



STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL
PO Box 47250 • Olympia, Washington 98504-7250

January 17, 2018

Mr. Jason Evans
500 Yale Avenue North
Seattle, WA 98109

Subject: Data Request 1 for TUUSSO Energy Columbia Solar Application for Site Certification;
Docket: EF-170823

Dear Mr. Evans,

Thank you for the opportunity to review your Application for Site Certification (ASC). The Energy Facility Site Evaluation Council (EFSEC) appreciates the time and effort that has been invested in preparing this ASC. It is our intention that these detailed comments and requests for information will assist you in preparing additional ASC materials, which are necessary for EFSEC as we continue to process your application. This memorandum has been prepared summarizing review of the TUUSSO Energy, LLC (TUUSSO or "Applicant") ASC for the Columbia Solar photovoltaic projects ("Projects" or collectively referred to as "Project"). EFSEC has completed a comprehensive technical review of the Project ASC dated October 16, 2017. EFSEC's review notes and recommended data requests are provided in the table below. Note that each request is labeled with a Data Request ID for tracking purposes and is numbered sequentially within each major chapter (Parts 1-5) of the ASC. Additionally, EFSEC has identified the applicable Washington Administrative Code (WAC) related to content requirements of an ASC.

All data requests identified in the table below will need to be reflected in an updated ASC for future submittal to EFSEC, pursuant to EFSEC WAC 463-60. However, please note that some of the data requests below are more directly connected to EFSEC's siting of the proposed Project under the State Environmental Policy Act (SEPA), thus some of the data requests listed will require the Applicant to also update the SEPA checklist in Appendix A, (see WAC 197-11-350). Changes within each document should be dated for clarity. The applicant shall state that the updated ASC and SEPA checklist are to be used for the SEPA determination for clarity. EFSEC requests that the Applicant submit the updated documents by January 26, 2018. Please contact EFSEC if there are any concerns about meeting this timeline.

Mr. Jason Evans
TUUSSO Energy, LLC
January 17, 2018

For questions about the data request please contact: Sonia E. Bumpus: Phone: (360) 664-1363 or
email: sonia.bumpus@utc.wa.gov.

Sincerely,



Sonia E. Bumpus

Cc:

Gretchen Kaehler, Washington Department of Archaeological and Historic Preservation

Justin Allegro, Washington Department of Fish and Wildlife

Lori White, Washington Department of Ecology- Wetlands

Stephen Lewis, US Fish and Wildlife Service

Tim McMahan, Stoel Rives LLP

Joy Potter, Potter Consulting Group LLC

Greg Poremba, SWCA Environmental Consultants

Data Request ID	Washington Administrative Code (WAC) Reference	Notes	Data Request	Connected to SEPA Determination
1-1	463-60-085; Mitigation measures	The mitigation in Section 1.10 omits the following noise mitigation that was included in Section 4.1.5 (d): <ul style="list-style-type: none"> • Construction equipment would use noise reduction devices that are no less effective than those originally installed by the manufacturer. • Stationary equipment used during construction would be located as far as practical from sensitive noise receptors. • “Quiet” equipment (i.e., equipment that incorporates noise control elements into the design - compressors have “quiet” models) would be used during construction when reasonably available. 	Revise Section 1.10 to include the mitigation measures described throughout the ASC.	
2-1	463-60-135; Legal descriptions and ownership interests	Ownership and lands that lie 1/4 mile either side of the center line for the Fumaria and Typha facilities transmission lines are not described.	Update Section 2.2 to include information on ownership of lands that lie 1/4 mile on either side of the center line for the Fumaria and Typha facilities transmission lines.	X B.8.a
2-2	463-60-145; Construction on site	Section 2.3.2.2 states the trenches for the electrical collection system would be 36 to 48 inches deep. Appendix F (Section 3.7) states electrical conduit or cable left in place would be at a minimum depth of 4 feet to allow for future farming activities.	Update Section 2.3.2.2 to state that the trenches for the electrical collection system will be 48 inches deep.	
2-3	463-60-165; Water supply	Section 2.6.1 indicates TUUSSO has discussed with the City of Ellensburg the availability of municipal water for construction purposes, and that TUUSSO intends to use either on-site water or water trucked in (for Fumaria, specifically) from a municipal source. No documentation of availability of water to meet construction demand from the City was provided in the ASC.	Provide documentation from the City of Ellensburg of the availability of water to meet demand for construction of all 5 proposed facilities and operation of the Fumaria location.	X B.3.a.4
			Update water supply description to indicate: 1) how many trucks and trips are anticipated; 2) estimated distance to be traveled by supply trucks; and 3) what type of truck would likely be used.	X B.14.(a or f)
2-4	463-60-165; Water supply	"TUUSSO is in the process of making a final determination between on-site existing water allocations and municipal water sources, and has not yet submitted any requests to municipal water sources." Per phone call on Dec. 19, Tuusso intends to use existing water allocations for operational uses, and lease agreements provide for this. However, construction water use is intended to be trucked in from municipal water sources. Water supply for operation of the Fumaria site was not discussed and documentation of available supply remains absent.	Update section to reflect current status and documentation of water supply information. Provide documentation from the City of Ellensburg (see also data request 2-3).	X B.3.a.4
3-1	463-60-322; Water (Natural Environment)	Drainage basins were described for each site with figures, but some of the required data under WAC 463-60-322(2) were not located in the ASC.	Describe in Section 3.3.4 the following information: bottom configuration; minimum, average, and maximum water depths and velocities; water temperature and salinity profiles; anticipated effluent distribution, dilution, and plume characteristics under all discharge conditions.	
3-2	463-60-322; Water (Natural Environment)	No documentation of availability of municipal water supply to meet demand for construction of all 5 proposed facilities and operation of the Fumaria location from the City of Ellensburg was provided in the ASC.	Provide documentation from the City of Ellensburg of the availability of water to meet demand for construction of all 5 proposed facilities and operation of the Fumaria location (see also data requests 2-3, 2-4).	X B.3.a.4

