United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office

Central Washington Field Office
215 Melody Lane, Suite 119
Wenatchee, WA 98801

In Reply Refer To:
01EWFW00-2018-CPA-0006

Stephen Posner
EFSEC Manager
1300 S Evergreen Park Drive SW
P.O. Box 43172
Olympia, WA 98504-3172

Dear Mr. Posner:

Re: U.S. Fish and Wildlife Service Comments on the Columbia Solar Projects

The U.S. Fish and Wildlife Service (Service) has reviewed the application to develop, construct, and operate five Columbia Solar photovoltaic projects (Projects). These include the Camas, Fumaria, Penstemon, Typha, and Urtica projects. TUUSSO Energy, LLC (TUUSSO) would be the owner and operator of the Projects. The following comments are provided as the Service's response to TUUSSO in accordance with Federal Power Act (FPA), as amended (16 US.C. § 791a, *el seq.)* ; the Migratory Bird Treaty Act, as amended (16 U.S.C. § 703); the Endangered Species Act, as amended (16 U.S.C. § 1531 *el seq.)*; and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. § 661 *el seq.)*.

BACKGROUND

TUUSSO proposes to site facilities that would generate and transmit 25 megawatts of electrical power through five solar arrays and two generation tie lines to be constructed on 200 of approximately 232 leased acres in Kittitas County, Washington. The Kittitas Valley is one of the sunniest areas of the state, and the array sites are in close proximity to existing Puget Sound Energy electrical infrastructure. The locations were selected based on several criteria, including consistency with the Kittitas County zoning code and comprehensive plan, land use efficiencies, placement on previously disturbed farmland to avoid environmentally sensitive areas, and the minimization of new electrical infrastructure by locating close to existing distribution lines.

GENERAL COMMENTS

In general, we view the compilation of existing information relevant to the development of the Projects as a vital tool in assessing environmental impacts of the proposed solar projects on aquatic and terrestrial resources. However, we do not discount the importance of bridging existing information gaps through the completion of feasibility studies.

If the Projects are pursued to the construction and implementation phases, we recommend TUUSSO consult with the Service, National Marine Fisheries Service, the Washington Department of Fish and Wildlife (WDFW), the U.S. Bureau of Indian Affairs, and any Indian Tribe or Nation whose treaty rights may be affected by the Projects. These agencies can provide guidance in developing the Projects in a manner that seeks to preserve, protect, and enhance fish and wildlife resources and other environmental values in the project area. It is especially important for TUUSSO to initiate consultation early so that studies may begin in a timely fashion and delays in the Projects may be avoided. We notice in the application that TUUSSO has conducted small scale studies for some aquatic and terrestrial resources, but it appears these studies do not take into account seasonal variation in the distribution of these resources. For example, TUUSSO notes that there are no special status botanical resources located at the proposed construction sites for the Projects and yet this assumption is based upon a one month study where all life history stages of these botanical resources cannot be accounted for in an accurate manner.

In general, while performing project feasibility studies during the term of the permit, TUUSSO should ensure that damage to habitat and resources, particularly aquatic habitat, wetlands, and riparian vegetation, is avoided or minimized. We recommend that TUUSSO be directed to contact the Service prior to undertaking any scientific study, investigation, or other work required by the application. This contact is for the purpose of developing measures to avoid, minimize, and mitigate study impacts on fish and wildlife resources, including federally-listed, threatened, or endangered species, or critical habitat. Further, TUUSSO should be directed to request and secure from the Service such permits and authorizations that may be necessary to avoid violating the take provisions of Section 9 of the ESA, during the performance of required studies.

Lastly, we recommend that the Project to include best management practices which limit compaction and disruption of sediments, limit the disruption of littoral movement (the natural movement of sediments), and limit underwater noise that can disrupt important aquatic species when they are most vulnerable. Noxious weed introduction and spread is also a major concern of the proposed Projects. We recommend that all noxious weed recommendations specified in all applicable state and county weed regulation are followed to the extent practicable. This should include eradicating and preventing any weed populations introduced from the construction and reestablishing robust native plant communities.

SPECIFIC COMMENTS ON THE PROPOSAL

Bull Trout

TUUSSO correctly identifies bull trout as being present in the Yakima River, specifically in closer proximity to the Fumara and Typha projects. The company also concludes that no effects will occur to fish resources such as bull trout due to minimum setbacks outlined in the descriptions of the Projects. The Service does not agree entirely with this "no effect" conclusion. As such, we recommend extending minimum setbacks to at least 100 feet for any of the Projects that would occur within close proximity to fish-bearing streams with documented bull trout use. This recommendation is based upon the assumption that the distribution of bull trout occurs

throughout the Yakima Basin and it is a wide-ranging species. The Yakima River Critical Habitat Unit (CHU) supports adfluvial, fluvial, and resident life history forms of bull trout. This CHU includes the mainstem Yakima River and tributaries from its confluence with the Columbia River upstream from the mouth of the Columbia River upstream to its headwaters at the crest of the Cascade Range. Since the time of listing, several populations are declining and/or have become functionally extirpated. In the original 2002 Draft Recovery Plan the Service identified 13 local populations, in 2010 we identified 16 local populations and since then we recognize that there are 15 local populations as a result of recent genetic analyses and current information in the Yakima Action Plan (Small *et al.* 2009, Reiss *et al.* 2012, Small and Martinez 2013). The Yakima core area exhibits multiple life history patterns but is heavily impacted by fish passage barriers at mainstem river dams (i.e., Bureau of Reclamation dams) and populations are currently mostly adfluvial or resident forms. Fluvial forms, located below the mainstem Naches and Yakima BOR dams consist of fish from both unique and local populations and from populations located above the dams that "flushed" downstream (Mizell and Anderson 2010, Small et al. 2009, and Small and Martinez 2013). Most populations spawn in the general window of mid-September to mid-October but several are unique and spawn between August and early September and late October to early November, exhibiting some of the longest timeframes in the Upper Columbia Geographic Area.

