vegetation and wildlife, etc.) that are likely to be converted by solar development. This aspect must be more fully included and discussed in this Appendix, as well as in the main body of the report, or this PEIS will be seriously incomplete and lacking.

3.4.2 Impacts from Operation

26 3.4.2.1 - This section mentions impacts to rural character, but impacts to rural character is completely missing above in the document under construction and conversion of lands.

27 3.4.4.1 Siting and design considerations, the first bullet statement on page 37 is:

• "**Consider** the WSU Least-Conflict Solar Siting Study maps, as well as local, state, and federal agricultural lands mapping, to avoid areas identified as having highest ranchland and farmland values." This statement ignores conservation lands (such as wildlife habitat and open space), which is a land use that may be converted.

The use of the word "consider" is very weak and unhelpful in the above bullet. That statement does not encourage or promote using this useful study that was required by the WA legislature to help developers planning solar projects on the Columbia Plateau. A suggested more helpful statement would be "If considering or planning a solar development within the Columbia Plateau, it is advisable to use the WSU Least-Conflict Solar Siting Study and its maps to avoid areas identified as having high or very high ranchland, farmland, and conservation values."

Thank you for the opportunity to review and comment on this draft PEIS. We believe this PEIS will be more complete and more useful with inclusion of the suggestions that we have made.

SIERRA CLUB
WASHINGTON STATE

October 28, 2024

Clean Energy Coordination
Department of Ecology
PO Box 47790
Olympia, WA 98504-7709

Re: Programmatic Environmental Impact Statement on Utility-Scale Onshore Wind Energy Facilities in Washington State

Dear Clean Energy Coordinator:

On behalf of our more than 100,000 members and supporters in Washington State, the Sierra Club submits these comments on the Programmatic Environmental Impact Statement ("PEIS") on Utility-Scale Onshore Wind Energy Facilities in Washington State that the Washington State Department of Ecology ("Ecology") released in September 2024.

Sierra Club understands the urgent need to transition away from fossil fuel technology to renewable energy as outlined in the Washington Clean Energy Transformation Act ("CETA", RCW 19.405). When developed in an environmentally responsible manner with early and continuing Tribal consultation as well as in a manner consistent with our climate, conservation, and biodiversity goals, utility-scale wind offers substantial opportunities for Washington State. Wind installations will provide benefits for communities impacted by the air and water pollution from burning fossil fuels. The U.S. energy grid has disproportionately harmed people of color and low-income neighborhoods with the negative health impacts that come from living near or downwind from gas- and coal-fired power plants. As more renewable energy technology is brought online to serve electric customers, it will become easier to reduce the use of and retire gas power plants that contaminate air and water while also contributing heavily to poor public health, climate change, and extreme weather.

At the same time, Sierra Club stresses the need to adequately assess the impacts of new energy developments, implement appropriate guardrails, and site renewable energy generation in appropriate areas that both promote national and state goals and protect important and culturally

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sensitive landscapes and sensitive species. Sierra Club has a keen interest in ensuring the PEIS for Utility-Scale Onshore Wind Energy Facilities in Washington State provides the full scope of information upon which project developers can draw in their efforts to determine where to site their facilities. To that end, Sierra Club believes that Ecology should make several improvements to the PEIS, as outlined below.

1

1. **Ecology and other agencies should proactively consult with all appropriate tribes for any proposed renewable energy project and require project developers to offer similar consultation.**

While the focus of an EIS is, by its very nature, a review of the potential environmental impacts of a proposed project, Sierra Club urges Ecology to identify that the first step for any proposed renewable energy project be true, transparent consultation between all state agencies and appropriate representatives of all appropriate federally recognized and unrecognized tribes, on a government-to-government basis.

In the spirit of the Centennial Accord signed in 1989 and RCWs 43.376.020, 70A.02.100, 70A.65.305, and other state laws, state agencies must offer tribes early, meaningful, and individual consultation for all projects and funding decisions that "may impact tribal resources, including tribal cultural resources, archaeological sites, sacred sites, fisheries, or other rights and interests in tribal lands and lands within which a tribe or tribes possess rights reserved or protected by federal treaty, statute, or executive order."[1] Executive Order 13175 -- Consultation and Coordination With Indian Tribal Governments, of November 9, 2000, outlined similar responsibilities for federal agencies working with tribes.[2]

Furthermore, "[c]onsultation requires that information obtained from Tribes be given meaningful consideration." Tribes have rights enshrined in treaties that predate settlement in these lands and

[1] RCW 70A.65.305, https://app.leg.wa.gov/RCW/default.aspx?cite=70A.65.305
[2] Executive Order 13175 -- Consultation and Coordination With Indian Tribal Governments, 65 Fed. Reg. 218, 67249-67252 (November 9, 2000).

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those rights must be respected (rights affirmed in *United States v. Winans* in 1923, *Sohappy v. Smith and United States v. Oregon* in 1969, *United States v. Washington* in 1974). Tribes have the right to gather, hunt, and fish at all usual and accustomed grounds and stations, and, as Judge Boldt reminded us all, they know best the location of those grounds and stations as well as that of sacred sites across the landscape.[3]

2 Sierra Club recommends that Ecology incorporate a commitment of all state agencies to engage in similar proactive tribal engagement for every proposed renewable energy project that develops after the PEIS. In addition, Ecology should require renewable energy project developers to also offer early, meaningful, and individual consultation for all projects and funding decisions that may impact tribal resources. Requiring developer engagement will ensure early coordination with tribes and prevent avoidable conflicts.

2. Ecology should broaden the range of wind projects defined as utility-scale installations.

3 Sierra Club urges Ecology to include smaller sized installations as meeting the definition of utility-scale installations as part of the portfolio in the PEIS. Project developers will look to the PEIS as a template, a model to follow. As such, presenting utility-scale wind options only in the range of 10 – 1,500 MW may preclude from consideration smaller options that can provide meaningful contributions to Washington's clean energy future. The Department of Energy defines utility-scale land-based and offshore wind projects as those 1 MW or larger.[4] Smaller scale installations will have less of an impact on the immediate environment and may be able to take advantage of localized conditions that may not be suitable for a larger scale project.

[3] John C. Hughes. (2024) *Lightning Boldt: Judge George H. Boldt and a defining moment in tribal sovereignty*. Legacy Washington, Washington Secretary of State, Olympia, Washington; Charles Wilkinson. (2024). *Treaty Justice: The Northwest Tribes, the Boldt Decision, and the Recognition of Fishing Rights*. Seattle: University of Washington Press.

[4] U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. Wind Energy Market Sectors. (n.d.) https://windexchange.energy.gov/markets#:~:text=The%20U.S.%20Department%20of%20Energy,than%201%20megawatt%20(MW).

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The Department of Energy further offers examples of distributed wind applications for commercial and industrial energy use, applications in the range of 50 – 1500 kW. These smaller installations can be sized to meet localized demand and thus decrease the strain on the electric grid. As of the end of 2023, installed distributed wind capacity in the United States stood at 1,110 MW, with 10.6 MW of that in Washington State.[5]

4 **3. Ecology should broaden the areas eligible for utility-scale wind to include degraded lands to ensure an equitable distribution of projects.**

Sierra Club asks Ecology to rethink the siting assumptions for wind installations. Rather than "[c]hanging the use of these lands to a renewable energy facility" thus making "the land no longer available for . . . other uses for the life of the facility,"[6] Sierra Club supports co-siting of wind turbines with agriculture, on already degraded lands throughout the state, and at other locations where the energy from wind can provide important benefits to the local community.

Early in 2024 the U.S. Department of Agriculture (USDA) and the U.S. Department of Energy (DOE) launched a partnership to bring smaller scale wind to farmlands: the Rural Energy for American Program (REAP).[7] The program provides technical assistance and funding for farmers and rural communities hoping to invest in renewable energy. Then, rather than generating renewable energy to fulfill the demand of anonymous users hundreds of miles away, rural communities generate renewable energy to meet their own needs. The distribution of benefits across the state, as required by CETA, becomes more equitable.

5 In addition, superfund and brownfield sites dot the Washington landscape. Those locations should be high on the list for renewable energy development. According to the U.S. Environmental

[5] Lindsay Sheridan, Kamila Kazimierczuk, Jacob Garbe, and Danielle Preziuso. (August 2024). Distributed Wind Market Report 2024 Edition. Pacific Northwest National Laboratory.
[6] Anchor QEA. (September 2024). Programmatic Environmental Impact Statement on Utility-Scale Onshore Wind Energy Facilities in Washington State. Appendix I: Land Use Resource Report, p. 33.
[7] U.S. Department of Agriculture. (February 26, 2024) New USDA/DOE Initiative to Help Farmers Access Wind Energy. https://www.rd.usda.gov/newsroom/news-release/new-usdadoe-initiative-help-farmers-access-wind-energy

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Protection Agency, "Eighty percent of federally tracked contaminated lands, including Superfund sites, are in non-urban/remote locations. In addition, some non-urban/remote Superfund sites are large, encompassing thousands or tens of thousands of acres."[8] Superfund and brownfield sites tend to be near critical infrastructure as a result of their historical uses. This makes them prime candidates for repurposing as locations for renewable energy generation sites.

6 4. **Ecology should expand its habitat analysis of critical and priority habitats.**

Sierra Club urges Ecology to expand its analysis of critical and priority habitats, species of concern and endangered species to include maps of the habitats and flyways of birds and bats rather than just mentions of them in the Utility-Scale Wind PEIS.

Migration pathways of birds through Washington State are well known. The National Audubon Society, BirdCast, the Cornell Lab, and Colorado State University have produced maps of the routes of bird migrations. The U.S. Fish and Wildlife Environmental Conservation System provides an on-line tool for identifying the current spatial range of endangered and threatened species found in Washington.[9] Migration patterns and critical habitat of birds must be protected when siting wind facilities.

7 Washington also is home to 15 bat species. Bat mortalities at wind turbines occur primarily during the spring and fall, during mating and migrating periods. Although none of the bats endemic to Washington are listed as endangered or threatened, Keen's myotis and Townsend's big-eared bat have been classified as state candidate species, and their habitat should be protected.[10] Maps of that habitat should be included in the PEIS.