Data Request ID	Washington Administrative Code (WAC) Reference	Notes	Data Request	Connected to SEPA Determination
3-3	463-60-332; Habitat, vegetation, fish and wildlife	The ASC states that “The five proposed Columbia Solar Projects would not affect any identified big game migratory corridors or migratory flyways,” but then goes on to state “Because all of the sites are near these less-inhabited areas, migratory species (e.g., deer and coyote) forage or hunt on and travel through the sites. From initiation of construction (with its associated human activity and noise) through long-term operation (with the planned fencing of the sites), 223 acres comprising the fenced-in areas of the solar project sites (not the entire 232 leased acres) would no longer be available to migratory species such as deer (coyote may still use the sites).” It is assumed that wildlife will use alternative routes, but it is not known which species use these sites and at what frequency and duration. The Applicant is to provide more information for determination of “no impact” of big game for the project with respect to adjoining property rather than relying on a comparison of available habitat on the landscape-scale analysis area.	<p>Update Section 3.4.1, Section 3.4.3.3, Section 3.4.5, Section 3.4.6.1, and Appendix C with maps and/or spatial data of identified big game migratory corridors and migratory flyways at the project-scale and landscape-scale.</p> <p>Update Section 3.4.1, Section 3.4.3.3, Section 3.4.5, Section 3.4.6.1, Appendix C with evidence/calculations of “no impact” to migratory species based on removal of available habitat from migration corridors.</p> <p>Update Section 3.4.3.3 and Appendix C with evidence/calculations of “no impact” to big game migratory species based on adjoining property habitat available for species at the Project-scale.</p>	
3-4	463-60-332; Habitat, vegetation, fish and wildlife	<p>Additional information is required to determine acres of impact to special status species habitat. Table 3.4-7 states that 2 acres of Bald Eagle habitat will be impacted when 223 acres of long-term disturbance is proposed for other species in Table 3.4-8. No surveys have been conducted for Bald Eagle (3.4.4).</p> <p>There is a discrepancy between the 3 acres of Columbia spotted frog habitat to be impacted in Table 3.4-7 and acreage impacts for surface waters and wetlands (0.01 acres).</p>	<p>Update Section 3.4.2, Section 3.4.4, Section 3.4.6, and Appendix C with plans for completing a Bald Eagle survey, consistent with WDFW guidance.</p> <p>Update Section 3.4.4, Section 3.4.6, and Appendix C with calculations for impacts to Bald Eagle habitat.</p> <p>Update Section 3.4.2, Section 3.4.4 and Appendix C with calculations for impacts to Columbia spotted frog habitat in the context of impacts to wetlands.</p>	<p>X B.5.a</p> <p>X B.5.a</p>
3-5	463-60-332; Habitat, vegetation, fish and wildlife	Additional information is required for long-term habitat removal and detailed determination of cumulative impacts. There is no description of how impacts will be minimized. The Project solar areas will be seeded with native vegetation, but inaccessible for wildlife that do not fly or fit through the fence holes. TUUSSO will be enhancing habitat that is no longer accessible while increasing fragmentation to wildlife habitat. More information is required for a cumulative impact analysis to big game (especially fragmentation of habitat) from the Project combined with other facilities in the area.	<p>Update Section 3.4.6.3 with cumulative effects analysis and detailed determination of impacts for long-term habitat removal at the landscape-scale.</p> <p>Update Section 3.4.6.3 with cumulative effects analysis of "no impacts" to big game due to habitat fragmentation caused by Project and other reasonably foreseeable projects or activities at the landscape-scale.</p>	X
3-6	463-60-332(3d); Habitat, vegetation, fish and wildlife	Additional information is required to determine how mitigation measures will achieve equivalent/greater habitat quality, value and function. Table 3.4-8 has long-term impacts (200+ acres for some species) - the areas which will be enhanced are inaccessible for wildlife due to fencing (exception is small mammals and some birds). Planting native species and decreasing noxious weeds is beneficial, but there is no quantification of the levels of enhancement/protection.	<p>Update Section 3.4.6.3 with evidence of how mitigation measures will achieve equivalent/greater habitat quality, value, and function if habitat is no longer accessible by wildlife.</p> <p>Update Section 3.4.6.3 with evidence of how to quantify achieving the equivalent/greater habitat quality based on habitat removal calculations.</p>	