Pacific Lamprey

Little is known about the historic distribution and abundance of Pacific lamprey in the Yakima Subbbasin. These fish were numerous, and were especially important to Native Americans for medicinal and ceremonial purposes and were considered a delicacy by many Columbia Basin tribes.

Population levels of Pacific lamprey have been dramatically reduced from historic levels, with only about 14 fish on average observed annually at Prosser Dam. Known distribution is limited to the mainstem Yakima and Naches Rivers. Pacific lamprey is a Washington State species of concern and is under consideration for ESA listing by the Service.

Work has recently begun to restore natural production of Pacific lamprey in the Yakima Subbasin. Work will initially focus on collecting and reporting information to evaluate status, relative abundance and distribution. Known and potential limiting factors will then be identified, and finally, development and implementation of restoration actions will be undertaken. Restoration actions have included translocation and supplementation activities in tributaries adjacent to the proposed Projects. We recommend that any construction activities associated with the proposed Projects entail best management practices to minimize the impacts of any new roads that may be located near lamprey-bearing streams.

Wildlife Resources

All proposed solar projects entail some level of construction, operation, and maintenance which result in potential impacts to wildlife and wildlife habitat. Our review of the application concludes that there is an adequate description of the quality and capacity of wildlife habitat and its use by wildlife in the project area, and yet potential effects to all wildlife resources, whether it

is mammals, amphibians, reptiles, and invertebrates, does not appear to be equal. The analysis contained in the application appears to be general in scope when considering habitat loss and fragmentation, migratory bird corridors, disruption of foraging areas. The application contemplates new roads associated with the proposed Projects and yet there are no apparent biological metrics to assess project related impacts associated with roads, traffic, habitat loss and fragmentation, avoidance of critical areas, wildlife-vehicular collisions, and the general increased vulnerability to dangers associated with human contact and activities. We would like to further assist TUUSSO by using lessons learned from other proposed solar project assessments in further refining the scale of impacts associated with the proposed Projects. As commonly pointed out by other resource agencies and the Service in previous comments during scoping processes for other proposed solar projects, these types of projects can commonly serve as an avian attractant. We appreciate that the application analyzes the impacts commonly associated with birds and solar power; however, we do not see an equivalent analysis for impacts pertaining to birds mistakenly landing on solar panels due to "lake effect" and ways to minimize the impact of this type of effect. These solutions may include growing native plant species around solar panels to benefit birds and other pollinators and adding special patterns to the Projects' panels or using other strategies to reduce the risk of crash landings.

Finally, the Service recommends the development of an Avian Protection Plan (APP) to encapsulate the mitigation measures for avian resources analyzed in this letter. We also recommend identifying and addressing conservation concerns of other species of migratory birds known or likely to occur at the Projects in this APP, which we did not consider in our consultations and review of associated documents. Currently, the list of federally protected migratory birds includes 1,007 species (50 CFR Part 10.13). We suggest you give particular attention to Birds of Conservation Concern (BCC) species known or likely to occur in the area. BCC species include those exhibiting significant population declines and may become candidates for listing under the Endangered Species Act (ESA) unless threats to their populations are reduced. Please clarify in the final application how these components would be formulated as the proposed Project progresses to the final stages of feasibility.

SUMMARY COMMENTS

Thank you for exploring the application of solar energy as an energy alternative. The Service appreciates the opportunity to comment on the Projects and hope our comments are useful to TUUSSO. In the event that TUUSSO has technical questions or concerns regarding these comments, please contact Steve Lewis at (509) 665-3508 extension 2002.

Sincerely,

Eric V. Rickerson, State Supervisor
Washington Fish and Wildlife Office

cc:
USFWS, Portland, OR (S. Stavrakas)
WDFW, Ephrata, WA (P. Verhey), WDFW
Bob Rose, Yakama Nation, Toppenish, WA

LITERATURE CITED:

Mizell, M. and E. Anderson. 2010. An investigation into the migratory behavior, habitat use and genetic composition of fluvial and resident bull trout (*Salvelinus confluentus*) in the Yakima River Basin. Appendices. Washington Department of Fish and Wildlife.

Reiss, K. Y., J. Thomas, E. Anderson, and J. Cummins. 2012. Yakima Bull Trout Action Plan. Yakima Basin Fish and Wildlife Recovery Board. http://www.ybfwrb.org/Assets/Documents/Plans/YBTAP%209-2012%20FINAL-small.pdf. 424 pages.

Small, M. P., D. Hawkins, and J. Von Bargen. 2009. Genetic analysis of Yakima Basin bull trout (*Salvelinus confluentus*). Final revised report. Washington Department of Fish and Wildlife, Genetics Lab. Olympia, Washington. June 17, 2009.

Small, M.P. and E. Martinez. 2013. WDFW Yakima bull trout report. Phase 3: Genetic analysis of Yakima Basin bull trout (*Salvelinus confluentus*). Washington Department of Fish and Wildlife, Genetics Lab. Olympia, Washington. 23 pages.