[8] U.S. Environmental Protection Agency. (May 2011). Renewable and Alternative Energy at Superfund Sites. Harnessing New Source of Power, p. 2.
[9] See U.S. Fish and Wildlife Service. (n.d.) ECOS Environmental Conservation Online System. Listed species with spatial current range believed to or known to occur in Washington. https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=WA&stateName=Washington&statusCategory=Listed
[10] Washington State Department of Fish and Wildlife. (June 2013). Washington State Bat Conservation Plan. https://wdfw.wa.gov/publications/01504

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Sierra Club applauds the Washington State Department of Ecology's efforts to produce a programmatic Environmental Impact Statement for Utility-Scale Onshore Wind Development. Sierra Club supports the just, equitable, and environmentally responsible expansion of wind, which has the potential to move the state away from its current dependence on fossil fuels, reduce emissions associated with electrical generation, and create a cleaner future for Washingtonians.

Sincerely,

Kathleen Saul, Ph.D.
Washington Chapter Sierra Club
Energy Committee

Margie Van Cleve
Washington Chapter Sierra Club
Conservation Co-chair

SIERRA CLUB
WASHINGTON STATE

October 28, 2024

Clean Energy Coordination
Department of Ecology
PO Box 47790
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At the same time, Sierra Club stresses the need to adequately assess the impacts of new energy developments, implement appropriate guardrails, and site renewable energy generation in appropriate areas that both promote national and state goals and protect important and culturally sensitive landscapes and sensitive species. Sierra Club has a keen interest in ensuring the PEIS for

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Utility-Scale Solar Energy Facilities in Washington State provides the full scope of information upon which project developers can draw in their efforts to determine where to site their facilities. To that end, Sierra Club believes that Ecology should make several improvements to the PEIS, as outlined below.

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Smith and United States v. Oregon in 1969, *United States v. Washington* in 1974). Tribes have the right to gather, hunt, and fish at all usual and accustomed grounds and stations, and, as Judge Boldt reminded us all, they know best the location of those grounds and stations as well as that of sacred sites across the landscape.[3]

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3 **2. Ecology should broaden the range of solar projects defined as utility-scale installations.**

Sierra Club urges Ecology to include smaller sized installations as meeting the definition of utility-scale installations as part of the portfolio in the PEIS. Project developers will look to the PEIS as a template, a model to follow. As such, presenting utility-scale solar options only in the range of 20 – 1,200 MW may preclude from consideration smaller options that can provide meaningful contributions to Washington's clean energy future. Lawrence Berkeley National Laboratory uses 5 MW as the lower bound for ground-mounted utility scale solar.[4] The Department of Energy defines utility-scale as 10 MW or larger.[5] Smaller scale installations will have less of an impact on the immediate environment and may be able to take advantage of localized conditions that may not be suitable for a larger scale project. Ecology should define utility-scale installations to include solar projects with a capacity slightly smaller than 20 MW.

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[3] John C. Hughes. (2024) *Lightning Boldt: Judge George H. Boldt and a defining moment in tribal sovereignty*. Legacy Washington, Washington Secretary of State, Olympia, Washington; Charles Wilkinson. (2024). *Treaty Justice: The Northwest Tribes, the Boldt Decision, and the Recognition of Fishing Rights*. Seattle: University of Washington Press.

[4] Utility Scale Solar 2024. Energy Markets and Policy. Lawrence Berkeley National Laboratory. https://emp.lbl.gov/utility-scale-solar

[5] U.S. Department of Energy, State and Community Energy Programs, Renewable Energy: Utility-Scale Policies and Programs. (n.d.) https://www.energy.gov/scep/slsc/renewable-energy-utility-scale-policies-and-programs

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4 **3. Ecology should broaden the areas eligible for utility-scale solar to include degraded lands to ensure an equitable distribution of projects.**

Sierra Club asks Ecology to expand consideration of suitable locations for utility-scale solar to include locations in Western Washington, in urban and growth management areas, and existing rooftops and already degraded lands throughout the state.

5 The Washington Clean Energy Transformation Act (CETA) calls for an equitable distribution of benefits and a reduction of burdens to vulnerable populations and highly impacted communities.[6] As written, the PEIS does not present an equitable distribution of utility-scale solar installations and misses important opportunities to deploy utility scale solar by unnecessarily limiting the geographic coverage of the PEIS. Because of the specifics set out by Ecology for the mapping of sites for utility scale solar, most of western Washington has been excluded from consideration. We should look at opportunities to expand utility scale solar statewide. Expanding the geographic locations can reduce the need for expanded transmission and other infrastructure, assure we have generating sites in less fire prone areas, while generating more power closer to major load centers.

6 Despite having somewhat lower Global Horizontal Irradiance (GHI) than eastern Washington, the values for the west side of the Cascades are on a par with those of Germany, a country that in May of 2024 generated 60% of its electricity using solar.[7] The contribution from western Washington should not be discounted.

In addition, Western Washington is home to at least 44 brownfield sites that could serve as locations for solar arrays.[8] These already-degraded sites often sit vacant, fenced off, awaiting remediation. Repurposing them for solar installations could bring additional funding and impetus to that work. While the number of solar panels on any one site may not generate 10 MW, the total output of smaller arrays on all of those sites could be considerable.

[6] Washington Clean Energy Transformation Act. RCW 19.405.010.
[7] Gavin Maguire. (15 May 2024). Germany solar power output jumps to record highs. Reuters. https://www.reuters.com/business/energy/germany-solar-power-output-jumps-record-highs-maguire-2024-05-14/
[8] Department of Ecology. State of Washington. Brownfield Sites. (n.d.) https://apps.ecology.wa.gov/cleanupsearch/reports/brownfields

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7 Adding solar panels to existing structures, like parking garages, warehouses, government buildings, shopping malls, and the like, also can feed electrons to the grid without taking valuable farm or ranch land out of production. Additionally, installing solar near the high demand areas of western Washington will reduce the need for costly upgrades to and energy losses associated with transmission lines across the Cascade Mountains. Indeed, in "Planning to Build Faster: A Solar Energy Case Study," researchers from the Climate and Community Institute of the Roosevelt Institute recommend siting solar on abandoned agricultural lands, existing rights-of-way, parking lots, superfund sites, and the like, as shown in the figure below.[9]

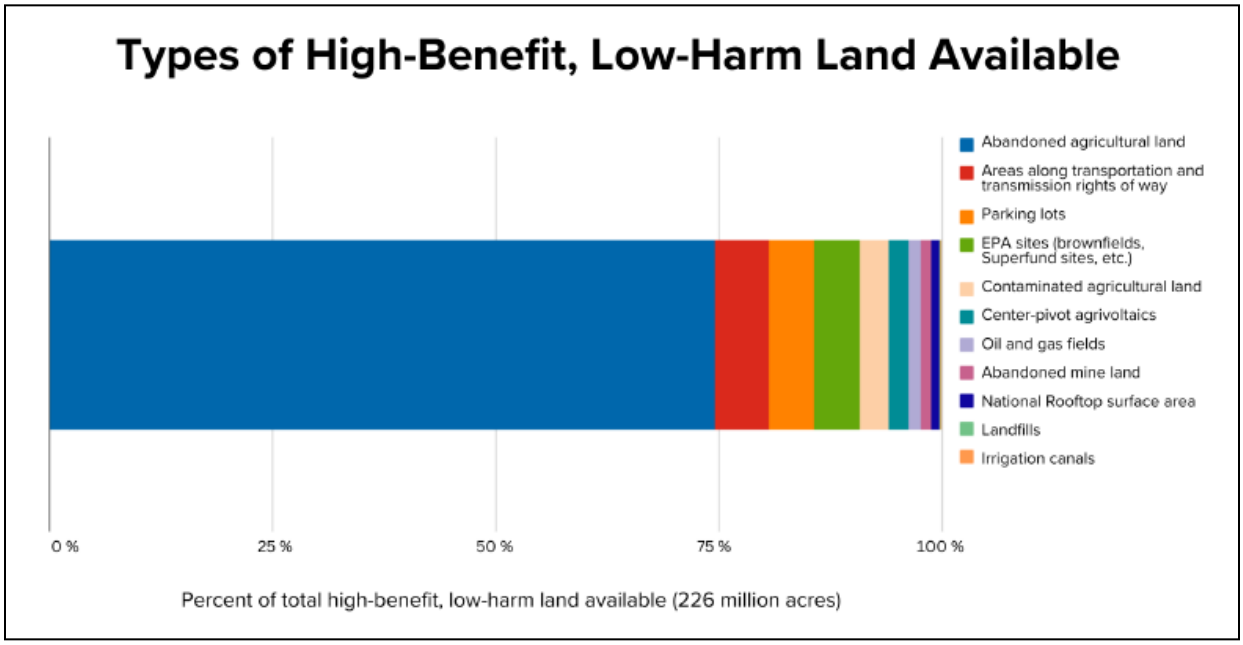

Figure 1: High Benefit, Low Harm Land Available for Siting Solar Systems (Bozuwa, Mulvaney, Estevez, Karlsson, and Malhotra, 2024)

Accordingly, Sierra Club urges Ecology to expand the consideration of suitable spaces for utility-scale solar to include degraded lands for renewable energy development.

8 **4. Ecology should expand its habitat analysis and incorporate the Least Conflict Solar Siting Report into its PEIS analysis to identify low-conflict areas for utility-scale solar development.**

[9] Johanna Bozuwa, Dustin Mulvaney, Isabel Estevez, Kristina Karlsson, and Sunny Malhotra. (2024). "Planning to Build Faster: A Solar Energy Case Study." The Climate and Community Institute, The Roosevelt Institute, p. 7.

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Sierra Club urges Ecology to expand its analysis of critical and priority habitats, species of concern, and endangered species to include habitat maps and territories rather than just mentioning of them in the Utility-Scale Solar PEIS.

Ecology should incorporate the results of the June 2023 Report to the Washington Legislature authored by the Washington State University Energy Program titled "Least-Conflict Solar Siting on the Columbia Plateau."[10] The report outlines the creation of a gateway mapping tool that allows the user to identify areas of important connectivity value for large species or contain areas with important oak, shrub-steppe, or sagebrush habitat. The tool identifies locations critical to focal species such as the Columbian Spotted Frog, Northern Leopard Frog, Greater Sage Grouse, Columbian Sharptailed Grouse, Sandhill Crane, Golden Eagle, Pygmy Rabbit, Black-tailed Jackrabbit, and Townsend's Ground Squirrel. These values feed into a score for Relative Environmental Conservation value of a particular cell on the map as shown below.[11]

[10] As per RCW 43.21C.535 Clean energy projects—Nonproject environmental impact statements; *See also* Washington State University Energy Program. (June 2023). *Least Conflict Solar Siting on the Columbia Plateau*. p. 52. *Available at* https://www.energy.wsu.edu/documents/Least-Conflict_Solar_Siting_Report-WSUEP23-04--6-29.pdf.
[11] *Id. at* 52.