Data Request ID	Washington Administrative Code (WAC) Reference	Notes	Data Request	Connected to SEPA Determination
			Update discussion on how buffer improvements along Yakima River will relate to a need for, or lack thereof, erosion control.	
3-7	463-60-333; Wetlands	<p>There is a discrepancy between Section 3.5 statements of "minimal impact" to wetlands (specifically 0.01 acre to Typha wetland TW03, which has triggered a JARPA) and "No impacts are proposed to wetlands within the Columbia Solar Project sites" (see page 269). The "no impact" statement should be updated and replaced with statement regarding a change of wetland acreage due to 0.01 acre of permanent wetland fill (as noted in the Vegetation Management Plan and in Section 4.2.2.3).</p> <p>Section 3.5 should also note whether the resulting culvert replacement would affect the wetland's hydrology (the crushed culvert has created wetland conditions, which suggests that fixing the culvert may drain this wetland area).</p> <p>Also, Section 3.5 does not mention potential impacts to the wetlands from project-related spread of noxious weeds, or from herbicides used to manage weeds on site. Text could be repeated or referenced from 3.4.3.3(b) regarding weed issues, and text regarding herbicides could be included in Appendix B.</p> <p>The Applicant may also consider including wetland areas in the monitoring mentioned in Appendix B: 3.5.1 (current text only mentions surveys around revegetation areas), to track whether project-related activities are increasing the spread of weeds in adjacent wetlands.</p>	Update section 2.5 to include plans for further wetlands review and impact assessment consistent with Ecology guidance.	X B.3
			Update and replace statement of "no impacts to wetlands within the Columbia Solar Project Sites" (3.5.5.2 (b)) with statement regarding a change of wetland acreage (specifically, 0.01 acre of permanent wetland fill).	X B.3.a.(2 or 3)
			Provide information in Section 3.5.4.1 (Typha discussion) and 3.5.5.2 (b) on how the proposed culvert replacement in Wetland TW03 could affect this wetland's hydrology.	X B.3.a.(2 or 3)
			Update 3.5.5.2 (f) to include or reference weed control text in 3.4.3.3(b). State in 3.5.5.2 (f) whether weed treatments would be applied within wetland buffers on site, and if these treatments would be approved for use within wetlands or near standing water.	X B.3.a.2
			Consider including wetland areas in the monitoring mentioned in Appendix B: 3.5.1 to track weed spread in the proposed Project site wetlands.	X B.3.a.2
3-8	463-60-333; Wetlands	This section effectively describes avoidance and minimization of impacts in the wetland buffers. However, it should be revised to include a specific statement that no additional mitigation plan would be required; this would more clearly address the rule requirements.	Update section 3.5.5.1 to include plans for further wetlands review and associated impact assessment and mitigation measures consistent with Ecology guidance.	X B.3.a
3-9	463-60-333; Wetlands	The KCC allows for wetland buffer averaging (KCC 17A.04.030). No variances in the buffer width were proposed in the application. It would be useful to include mention of whether averaging was considered to avoid the 1.52 acres of total buffer encroachment.	Provide information in Section 3.5.5.1 on whether buffer averaging was considered to avoid the 1.52 acres of total buffer encroachment.	X B.3.a
3-10	463-60-333; Wetlands	There is a discrepancy here where the text states no mitigation/restoration is required because "No impacts are proposed to wetlands within the (project)" (page 269). This does not match the earlier statements that TW03 would have 0.01 acre of impact (page 264), which has triggered a JARPA. The "no impact" statements should be updated to note that there will be 0.01 acre of permanent wetland fill. Also, the SEPA Checklist mentions that no mitigation is required because the fill is less than 1,000 square feet; this rationale is not consistent with Ecology's review.	Review applicability of codes in relation to delineated wetlands per Ecology guidance and update 3.5.5.2(b) accordingly.	X B.3.a.3 B.8.g