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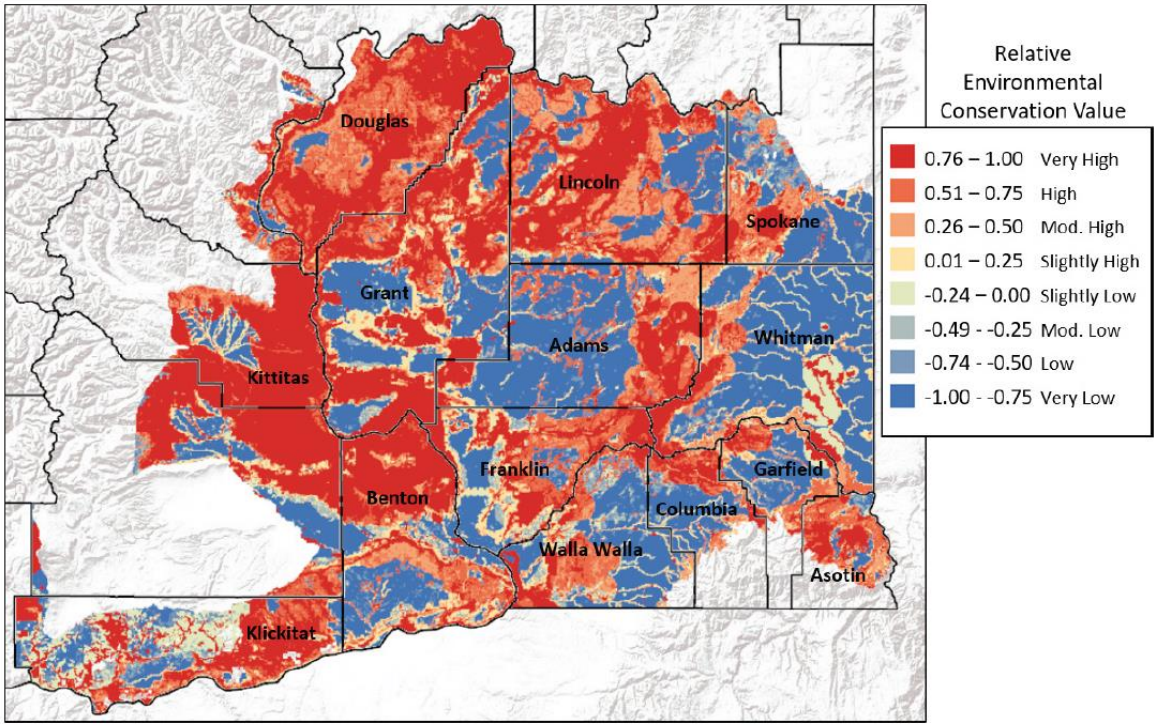

Figure 2: Relative Environmental Conservation Value of Lands on the Columbia Plateau (Washington State University Energy Program, 2023)

The Least Conflict Solar Siting Report and associated gateway provide similar maps for values of ranch and farmland, and a composite map that combines solar insolation information with data from the other maps. The gateway tool can also identify areas not used by wildlife, of low conservation value, not considered prime farm or ranchland, and thus more amenable to development for utility-scale solar. The information contained in the Report and gateway tool provide a more nuanced picture of the potential impact of utility-scale solar on the natural resources of Washington than the current PEIS and should be incorporated into the final PEIS.

Sierra Club applauds the Washington State Department of Ecology's efforts to produce a programmatic Environmental Impact Statement for Utility-Scale Solar Development. Sierra Club supports the just, equitable, and environmentally responsible expansion of solar, which has the potential to move the state away from its current dependence on fossil fuels, reduce emissions associated with electrical generation, and create a cleaner future for Washingtonians.

Sincerely,

SIERRA CLUB
WASHINGTON STATE

Kathleen Saul, Ph.D.
Washington Chapter Sierra Club
Energy Committee

Margie Van Cleve
Washington Chapter Sierra Club
Conservation Co-chair

Conservation Northwest
Keeping the Northwest Wild

Clean Energy Coordination
Department of Ecology
P.O. Box 47709
Olympia, WA 98504-7709

RE: Draft Utility Scale Solar and Onshore Wind Energy Programmatic Environmental Impact Statements

Dear members of the Clean Energy Coordination,

Conservation Northwest thanks you for the opportunity to comment as we work to protect, connect, and restore wildlife habitat focusing on landscape scale linkages. Our Sagelands Heritage Program has been tracking proposed projects in the Columbia Plateau and advocating for the protection of wildlife, wild lands, productive agriculture, and cultural resources. We fully support the development of solar energy on appropriate sites that have the least value for the conservation of ecosystems. The need for renewable energy should not cause the loss of existing native species or the further fragmentation of wildlife habitat.

This comment letter will address the two major deficiencies we recognize in the Draft PEIS.

1. The lack of emphasis on identifying sites with the least potential conflict.
2. The minimization of the adverse effects of land use changes on native species and functioning natural ecosystems by an emphasis on mitigation.
3. Section three details recommendations to improve specific itemized sections.

1 1. **IMPORTANCE OF SITE SELECTION**

This PEIS is required under RCW 43.21C.535 Section 302 (6) to: "Include maps identifying probable, significant adverse environmental impacts for the resources evaluated. Maps must be prepared with the intention to illustrate probable, significant impacts, creating a tool that may be used by project proponents, tribes, and government to inform decision making." In Section 302 (7), the legislature states that this document: "Must consider the findings and make recommendations to the legislature and governor on potential areas to designate as clean energy preferred zones." This document does not emphasize the importance of planning utility scale solar developments in sites without significant environmental impacts and it entirely fails to identify criteria for clean energy preferred zones. This Draft PEISs is incomplete in following the intent of HB 1216 or the requirements the legislature clearly laid out because it is not designed to proactively avoid negative impacts, instead it is organized only to detail potential reactions to development actions.

Ecology must take an approach to incentivizing and guiding development towards low-conflict areas to ensure that renewable energy development does not undermine existing conservation efforts. Considerable resources have been invested towards the protection and recovery of

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shrub-steppe habitat and species. The investments and associated mapping resources in efforts such as the WSU Least-Conflict Solar Siting (LCSS) project and the Washington Shrub-steppe Restoration and Resiliency Initiative (WSRRI) should be utilized to guide the creation of clean energy preferred zones. The draft solar PEIS should direct project proponents to mapping products to inform site selection rather than simply inviting developers to consider consulting them.

2 Spatial information from LCSS and WSRRI was designed to direct site selection away from priority regions including "Core Protection Areas", "Growth Opportunity Areas", and "Corridors." Areas containing cultural, ecological, and critical habitat for wildlife including threatened and endangered species are not suitable for solar development. We strongly promote land management decisions to ensure a biodiverse ecosystem under uncertain future climatic conditions.

Recent publications in the energy sector identified that when there was more than one source of opposition to a utility-scale project, 49% were cancelled permanently. [1] Intelligent planning for Washington State would emphasize the utilization of existing disturbed lands that would not create opposition from community, conservation, or tribal entities. From the PEIS document on page 88: "Consider use of the WSU Least-conflict Solar Siting maps and avoid areas identified as having high conservation values." This statement diminishes the high value of the Least Conflict report and the final PEIS should strongly encourage developers to use this and the WSRRI and Habitat Connectivity Spatial Priorities early in their project planning within the Columbia Plateau to help expedite solar development by minimizing conflicts.

Much of the data used to inform the resource-based development of public land in the Western U.S. is now outdated and no longer represents the best available science to assist with avoiding resource conflicts.[2] We must use the considerable resources of Washington State to inform management decisions with impacts on wildlife, wildlife habitat, and connectivity corridors in both single project and cumulative impacts of utility scale solar and onshore wind energy projects. A comprehensive final EIS for Onshore Wind and Solar Facilities that more clearly addresses HB 1216 legislative intent by directing project proponents to low impact areas is needed to support the advancement of responsible renewable energy in Washington. We strongly recommend that identified Solar Energy Zones (SEZs) or similar designated areas are established in Washington state to direct renewable energy development onto land that does not have high ecological value or biodiversity.

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[1] Lawrence Susskind, Jungwoo Chun, Alexander Gant, Chelsea Hodgkins, Jessica Cohen, Sarah Lohmar, *Sources of opposition to renewable energy projects in the United States*, ENERGY POLICY 165: 112922 (Dec. 8, 2022)

[2] See BLM Solar PEIS ROD, Appendix A – Land Use Plan Amendments, Table A-2 Exclusions under BLM's Solar Energy Program. https://blmsolar.anl.gov/documents/docs/peis/Exclusions-ROD-Table-A-2.pdf

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2. **POTENTIAL IMPACTS TO ENVIRONMENTAL RESOURCES**

Fish and wildlife habitat is threatened by drought, wildfire, invasive plants, and increased human development and activity. Many species of plants and animals rely on shrub-steppe habitat in Washington state that is already fragmented and degraded. Further loss of thousands of acres to solar development could very well result in the extinction of species, reduce wildlife connectivity, and set back restorative efforts in many places in the state. The proposed mitigation measures outlined in this document work under the assumption that the replacement, enhancement, or substitution of resources or environments would be possible. In Washington State's remaining shrub-steppe habitat and cultural resources cannot be replaced or substituted.

In the Western U.S., the sagebrush ecosystem with over 350 species of conservation concern has seen a 50% decline since the 1800s.[3] Research and experience in the shrub-steppe ecosystem demonstrates that many species require habitats that are less disturbed and fragmented and the U.S. Geological Survey issued a report in September 2022 highlighting this decline.[4] Building on previous research and efforts, the report embraces the "defend the core, grow the core" strategy, under which intact and unfragmented landscapes would be protected first, with focus then turning to the restoration of degraded habitat.[5] The protection of intact landscapes as proposed could help the agency reduce threats to the sagebrush ecosystem and the wildlife that depend on it.