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3-11	463-60-333; Wetlands	<p>Section 1.10 describes how reseeding will occur within wetlands on the Typha and Urtica sites. This is not mentioned Section 3.5, and should be included to comply with code 3f(f) and to be consistent with Section 1.10.</p> <p>Also, herbicide treatments used throughout the site to treat weeds could affect wetlands; this is not mentioned in Section 3.5. The Vegetation Management Plan covers this but does not specifically list how weeds would be treated if they were in or near the wetland buffers (e.g., would different herbicides be used in these areas, or would hand-pulling be used within wetland buffers?). Consider including these specifics in the management plan.</p>	<p>Update 3.5.5.2 (f) to include or reference weed control text in 3.4.3.3(b). State in 3.5.5.2 (f) whether weed treatments would be applied within wetland buffers on site, and if these treatments would be approved for use within wetlands or near standing water.</p> <p>Consider updating the Vegetation Management Plan with specifics on weed treatments (e.g., protocols or specific herbicides to use) within wetland buffers.</p>	X B.4.a
4-1	463-60-352; Environmental health	<p>Basis for assumed baseline of an Ldn of 40 is needed as it does not match any of the categories outlined in Section 4.1-1. An Ldn of 40 is more than likely overly conservative and was not used in the impacts section.</p> <p>Distance and potential noise impacts from Interstate 90 are unclear. The interstate is mentioned as a potential existing noise source but is not quantified.</p> <p>The presence of high density receptor locations in the vicinity of the proposed site is required by rule but not described in the ASC.</p>	<p>Provide the basis of the use of an Ldn of 40 dBA as a baseline noise level in Section 4.1.</p> <p>Update Section 4.1 with the distance from Interstate 90 to the Project and show that the noise from the interstate is consistent with the assumed baseline.</p> <p>Provide the distance to the closest high-density receptor from the Project in Section 4.1.</p>	
4-2	463-60-352; Environmental health	<p>Operational noise source levels (inverters) are not provided and impact analysis could not be verified.</p> <p>Calculated Lmax is less than Calculated Leq and basis of calculated levels could not be replicated. Assuming the "construction equipment would be operating at the property boundary closest to the considered receptor" is appropriate for an Lmax, but not an Leq.</p> <p>Low frequency noise impacts need to be addressed per the rule.</p>	<p>Provide the noise source level of the inverters used to calculate the noise impacts in Section 4.1.2.2.</p> <p>Provide the calculations used to generate the Leq and Lmax noise levels used to generate the results in Tables 4.1-4 through 4.1-13.</p> <p>Update the noise impact analysis in Section 4.1 with low frequency noise impacts.</p>	X B.7.b
4-3	463-60-362; Land and shoreline use	Discussion of impacts or mitigation related to spills or wastes for prime farmland or farmland of statewide importance is not included in the ASC.	Provide in Section 4.2.13 a discussion of impacts and mitigation (if needed) from spills, discharges, or wastes to the adjoining agricultural community (including prime farmland or farmland of statewide importance).	X
4-4	463-60-535; Socioeconomic impact	The ASC is unclear about source of water for firefighting. ASC Section 4.4.8.1 states water sources are available on site at all but Fumaria site (consistent with Water Supply section of ASC), but how would that water be accessed in the event of a fire?	Identify in Section 4.4.8 how existing water use allocations will be accessed in the event of a fire at each facility, and that this information will be included in the Fire Protection and Safety Plan developed for each of the Projects.	X B.3.a B.15
4-5	463-60-535; Socioeconomic impact	The Applicant cites an EFSEC (2007) reference for some of the information for law enforcement services. This information should be updated (and ESFEC 2007 is not included among the references at the end of the chapter). Unclear whether City	The information for police services must be current in Section 4.4.9, rather than relying on 2007 data. Should TUUSSO desire to retain some information from 2007, include the EFSEC (2007) reference at the end of the chapter. Clarify whether City Police, the County Sheriff Department,	