Migration is a critical behavior among many species used to find forage, avoid predation, maintain genetic diversity and harsh weather, and meet other biological needs. Researchers have come to better understand and appreciate the role that public lands play in providing habitat connectivity for migrating big game by mapping migration routes for elk, mule deer, pronghorn, and other ungulates that span dozens to hundreds of miles across Western states.[6] Development, activity, and habitat degradation and fragmentation in corridors negatively impacts these animals as they move across the landscape.

3 The PEIS should clearly and consistently direct utility scale developers to the Washington Department of Fish and Wildlife (WDFW) wind and solar guidelines currently being updated for all stages of project development, including site selection, site design, assessment of potential environmental impacts, and avoidance and mitigation measures. Developers should prioritize minimal conflict through early, meaningful, and consistent Agency and Tribal consultation.

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[3] Thomas E. Remington, et al., *Sagebrush Conservation Strategy—Challenges to Sagebrush Conservation*, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 2020-1125 (2020).
[4] Kevin Doherty, et al., *A Sagebrush Conservation Design to Proactively Restore America's Sagebrush Biome*, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 2022-1081 (2020).
[5] *Id*.
[6] U.S. Geological Survey, *Ungulate Migrations of the Western United States, Volumes 1, 2, and 3* (2020-2022), https://doi.org/10.3133/sir20205101; see also resources cited in Appendix A.

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This PEIS implies that much of the analysis will be done at a project-level scale, however the document is often simply a list of potential impacts and potential mitigations. The document does not adequately define the thresholds to be considered a significant impact to inform project planning. In the current state, this document is a missed opportunity to achieve the legislature's stated intent of identifying a path to efficiently locating utility scale developments. This PEIS often uses a piecemeal approach and is not organized as an effective tool to remove obstacles and avoid conflicts during project planning.

In the absence of a broad plan, solar energy development in the western states has consistently resulted in negative impacts to local resources. For example, the BLM issued a permit for an 80MW solar project in southwest Wyoming sited in general habitat for Greater sage-grouse, winter range for mule deer and pronghorn, and a known migration route.[7] Rather than address utility-scale solar development on a case-by-case basis a comprehensive planning and permitting process would clearly outline a step by step process to avoid, minimize, and offset negative impacts.

3. Conservation Northwest recommendations for specific sections.

4 4.6.1.1, page 78, Wildflowers and forbs are missing from the list of terrestrial plants.

5 4.6.3.2, page 88, should clearly state the gold of actions to avoid and reduce impacts.

6 4.10, Land Use, This could be more effective by identifying significant and unavoidable impacts for to native plant dominated landscapes, and wildlife habitats.

7 4.10.3.1 This section focuses on economic resources and is a missed an opportunity to highlight impacts of land use changes that reduced the ecosystem services and habitat quality and the associated cumulative effects of such actions. "Removing these lands, particularly those of high quality, from their resource uses would reduce the area available to continue producing agricultural, forestry and mining."

8 Page 121 Findings. The statement again ignores the irreversible conversion of natural habitats to degraded environments.

9 4.10.3.1 – Language concerning construction and conversion of land minimizes the adverse effects on rural character, native species, and functioning ecosystems.

10 4.10.3.2 – Instead of "consider" using the WSU least-conflict solar mapping, possibly state "must consult LCSS and WSRRI products.

Appendix E – Biological Resources

11 3.2.1.2 – Missing reference to shrub-steppe and riparian vegetation.

12 3.2.1.3 – Missing the value of agricultural land to waterfowl habitat.

[7] Hall Sawyer, Nicole M. Korfanta, Matthew J. Kauffman, Benjamin S. Robb, Andrew C. Telander, Todd Mattson, *Trade-offs between utility-scale solar development and ungulates on western rangelands*, FRONTIERS IN ECOLOGY AND THE ENVIRONMENT (Apr. 21, 2022).

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13 3.4.1.1 – Certain species such as Sage Grouse have specific times of the year they use specific locations such as lek sites and nesting sites. The timing of construction can permanently alter migration and behavior from vulnerable species.

14 3.4.2.1 – Terrestrial Habitats, Once a shrub-steppe habitat is disturbed, it is highly likely to be permanently degraded due to invasive weeds and increased wildfire potential.

15 3.4.4.1.1, page 66, For least conflict development, shrub-steppe habitat must be avoided for development. Shrub-steppe is an ecosystem of concern that is imperiled.

Appendix I Land Use Resource Report

16 2.3 Impact Assessment, page 12, Fails to clearly indicate that actions would cause permanent conversion and result in conflicts.

Thank you for your time and consideration,

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Coded Comment Record: Businesses

Puget Sound Energy

Please see attached file.

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October 28, 2024

Diane Butorac
SEPA Responsible Official
Clean Energy Coordination Section
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Re: Puget Sound Energy, Inc.'s Comments on the Draft Programmatic Environmental Impact Statements for Utility Scale Solar and Onshore Wind Energy Facilities.

Dear Ms. Butorac,

Puget Sound Energy, Inc. ("PSE") appreciates this opportunity to comment on the Washington Department of Ecology's ("Ecology") Draft Programmatic Environmental Impact Statements ("PEISs") for Utility Scale Solar Energy Facilities and Onshore Wind Energy Facilities in Washington State.[1]

PSE is Washington's oldest and largest public utility and currently provides electricity to approximately 1.2 million customers across ten counties in Washington. PSE began developing renewable electric generation projects over twenty years ago and currently operates 772 megawatts (MW) of wind generation in three Washington counties. We are also in the process of developing the Appaloosa Solar Facility—a 142 MW solar facility in Garfield County. Since our early days in renewable development, the pressure to bring clean energy generation to the grid has increased dramatically. With the passage of the Clean Energy Transformation Act ("CETA") in 2019, the Legislature gave PSE and other electric utilities a mandate to transition our existing diversified mix of energy generation resources—including natural gas, wind, solar, hydropower, and coal—to cleaner, carbon free resources. The scale of the change required to comply with CETA and advance PSE's own Beyond Net Zero goals is daunting. To meet our 2030 compliance targets,

[1] In this letter, we refer to the Draft PEIS for Utility Scale Solar Energy Facilities as the "Solar PEIS" and to the Draft PEIS for Onshore Wind Energy Facilities as the "Wind PEIS."

PUGET SOUND ENERGY

PSE projects a need for more than 6,700 MW nameplate of new, carbon-free generation resources. This represents an approximate doubling of our current generation capacity in the next 5-6 years. By 2045, PSE expects the need for new, carbon-free resources to total more than 15,000 MW of nameplate capacity.

Because of this appropriately aggressive climate mandate, PSE appreciated the Legislature's adoption of ESSHB 1216 (2023 Wash. Sess. Laws ch. 230, hereinafter, "HB 1216"), now codified in relevant part at Chapter 43.21C RCW, which seeks to expedite environmental review for clean energy projects on a timeframe in line with CETA's deadlines and the state's targets for GHG reduction goals. The most promising aspect of HB 1216 is the legislature's directive to produce these PEISs. If Ecology achieves the important statutory objective of the PEISs, these PEISs will identify the potential impacts associated with utility scale solar and wind projects and mitigation that can be effective in addressing those impacts. This would, in turn, significantly improve the efficiency of SEPA review at the project level, promote clean energy facility siting, and help fight climate change and achieve the state's greenhouse gas emission limits.

Because we share the Legislature's goals, we are very appreciative of Ecology's diligent work to accomplish the statutory objective set forth in HB 1216, and Chapters 43.21C and 43.394 RCW. We acknowledge that Ecology is attempting to discharge its obligations at a pace to meet the legislatively declared "goal" of completion by June 30, 2025. While that schedule is appropriate given the timeframe for CETA compliance, we appreciate that the level of effort required is significant in a compressed period of time.

We also acknowledge and appreciate parts of the PEISs that are helpful towards fulfilling the legislature's directive. For example, the PEISs attempt to fully resolve some impact issues at the programmatic level leaving only site-specific impacts for the project-level review.

1 However, many aspects of the PEISs fall short of—and, in some instances, actually work against—the Legislature's goal of streamlining project-level SEPA review for wind and solar projects. For example, and as explained in further detail below, in too many instances the PEISs defer much of the analysis to subsequent project-level review. While there are many pages of analysis and review, the documents often concludes simply with lists of potential impacts and lists of potential mitigation. The documents regularly stop short of taking firm positions on whether those are significant impacts or what of the identified measures would be adequate to mitigate those impacts. This approach fails to implement the vision set forth in HB 1216 Sections 302 and 303, which direct Ecology to identify mitigation measures that, if adopted, would bring a proposed project's
2 impacts to a less than significant level. We acknowledge that the PEISs are programmatic, but strongly request that they include more concrete conclusions related to impacts and more direction as to mitigation that would sufficient to bring any significant adverse impacts to a less than significant level. If Ecology does not fulfill this legislative mandate, the PEISs will fall short of

the legislative directive to minimize the burden of subsequent project-level review. These sections are a missed opportunity to achieve the legislature's stated intent.

3 Additionally, in several instances the PEISs identify issues regarding impacts to specific elements of the environment that will be required to be addressed in project-level review that exceed the scope of typical SEPA review, which works against long established impact analysis protocols and the legislature's goal of efficiency in clean energy siting. Similarly, the PEISs specify environmental studies needed to resolve certain impact issues that exceed the level of the inquiry and analysis typically required for many solar or wind facilities. In other words, these PEISs actually may commit lead agencies to a more complicated SEPA process at the time of project review than occurs under the status quo, where many of these kinds of facilities are issued mitigated determinations of nonsignificance.[2]

Moreover, the PEISs give agencies with jurisdiction license to define subjective thresholds for significance on certain elements of the environment thereby giving renewable energy opponents new, subjective tools to declare impacts to be significant and create unnecessary obstacles during project review.

4 As noted below, we believe additional work can resolve many of these initial concerns and still achieve the promise of the statutory objective. However, that work will require more time and additional opportunities for public input on more refined SEPA documents. Specifically, the process would benefit from additional opportunities for comment on Ecology's revisions. For these reasons, PSE respectfully requests that Ecology provide more time to address initial stakeholder input and more opportunities to comment on subsequent drafts. All parties would benefit from Ecology considering this initial round of comments and developing a second, updated *draft* document for comment, review and revision *prior to* any finalization of the PEISs. While the legislature declared a goal for completion, it is only a goal, not a deadline. Those responsible for meeting CETA requirements are relying on these PEISs to help expedite permitting and environmental review of solar and wind projects. Taking the time now to get them right is time well spent. This issue would be cured if Ecology commits to revisions and another round of public comment before finalization.

Beyond our general request for additional time and process, PSE has the following more detailed comments. As a preliminary note, our comments only address our review of the PEISs and not the voluminous appendices. The thirty-day comment period for two 500+ page documents is insufficient to fully evaluate all the supporting technical information. Additional time, as requested above, would lead to more informed comments from stakeholders.

[2] PSE identified 18 utility-scale solar facilities that have been permitted or applied for in Washington. Only four of these proposals were determined to require an Environmental Impact Statement under SEPA.

We have grouped our comments with thematic issues that apply to both PEISs. In addition, we have attached a chart to this letter that includes our comments on specific sections of the PEISs.

Again, we greatly appreciate Ecology's work to-date on this potentially monumental task and recognize the pressure of the schedule imposed on Ecology.

5 **A. The PEIS's decision not to provide clear direction on certain mitigation is a missed opportunity to achieve the Legislature's clearly stated intent.**

The legislature directed these PEISs, in part, to identify mitigation that would be adequate to mitigate significant impacts identified in the programmatic review that would help streamline subsequent project-level SEPA review. Specifically, RCW 43.21C.538(3), as adopted in HB 1216, indicates that:

> Clean energy project proposals following the recommendations developed in the nonproject environment review completed pursuant to RCW 43.21C.535 must be considered to have mitigated the probable significant adverse project-specific environmental impacts under this chapter for which recommendations were specifically developed unless the project-specific environmental review identifies project-level probable significant adverse environmental impacts not addressed in the nonproject environmental review.

RCW 43.21C.538. This is a cornerstone of the strategy to streamline environmental review of specific projects. The importance of this tool cannot be understated. If done correctly, then a lead agency or project proponent can simply choose from the menu of mitigation to conclude that the project adequately mitigates impacts without need for further review (except site-specific considerations, which will be limited to unique site- or project-specific issues).

6 Unfortunately, in several key areas, the PEISs miss the mark. For example, the sections specific to habitat and species purport to create standards for significance for impacts to those aspects of the environment,[3] but lack clear information on the threshold for significance and appropriate methods for definitively mitigating those impacts. While a generalized list of mitigation is offered, there is no clear statement about which mitigation should be used and which combination will reduce impacts below the significance threshold. Instead, the PEIS states, "[d]etermining if mitigation options would reduce or eliminate impacts below significance would be dependent on the specific project or site." Solar PEIS at 91; Wind PEIS at 95. While the presence and extent of species and habitat will vary by site, the mitigation options to deploy when species and habitat are

[3] For example, the PEISs suggest that impacts to habitat are determined to be significant when there would be "permanent degradation, loss, or conversion of suitable habitat that is critical to species viability or disrupt habitat continuity along migration routes." Solar PEIS at 86; Wind PEIS at 78.

present, including ratios for on-site and off-site habitat restoration can be better defined at the programmatic level. Without additional guidance, this analysis and section is largely unhelpful at achieving the statutory goal. Moreover, we know that defining both impact and clear mitigation for this element of the environment is possible. *See, e.g.*, Washington Department of Fish and Wildlife Wind Power Guidelines (2009) (defining habitat mitigation ratios to address project impacts).

7 Similarly, the mitigation related to wildfire addressed in the Environmental Health and Safety and Public Services and Utilities fall short. The PEISs note that there are potentially significant impacts from wildfires associated with construction and operation of solar and wind facilities. *See* Solar PEIS 100-101, 160; Wind PEIS at 100, 104. The sections list several mitigation measures such as undefined setbacks, vegetation control, water cisterns on site, and compliance with building and fire codes. However, the list of mitigation does not include necessary specificity for each such as the degree of setbacks. Moreover, the PEISs do not indicate that compliance with some combination of these mitigation measure is sufficient to prevent the need for future, project-specific review. Like the analysis for habitat, the PEIS simply says, "[d]etermining if mitigation options would reduce or eliminate impacts below significance would be dependent on the specific project and site and local regulations and plans." *See e.g.*, Solar PEIS at 106, 116, 124, 163, et seq.; *see also e.g.*, Wind PEIS at 120, 129, 143, et seq.

8 The discussion in the PEISs of mitigation for impacts to recreational opportunities is yet another example. The PEISs suggest that any loss of recreation resources or crowding of alternative recreational opportunities, or through segmentation of recreational facilities would be a significant impact. Solar PEIS at 140; Wind PEIS at 143. The PEISs identify potential mitigation, including providing new opportunities for recreational activities, but they neither provide detail of what degree of those opportunities would be sufficient to mitigate nor provide information on what level of impact reaches a level of significance.

These examples are not exhaustive. Additional guidance throughout the documents of the kinds of mitigation that would be sufficient to mitigate impacts at a programmatic level would be more helpful. A project's failure to provide the mitigation specified in the PEIS not mandate a conclusion that the project has significant adverse impacts. Rather, the failure to provide mitigation at levels identified in the PEIS could instead trigger additional project level review.

9 **B. The No Action Alternative is a Lost Opportunity**

The No Action Alternative in the PEISs is poorly formed such that the comparison between the various action alternatives and the no action alternative does not provide an accurate assessment of the impacts of development of solar and wind facilities.

An EIS is required to present "reasonable alternatives" that must include the "no action alternative." WAC 197-11-440(5)(b)(ii). Moreover, the EIS must "present a comparison of the environmental impacts of the reasonable alternatives and include the no action alternatives." WAC 197-11-440(5)(c)(vi). Therefore, the purpose of the no action alternative is to assess impacts to the environment of failing to pursue the proposal and the action. Accordingly, the no action is "typically defined as what would be most likely to happen if the proposal did not occur." Wash. State Dep't of Ecology, State Environmental Policy Act Handbook (2018) (SEPA Handbook).

In this case, the proposed action is development of solar and wind facilities at the programmatic level. *See* PEISs, Section 1.3). Accordingly, the no action alternative should be the lack of development (or lack of sufficient development) of solar and wind, respectively.

Unfortunately, the No Action Alternative in the PEISs does not accurately reflect this approach. Instead, the PEISs define the no action alternative as follows: "Under the No Action Alternative, it is assumed the city, county, and state agencies would continue to conduct environmental review and permitting for utility scale solar [and wind] development under existing state and local laws on a facility-by-facility basis but without the use of this PEIS for reference." Solar PEIS at 28; Wind PEIS at 29.

10 This formulation improperly conflates the environmental review document (the PEIS) with the action the PEIS analyzes (the development of utility scale solar and wind generation facilities), such that the no action is actually the absence of the PEIS. The no action should not be focused on the impacts of the lack of programmatic review—rather, it should be focused on the impacts of the lack of the action. This failure to define properly the no-action has real consequences. Ecology's analysis of the impacts of the improperly defined no-action alternative leads to insufficient understanding of the impacts of the proposal, by comparison.

A comparison with a properly defined no action alternative creates an opportunity to highlight not just impacts of development of renewable resources, but also the benefits of the proposal, such as reduction in GHGs and non-energy benefits to overburdened communities, as discussed below. It also achieves the legislature's intent of HB 1216 by highlighting how the proposal will "[f]ight climate change and achieve the state's greenhouse gas emission limits; improve air quality; grow family-wage clean energy jobs and innovative clean energy businesses that provide economic benefits across the state; and make available secure domestic sources of the clean energy products needed to transition off fossil fuels." *See* HB 1216, § 1(1).

At a minimum, even if Ecology does not change the no action alternative, Ecology should at least consider identifying that the development of renewable resources will be slower in the absence of the PEISs. This would be consistent with the assumption that the PEISs work as anticipated in "[e]nabl[ing] more efficient and effective siting and permitting of clean energy projects[,]" and

"facilitat[ing] the rapid transition to clean energy that is required to avoid the worst impacts of climate change on Washington's people and places." HB 1216, § 1(2).

11

C. The GHG Analyses are based on a fundamentally flawed framework that ignores the benefit of GHG reduction associated with operation of solar and wind resources.

The GHG analyses in the PEISs focus on GHGs associated with the construction and operation of the facilities in isolation and without comparison to the status quo. The Solar PEIS focuses— and calculates— GHGs from resource extraction and manufacture of PVs, construction of the facility, and vehicular traffic associated with the operation of the facility. Solar PEIS at 61. The Wind PEIS, likewise, focuses on GHG emissions from the "upstream, downstream, and operational and [sic] processes," including "the raw material extraction and construction of facility components, along with the construction of the facility," "vehicle exhaust emissions from maintenance activities," "decommissioning and disposal of the turbines and other components." *See* Wind PEIS at 61. Notably, while the GHG analyses nominally mention GHG reductions as compared to fossil fuel generation facilities,[4] they do not attempt to calculate those reductions or credit those GHG reduction benefits against the GHG impacts from manufacture of component parts, construction of the facility, and vehicular traffic associated with their operation.

12

This significant error is related to the failure to clearly define the no-action alternative. The very purpose of solar and wind projects is to reduce the state's GHG emissions. The analysis in the PEISs ignores those reductions and focuses solely on additive GHG emissions associated with the manufacture of the components of the facility and the facility's construction. Solar PEIS at 61, Appx. C; Wind PEIS, Appx. C, 10–11, Table 4 at 15. That analysis of emissions without context and comparison to the true no action alternative and continued reliance on other forms of generation defies credulity and erodes credibility of the analysis. If these facilities did not provide GHG reduction benefits, the legislature would not have adopted CETA mandating the construction of facilities like this to reduce emissions associated with generation of electricity.

Demand for electricity in Washington is going up, particularly with the transition of significant portions of the transportation sector. It is possible to simultaneously recognize and calculate the lifecycle emissions associated with clean energy facilities, while still calculating the foreseeable GHG consequences of a no action or more GHG intensive generation alternative.

Compounding the problem, the PEIS seems to suggest that offsets for the GHGs associated with construction and operation are required for the GHG emissions. While the PEIS concludes that

[4] For example, the Wind PEIS states: "[t]he operation of onshore wind energy facilities would reduce overall GHG emissions compared to a fossil fuel power plant that would otherwise be in operation to supply the same amount of electricity. Overall, GHG emissions would be reduced if onshore wind energy production replaces fossil fuel energy production over the next 20 years. Washington State law requires utilities to have net-zero GHG emissions by 2045." Wind PEIS at 61.

there will be "less than significant impacts" related to GHGs that conclusion is premised on compliance with the law and with mitigation measures identified in the PEIS, which includes the potential for offsetting GHG emissions associated with the manufacture of components and construction of the facilities. It is absurd to require offsets without crediting for GHG reductions the facilities are designed to provide.

13 **D. The PEISs appear to commit to studies and analysis that are not necessary for all solar and wind facilities, thereby hindering a streamlined project-level review.**

The PEISs purport to impose an obligation to conduct, in all instances, additional study of various impacts at the project level. This is inconsistent with the legislative intent of the PEIS and commits lead agencies and applicants to a review that exceeds the level of the inquiry/analysis that is currently typically required for many solar or wind facilities.

Specifically, many of the conclusions in the PEISs that there will be "less than significant impacts" on elements of the environment are premised on compliance with mitigation measures identified in the PEIS. For some elements of the environment, the mitigation measures identify more robust detailed studies, which implies that of no significant impact can only be confirmed with additional studies identified in the PEIS.

14 In many instances, the level of inquiry and analysis is not warranted. For example, the conclusion that solar and wind facility development will not impact earth resources is qualified upon compliance with the mitigation measures that include completion of "detailed geotechnical engineering, soil, and hydrologic studies to characterize site conditions." *See* Solar PEIS at 55; Wind PEIS at 55. It is not typical to require hydrologic studies for these kinds of facilities unless there are unique site-specific circumstances. A more refined assessment that identifies under what more limited circumstances such a review is needed to mitigate specific impacts would be more helpful.

Similarly, the conclusion that solar and wind facilities will not impact water resources appears to be qualified upon compliance with the mitigation measures that include completion of "hydrologic study of the site" and identification of "site surface runoff and drainage patterns and groundwater levels and flow direction." *See* Solar PEIS at 74; Wind PEIS at 75. It is not typical to require these studies for solar and wind facilities unless unique site-specific circumstances warrant that review. Accordingly, a more refined assessment that identifies the unique site- specific circumstances under which such a study would be required is more helpful. To require it of all proposed facilities simply increases the level of study beyond what is typical and expands project-level review, rather than streamlining it.

Additionally, the conclusion that solar facilities will not create significant visual impacts is qualified upon compliance with the mitigation measures that include completion of a "detailed visual resource analysis during siting to identify and map landscape characteristics, key observation points (KOPs), and key viewsheds, prominent scenic, Tribal, and cultural landmarks; and other visually sensitive areas near the facility location." Solar at 132. While these are helpful tools, they are not always needed. Instead, Ecology should consider requiring them only when site specific conditions dictate it.

15 **E. The analysis of impacts on resources relevant to Tribal rights, interests and resources misses the mark and works at cross purposes with the legislative intent.**

In HB 1261, the legislature directed Ecology to consider impacts to "[c]ultural resources and elements of the environment relevant to tribal rights, interests, and resources including tribal cultural resources and fish and wildlife and their habitat" and to "consult with federally recognized Indian tribes and other agencies with expertise in identification and mitigation of probable, significant adverse environmental impacts." RCW 43.21C.405(3)(a)(v). PSE shares the legislature's goals to use the PEIS process to increase information exchanges with Washington tribes early and to make a basic engagement and mitigation road map for potential impacts, including to cultural resources. It is our sincere hope that this PEIS effort increases communication with tribes on renewable energy development and works to advance conversations around avoidance, minimization and mitigation for potential impacts that are specific to tribes while also providing more certainty regarding the permitting process.

16 We are concerned, however, that the PEISs should have better define an appropriate, more standardized process for SEPA tribal engagement, impact analysis, and mitigation. Specifically, this section of the PEISs defers all consideration to project level-review. The PEISs present mitigation as a list of additional analysis and discussion that could be taken to defined impacts against which all subsequent SEPA project review will be evaluated which in practice would work at cross-purpose with the legislative intent of the statute by not providing a road map for effective resolution of the impact issues.

As noted above, tribal consultation is critically important to SEPA review and tribes must have an appropriately robust role. However, the legislature intended for the PEISs to provide more specific guidance than what this chapter contains. If after additional work and consideration, Ecology cannot be more precise, we suggest that it would be better to reduce the discussion and expressly defer to consultation at the project-level.

17 **F. Analysis of impacts on environmental justice and overburdened communities ignores non-energy benefits of solar and wind facilities.**

The Legislature specifically directed Ecology to consider impacts to "environmental justice and overburdened communities," RCW 43.21C.405(3)(a)(iv), with an eye towards completing impact analysis and identifying mitigation to streamline subsequent project review. Unfortunately, the analysis falls short of that goal.

18 As a preliminary matter, the sections in the PEISs focus exclusively on potential adverse impacts without any discussion of non-energy benefits to named communities from renewable energy projects. As acknowledged in the PEISs, renewable energy development results in certain temporary construction impacts and potentially longer term impacts (e.g., aesthetic impacts). Omitted from the PEISs, however is a discussion of the non-energy benefits to named communities from renewable development. These can include economic benefits (e.g., rent to local land owners, tax revenue to local municipalities, and jobs) and non-economic benefits (e.g., improved municipal services (due to improved tax base). Increased access to renewable energy cumulatively, can also support a reduction in burdens experienced by named communities (e.g., reduction in health impacts as transportation decarbonizes and reduction in power outages). The identification and tracking of benefits and burden reductions is required pursuant to CETA. *See* RCW 19.405.040(8). Omitting it from the PEISs removes important context and opportunities in this statewide conversation on renewable energy development in the state. This approach is also consistent with the treatment of other potential environmental impacts (e.g., with respect to aesthetic impacts, when considering different height turbine alternatives, review appropriately considers that taller turbines may be seen from farther away, but have the benefit of requiring bigger spacing between turbines which can help to reduce the potential for visual clutter). Examination and discussion of these benefits is essential to a thorough impact analysis because it provides context and balance to the potential adverse impacts from the facilities.

19 Moreover, the "significance" standard applied in both PEISs is insufficiently defined. In several instances, the findings indicate that impacts to other elements of the environment could be significant and disproportionate if "located near" Environmental Justice and Overburdened community populations. *See* Solar PEIS at 42–43 (impacts from conversion of agricultural lands, increased wildfire, visual impacts, changes to rural character are disproportionate if "located near" Environmental Justice and Overburdened Communities); *see also* Wind PEIS at 40. The proposed standard is both vague (no precise indication of what constitutes "near") and inaccurate as it does not differentiate between impacts that would accrue differently to named communities than those to the general population. Where the significant impacts identified accrue to everyone, the question of whether there are impacts to overburdened communities should be one where the significant impacts effect the population in a greater way than the general population.

The analyses to determine whether an impact is disproportionate in this way must be added. The evaluation of impacts (for all subjects within this section) should be a two-step process similar to

the federal NEPA guidance.[5] The first steps involves a determination if an impact is significant (regardless of the presence of Environmental Justice or Overburdened Communities). If the conclusion is no significant impact, there cannot be a significant impact on Environmental Justice or Overburdened Communities. In the second step there needs to be analysis to determine if the significant impact to Environmental Justice or Overburdened Communities appreciably exceeds those that accrue to the general population.

20 The analysis also fails to specifically address "overburdened communities." Impacts to Environmental Justice and Overburdened Communities should specifically address whether or not projects would contribute to the factors (negatively or positively) that qualify these communities as overburdened. Ecology should provide guidance on these evolving issues in the PEISs to ensure adequate and useful analyses are completed.

21 Finally, the section does not adequately explain whether the impacts can be mitigated and how. Additional analysis and explanation is needed to make this chapter useful for project-level review.

22 **G. The Solar PEIS relies too much on consistency with Washington State University Least Conflict Solar Siting Study maps**

Although the Legislature directed Ecology to "consider the findings of the Washington State University least-conflict solar siting process," RCW 43.21C.405, Ecology appears to encourage compliance with the maps associated with that study for purposes of mitigating impacts. *See, e.g.*, Solar PEIS at 88 (biological resources), 122 (Land use).

23 As a preliminary matter, it is not clear whether a potential project site must be identified on the map as an area appropriate for siting in order for the project to be considered to have adequately mitigated for impacts, which is an approach that PSE strongly opposes. As noted above, those sections of the PEIS suggest that a determination that impacts are less than significant depends on "implementation of actions that could avoid and reduce impacts." *See* Solar PEIS at 87. Accordingly, if mitigation includes "consideration" of the study's maps to avoid areas where the maps discourage development, it is not clear whether a facility proposed in those locations has satisfied the mitigation.

24 More generally, the over-reliance on that study is problematic. PSE appreciates efforts, including the Least Conflict Solar Siting Study maps, which seek to direct development to areas that avoid impacts of greatest concern. Such mapping, however is at too high a resolution (i.e., mapping polygons) to be used in site-specific decision-making. It also incorporates considerations and

[5] *See* Council on Environmental Quality, *Environmental Justice–Guidance Under the National Environmental Policy Act* (Dec. 10, 1997), available at: https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf (last updated on Dec. 26, 2023).

value assessments that more appropriately belong to local decision makers, including SEPA and permitting leads. PSE supports pointing to this resource as a tool, but strongly requests that determinations as to development suitability be made based on site-specific data. If site-specific data shows unacceptable impacts to ecological, cultural resource or land use, those impacts should be evaluated and addressed by the permitting entity.

H. Additional comments are attached in a chart.

We have attached a chart in which we have made comments to specific parts of the PEISs. As noted above, this is based on the level of review of extensive documents that could be completed in a short comment period. It does not include comments on the appendices to the PEISs.

PSE appreciates the opportunity to comment on these potentially valuable tools in expediting the state's conversion to renewable sources of electricity. We appreciate Ecology's hard work on the PEISs and encourage more in the coming months to ensure that the documents are as valuable as the Legislature intended.

Sincerely,

Brian Carrico
Major Facility Siting Manager
Puget Sound Energy, Inc.

Cc:
Lorna Luebbe, General Counsel/VP Sustainability
Sara Leverette, Asst. General Counsel/Dir. Environmental Services
Maggie Douglas, Government Relations Manager

Attachment A

	Section Reference		Comment
	Solar	Wind	
25	General	General	Site characterization in Section 2.5 and throughout the PEISs is discussed in the context of overall construction activities. Acknowledgement should be made that site characterization can occur prior to project activities and may be completed prior to SEPA review.
26	General	General	For many environmental elements a general statement is made that a larger project will result in greater impacts. This analysis does not properly consider site specific conditions. While the geographic extent of impacts is one consideration it is not the only determinate. Proper qualification should be made to this generalization.
27	General	General	The analysis of impacts during construction and operations needs proper differentiation throughout to avoid counting impacts twice. As an example, Land Use (e.g., Wind/Solar PEIS at 4.10.3.1), includes conversion discussions in both construction and operations.
28		2.2.1	This section should be updated to reflect technology changes that could result in larger and even taller. Even if the analysis is not completed recognition should be added regarding this fact as well as identifying what environmental elements could be changed by increased turbine sizes.
29		2.2.1.3	To be more complete and accurate, this section should clarify that the mechanical brakes on the drivetrains of wind turbines are used in conjunction with blade pitch to prevent the rotor from turning.
30		2.2.1.4 Wind turbine measurement and orientation equipment	Wind turbines do not typically have anemometers installed at different heights as this section suggests. Wind speed measurements at varying heights is commonly done on meteorological towers. On wind turbines, wind speed measurement is performed only near hub height.
31	2.2.1.5 Transformers	2.2.3.1 Transformers	The caption for Figure 2-5 (Wind PEIS) and 2-4 (Solar PEIS) includes a note with a sentence that says: “Higher voltage means more electricity is flowing.” Please strike this sentence because it is inaccurate and unnecessary. A system with a greater operating voltage allows more electrical energy to flow per unit of electrical current than a system with less operating voltage. A greater operating voltage does not necessarily mean that more energy is flowing.
32	2.2.3 Buildings for operations and maintenance	2.2.4 Buildings for operations and maintenance	The first paragraph in this section has a sentence that says that “Lighting would be needed for security and occasional work and maintenance.” Work and maintenance at wind facilities is ongoing, and is not considered occasional.
33		2.5.3 Operations and maintenance	This section states that “onshore energy facilities would not typically have staff on site on a daily basis…” In PSE’s experience operating three onshore wind farms, staff are on site performing maintenance every workday. Please update accordingly.
34		2.5.3 Operations and maintenance	The number of people needed to operate and maintain utility scale onshore wind facilities often exceeds 20 people in PSE’s experience. Please update this section accordingly.
35		3.1 Assumptions for determining	The geographic scope of the study should be limited to areas with an average wind speed of 13 mile per hours consistent with the US

	Section Reference		Comment
	Solar	Wind	
		geographic scope of study	Energy Information Administration ("EIA") which recommends the following: Good places for wind turbines are where the annual average wind speed is at least 9 miles per hour (mph)—or 4 meters per second (m/s)—for small wind turbines and 13 mph (5.8 m/s) for utility-scale turbines. Favorable sites include the tops of smooth, rounded hills; open plains and water; and mountain gaps that funnel and intensify wind. Wind speeds generally increase with increasing elevation above the earth's surface. https://www.eia.gov/energyexplained/wind/where-wind-power-is-harnessed.php
36	3.1 Assumptions for determining geographic scope of study	3.1 Assumptions for determining geographic scope of study	In both PEISs, Ecology limited its geographic scope of study to areas within 25 miles of existing transmission lines of 230 kV or greater. Yet, in asserting these, Ecology acknowledges that a whole area of land currently developed with significant solar energy infrastructure is excluded based on these assumptions. This indicates that other areas that are well-suited for solar energy are likewise excluded.
37	4.1.2 How impacts were analyzed	4.1.2 How impacts were analyzed	This section includes a reference to the health and wellbeing of tribal members. This appears to be beyond the scope of WAC 197-11-440(6)(e) and WAC 197-11-444. PSE sees a meaningful place for addressing these issues, but asks for better clarification and examples as to how this applies to a SEPA analysis.
38	4.1.1 Affected environment	4.1.1 Affected environment	The affected environment section does not properly consider tribal access to lands across the geographic scope of the study. While resources important to Tribes may potentially be present across the geographic scope of the study area this does not mean Tribes or tribal members currently have access to lands where these resources are located. For example, private landowners may not allow access to lands (for safety or other reasons), and if a project occurs in this situation, it would not have the same impacts to tribal access to those resources as for lands where access is available.
39	4.1.3.2 Actions to avoid and reduce impacts	4.1.3.2 Actions to avoid and reduce impacts	Remove the mitigation requirement to contact tribes before land is acquired. This is inconsistent with how acquisition happens and compromises the process. Requiring a Tribal monitor on archaeological survey crews should be changed from a requirement to a recommendation that affected tribes be invited to provide a monitor. Tribes may not always have a desire or resources to provide this service and thus should be left up to the individual tribe. The Siting and Design Considerations could include potential mitigation by opening of or allowing access to currently closed lands to tribal members.
40	4.2.1 Environmental justice and overburdened communities -	4.2.1 Environmental justice and overburdened communities -	Many census tracts in rural areas of the state cover very large geographies and may not be indicative of the actual populations that may be proximate to and potentially see impacts from a project. The analysis of impacts needs to include this consideration.

	Section Reference		Comment
	Solar	Wind	
	Affected environment	Affected environment	
41	4.2.2 Environmental justice and overburdened communities - How impacts were analyzed	4.2.2 Environmental justice and overburdened communities - How impacts were analyzed	The methodology for determining Environmental Justice impacts is inadequate and fails to provide an analysis to determine whether impacts are disproportionate and leads to conclusions that are too broad to be helpful. The analysis merely notes whether these populations are present in the census tract and assumes because of this that impacts would be significant. An impact would only occur if it is disproportionately high and adverse (see NEPA guidance). An effort to determine whether an impact is disproportionate must be added. The analysis also fails to specifically address “overburdened communities”. Impacts to overburdened communities should specifically address whether or not projects would contribute to the factors (negatively or positively) that qualify these communities as overburdened. Including this in the document would provide guidance for projects in this evolving topic.
42	4.2.3.1 Environmental justice and overburdened communities - Findings or all soar facility types evaluated in the PEIS - Impacts	4.2.3.1 Environmental justice and overburdened communities - Findings for utility-scale onshore wind facilities - Impacts	The analyses of impacts to Land Use should not include dust, noise, traffic and visual changes. That should be addressed under those resources as they are not general land use items. The analyses of impacts lacks any discussion of how conversion of natural resources lands of long-term commercial significance would be a significant impact. The conclusion is reached without any discussion of scale or intensity and does not discuss how this relates to Environmental Justice or Overburdened Communities and merely states it would be disproportionate if located near these populations. See WAC 197-11-794 for a discussion of significance. The evaluation of impacts (for all subjects within this section) should be a two-step process similar to the federal NEPA guidance (see https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf). The first steps involves a determination if an impact is significant (regardless of the presence of Environmental Justice or Overburdened Communities). If the conclusion is not significant, there cannot be a significant impact on Environmental Justice or Overburdened Communities. In the second step there needs to be analysis to determine if the significant impact to Environmental Justice or Overburdened Communities appreciably exceeds those that accrue to the general population.
43	4.3.3.2 Earth - Actions to avoid and reduce impacts	4.3.3.2 Earth - Actions to avoid and reduce impacts	Specific detail should be given to which geologic hazard areas require avoidance and which can be addressed through compliance with standards that are protective of the hazard. For example, seismic hazards are located across broad swaths of the geographic scope, and it may not be possible to avoid them. The prioritization of sites with suitable topography could result in development of sites with less suitable wind or solar resources. A more appropriate consideration would be to design project facilities to locate on suitable topography within an overall site. An overall site could contain significant topographical features, but these could be avoided by appropriate design of the project facilities.

	Section Reference		Comment
	Solar	Wind	
44	4.5.3.1 Water Resources – Affected environment - Impacts	4.5.3.1 Water Resources – Affected environment - Impacts	The discussion of water resource impacts includes many statements that use the term “would” in describing impacts. For example: “In-water construction…. would temporarily elevate stream turbidity levels from sediment disturbance and temporary water management….” Appropriate BMPS and construction methods can be employed to manage these impacts and an appropriate qualifier is to classify these as impact that “could” occur.
45	4.5.3.2 Water Resources – How impacts were analyzed - Actions to avoid or reduce impacts	4.5.3.2 Water Resources – How impacts were analyzed - Actions to avoid or reduce impacts	Critical Areas is a broad term used to describe different water resources as well as non-water resources. The avoidance measure for critical areas should be refined to be more specific about which resources should be avoided. For example, wind and solar farms would not have to avoid critical aquifer recharge areas. Moreover, the sentence should more clearly state that the projects should “avoid, to the greatest degree possible. Where avoidance is not possible, projects should mitigate any impacts consistent with applicable critical areas regulations.” Without clarification, the language could be misconstrued as overly restrictive, beyond what is required under critical areas codes, compliance with which should be deemed adequate to mitigate impacts. The avoidance measure for contaminated soils and impaired receiving waters is not necessary. Appropriate controls can be put in place to avoid impacts associated with these features. Suggest changing this to “Structures sited in areas of known soil or groundwater contamination, or in direct proximity to impaired receiving waters should employ appropriate controls to minimize potential impacts.” Floodplains are addressed twice in the list. The first reference (Avoid siting facility infrastructure in floodplains) should be removed in favor of the more detailed second entry which properly addresses design considerations that can be employed to minimize potential impacts.
46	4.5.3.2 Water Resources – How impacts were analyzed - Actions to avoid or reduce impacts	4.5.3.2 Water Resources – How impacts were analyzed - Actions to avoid or reduce impacts	The condition that BESSs should be sited “away from” surface waters is vague and should be clarified.
47	4.6.3.1 Biological Resources – Findings for utility-scale solar facilities - Impacts	4.6.3.1 Biological Resources – Findings for utility-scale onshore wind facilities - Impacts	Impacts are stated as increasing based on the project size. This correlation is not always true. A larger project area could be sited in are that has low habitat values while a small project could be sited in areas of high habitat values. Appropriate consideration should be included in the analysis of impacts and a qualifier added to the conclusions. The impact discussion does not differentiate from short term and temporary impacts such as disturbance from construction activities versus the long-term impacts of habitat modification. For example, construction activities can disturb wildlife during those activities.

	Section Reference		Comment
	Solar	Wind	
			However, after project completion that impact is eliminated. Wind farms also result in a relatively small footprint across a large project area. The experience at our wind facilities is that wildlife use can be heavy and that facilities can actually preserve large land areas from other more intensive development. This should be recognized in the evaluation and assessment of significance for project impacts. 48 The discussion of the applicability of Forest Practices Act rules should not be included in the impact discussion unless its relationship to impacts on terrestrial habitats is specifically addressed. The conclusion surrounding activities that could have less than significant impacts is not clear. It includes a state that "some" activities could be less than significant but does not identify what impacts are less than significant. This is not helpful for future project reviews. 49 The conclusion on impacts to habitat are determined to be significant when there would be "permanent degradation, loss, or conversion of suitable habitat that is critical to species viability or disrupt habitat continuity along migration routes…" This does not include any consideration of the size or severity of the impact – just the mere presence of it. At a minimum the language needs to change "would" (indicating that the impact will occur at any level) to "could" to allow proper consideration of the size, severity and likelihood of an impact occurring consistent with WAC requirements. Leaving as is would trigger any project to require an EIS as significant impacts would occur if ANY suitable habitat was impacted. The term suitable habitat is too vague to be meaningful, is not a term that is typically used and is not discussed in the Affected environment discussion. This term could mean habitat for any and all species (which essentially encompasses all of the study area to some degree) or something that covers less area. The FEIS should reconsider this term and consider impacts appropriately.
50	4.6.3.2 Biological Resources – Actions to avoid and reduce impacts	4.6.3.2 Biological Resources – Actions to avoid and reduce impacts	The term "possible" (*able to be done; within the power or capacity of someone or something*) should not be used in the avoidance of priority habitat and shrubsteppe habitat. *See* Solar PEIS at 88; Win PEIS at 90. A more appropriate term to use is "practicable" (*capable of being put into practice or of being done or accomplished: feasible*). This should be considered across all environmental elements as well. This potential impact would instead benefit from reasonable, standardized compensatory mitigation where it cannot be avoided. Additionally, would benefit from assessment of the degree to which operation (as compared to construction) actually affects shrubsteppe- and priority-habitat functions. The measure requiring screening of sites through mapping resources is unclear on whether it is merely to identify resources or to eliminate areas from siting of wind and solar facilities. Screening

	Section Reference		Comment
	Solar	Wind	
			is appropriate to determine which resources should be evaluated but it should not be used to determine final site suitability. Following APLIC design guidance for overhead transmission lines could be considered as a design mitigation for avian impacts. PSE has successfully used the 2009 WDFW mitigation guidelines but we have significant concerns regarding the recently released draft update. The FEIS should consider any impacts associated with following the guidelines.
51	4.8.3.1 Environmental health and safety – findings for utility-scale solar facilities - Impacts	4.8.3.1 Environmental health and safety – findings for utility-scale wind facilities - Impacts	The Wildfire Risk during construction discussion does not properly address wildfire risks. Risks during construction would likely be similar to already occurring activities within the project area (agriculture or forestry) but would likely be less risk due to the permitting and monitoring efforts that go on for this construction as compared to other activities. In addition, the conclusion of a significant adverse impact is not supported by the analysis or specifics of wind or solar facility construction. The conclusion should be not significant unless further analysis is completed that supports a significance determination. A better analysis of wildfire risk during construction and operations should be developed. All wildland fires in Washington have an investigation to determine cause. An analysis of this information could identify fires with ignition sources resulting from the construction or operation of wind or solar farms to determine frequency and severity of impacts. The current analysis does not support a significance determination. Consideration should also be given on project features that can reduce fire risk such as project access roads acting as fire breaks and access routes for fire response activities, and how the presence of maintenance and operation personnel can assist in identifying fires and providing initial response.
52	4.8.3.2 Environmental health and safety – findings for utility-scale solar facilities - Actions to avoid and reduce impacts	4.8.3.2 Environmental health and safety – findings for utility-scale wind facilities - Actions to avoid and reduce impacts	Siting and design consideration for fire breaks should be broader and not directed just to perimeter fencing and buildings. For example, turbine or panel access roads could act as fire breaks.
53	4.8.4.1 - Environmental health and safety – findings for utility-scale solar facilities - Findings for facilities with	4.8.4.1 Environmental health and safety – findings for utility-scale solar facilities - Findings for facilities with	There is no discussion in the impacts section that addresses emergency responder risk associated with hazardous air emissions. While it is generally understood that lithium-ion batteries can create hazardous pollutants during a fire there is no discussion of response methods and specific hazards to responders associated with it.

	Section Reference		Comment
	Solar	Wind	
	co-located BESS - Impacts	co-located BESS – Impacts	
54	4.8.4.2 Environmental health and safety – findings for utility-scale solar facilities - Findings for facilities with co-located BESS –- Actions to avoid and reduce impacts	4.8.4.2 Environmental health and safety – findings for utility-scale solar facilities - Findings for facilities with co-located BESS –- Actions to avoid and reduce impacts	Measures for addressing BESS impacts need to properly consider battery technologies. All technologies do not present the same risks or impacts, and this should be addressed in each measure. BESS facilities are viewed as having potentially significant impacts. Solar PEIS at 104; Wind PEIS at 108. The analyses acknowledge standards (fire code, building code, etc.). However, it largely ignores these standards for fire and hazards that are intended to address the relevant issues. Compliance with these measures should be sufficient to mitigate the impacts.
55	4.9.2 Noise and vibration – How impacts were analyzed	4.9.2 Noise and vibration – How impacts were analyzed	Although the specificity with which noise standards are described are useful, the noise analysis relies on FTA methods, which are specific to transit projects and may not be appropriate to wind or solar projects. The FTA guidance is also not followed for the analysis. For example, FTA uses a combination of background noise and increased noise levels to determine an impact versus the 5 dba increase used in the document. Areas that have lower background noise can accommodate greater increases in noise before impacts become significant. Areas with high background noise can accommodate less. The analysis used here is opposite. The analysis also fails to consider established state policy as SEPA is supposed to do. Specifically, the state has exempted daytime construction noise from its limitations on noise. This is clear direction from the state that this impact is not significant – otherwise it would be regulated. Furthermore, the standards are based on judgments of whether a "receptor" located a certain distance from the noise generating source "would be affected" by noise associated with the facility. The PEIS seems to assume, without explanation, that "affected" is the same as "significant adverse impact." *See e.g.*, Wind PEIS 111 (finding potentially significant adverse impacts where receptors are located in certain areas and in "quiet rural setting[s]." Wind PEIS at 111.
56	4.9.3.1 Noise and Vibration - Findings for utility-scale solar facilities - Impacts	4.9.3.1 Noise and Vibration - Findings for utility-scale wind facilities - Impacts	Construction noise is noted as a significant adverse impact. As noted above this conclusion is not supported by state policy. In addition, there is no consideration for duration, terrain, frequency, etc. in making this determination. Rather it is a blanket distance. If construction noise is retained as a significant impact after consideration of other comments, it must be better qualified based on specific site characteristics and changed from an impact that "would" occur to one that "could" occur.

	Section Reference		Comment
	Solar	Wind	
			The analysis of impacts also notes that larger facilities could have noise impacts that are greater than smaller facilities and also uses different noise standards for the conclusions. It is not clear the reasons for both differences. While larger facilities would either be larger geographically or include larger turbines it does not mean greater noise impacts. The turbines could be further apart, could have specific noise characteristics that are lower, may not of sensitive receptors proximate to the project, and other factors that could influence the distance of noise contours and impact levels. This needs to be further analyzed and considered in the conclusion of impacts. Similar to construction noise, noise impacts from substations needs to be considered in light of state policy that specifically exempts them from noise standards.
57 58	4.10.3.1 Land use - Findings for utility-scale solar facilities - Impacts	4.10.3.1 Land use - Findings for utility-scale wind facilities - Impacts	The analysis of impacts to land use includes considerations of dust, noise, traffic and visual changes. These impacts are more properly considered under those specific environmental elements and not in land use. The conclusion of significant impacts associated with conversion of natural resources lands of long-term commercial significance is not supported by the analysis. It does not properly consider context and intensity. As written, if a project converts any amount it is automatically considered to be a significant impact. This section needs additional analysis or a different conclusion reached. It should properly consider the factors such as relationship to existing land use plans and whether renewable energy facilities are an allowed use within natural resource lands and whether they are or are not compatible with other rural and natural resource based land uses. At a minimum the impact should be changed from one that "would" occur to one that "could" occur based on the specific circumstances of the project.
59	4.10.3.2 Land use - Findings for utility-scale solar facilities – Actions to avoid and reduce impacts	4.10.3.2 Land use - Findings for utility-scale wind facilities – Actions to avoid and reduce impacts	Measures to address aviation impacts are not appropriately included in land use. It is more properly addressed in transportation. There are other examples of non-land use issues being addressed in this section as well.
60	4.11.1 – Aesthetics/ visual quality – Affected environment	4.11.1 Aesthetics/ visual quality – Affected environment	Rural character is not appropriately addressed as a visual resource. Visual resources are only one aspect of rural character. Rural character should be only addressed in one environmental element.
61	4.11.2 Aesthetics/ visual quality – How impacts were analyzed	4.11.2 Aesthetics/ visual quality – How impacts were analyzed	The presence of workers and vehicles for maintenance activities is not appropriately considered a visual impact. Proper characterization of visual impacts must include consideration of existing landscape features. Existing built features must be included.

	Section Reference		Comment
	Solar	Wind	
62	4.12.3.1 Recreation - Impacts	4.12.3.1 Recreation - Impacts	Impacts to recreation resources are determined to be significant when there would be “loss of recreation resources or crowding of alternative recreational opportunities…” This does not include any consideration of the size or severity of the impact – just the mere presence of it. At a minimum the language needs to change “would” (indicating that the impact will occur at any level) to “could” to allow proper consideration of the size, severity and likelihood of an impact occurring consistent with WAC requirements. Leaving as is would trigger any project to require an EIS as significant impacts would occur if any recreational resources were impacted
63	4.15.3.1 Public services and utilities – Findings for utility-scale solar facilities - Impacts	4.15.3.1 Public services and utilities – Findings for utility-scale wind facilities - Impacts	Findings for fire response are noted as significant adverse impacts. There is no analysis that describes the impacts and how they would reach a level of significance. The conclusion should eliminate the significant impact unless additional analysis supports a significance determination. The analysis should include data from the lengthy history of wind farm and solar facility construction and operations within Washington and across similar landscapes worldwide.