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		Police, County Sheriff Department, or Washington State Patrol would have jurisdiction over proposed sites. Applicant did not propose a communication plan, sharing contact information for responsible police service for staff, or contact info for each site's construction or operation managers for police services.	or Washington State Patrol would have jurisdiction over each of the proposed Project sites. Provide a communication plan, including contact information for responsible police service and for each Project site's construction and operation managers.	
4-6	463-60-535; Socioeconomic impact	No telephone services (or buildings with a telephone) are described in ASC 4.4.19 or in ASC 3.6.2. Section 4.4.19 suggests cellular phone service is available from a variety of providers. It would be helpful to know that cellular service is available at each site, in the event of emergency, as no landlines are proposed.	Confirm in Section 4.4.19 or 4.4.20 that cellular telephone service is available at (and across) each proposed Project site.	
4-7	463-60-535; Socioeconomic impact	Provide analysis of solid waste generated during construction compared to capacity at area landfills.	Provide in Section 4.4.24 documentation from area landfills that there is sufficient capacity to accept the proposed volume of solid waste generated during Project construction.	X B.15
4-8	463-60-535; Socioeconomic impact	Hospital services are provided, but ambulance services are not described. The Applicant cites an EFSEC (2007) reference for some of the information for helicopter (emergency) services. This information should be updated (and ESFEC 2007 is not included among the references at the end of the chapter).	Provide current information for ambulance services in Section 4.4.25, including current information for helicopter (emergency) services. Should TUUSSO desire to retain some information from 2007, include the EFSEC (2007) reference at the end of the chapter.	
5-1	463-60-540; Other permit applications	The Applicant did not address subparts (2) and (3) of this rule in the ASC. State Permits required by the Applicant are listed in Table 2.23-1, but NOIs for these permits (with the exception of construction stormwater) are not included in the ASC	Address subparts (2) and (3) of WAC 463-60-540 in Part 5 of the ASC.	
S-1	SEPA Checklist - Water	The SEPA checklist suggests it will use on-site existing water allocations but is not clear whether they are surface or groundwater allocations at each of the 4 sites where they exist. We suggest a table which shows each site for the rows, and the various water use stages for the columns (e.g. for construction - water use, water source, water volume; for operation - water source, water use, water volume. In the water source cell the table could state if the source is an existing surface or ground water right.	For each site: <ul style="list-style-type: none"> Clearly identify the proposed water use, water source, and water volume for construction. Clearly identify the proposed water use, water source (including ground or surface allocation) and water volume for operations. 	X B.3.a.4 B.3.b.1
S-2	SEPA Checklist - Animals	A potential impact related to "lake effect" associated with birds and PV panels is not clearly discussed.	State whether this issue has been considered and whether there is currently a proposed method for avoiding injury to birds from "lake effect" of the PV panels.	X B.5
S-3	SEPA Checklist - Noise	WAC 173-60-040 measures noise levels at a receiving property boundary. Residential properties (Class A), have a limit of 60 dBA at the property boundary when the noise source is a Class C source. For example, some sites will have a 67.6 dBA at the project site's boundary. If the adjacent property at that location is residential, there would be a 7.6 dBA exceedance.	Specify the dBA expected at each receiving property boundary and the noise category/class of the receiving property (e.g. class A/residential, Class B/commercial, etc.). Describe if noise reducing mitigation is feasible for whatever exceedance noise level (e.g., 7.6 dBA) projected to be emitted at a receiving property boundary.	X B.7.b
S-4	SEPA Checklist - Land and Shoreline Use	The checklist is not clear about all adjacent land uses. It says "...is surrounded by other farmland." For each site, the checklist should clearly identify the adjacent uses on all sides. Camas has a commercial operation, Better life for Dogs, on the	Clearly describe all adjacent, or nearby land uses within 0.25 miles of the property boundary, for each site.	X B.8.a

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		northwest side of the property boundary. There is a golf and country club on the southeast side of Typha.		
S-5	SEPA Checklist - Aesthetics	The checklist states that adjacent viewers would experience the greatest change in views since the contrast is most noticeable when viewing up close.....Under general mitigation it states “that each of the five solar sites would be adequately screened by either existing or new vegetation or through the application of perimeter fencing to reduce contract from glint and glare for KIPs with level views.” The checklist information is not clear whether any measures are proposed to mitigate effects for close up viewers such as those on adjacent properties.	Reference the discussion in the ASC regarding commitments to mitigate changes to views at adjacent properties, including 1) where mitigation would be implemented, 2) nature of the mitigation (e.g. vegetation, fencing), 3) size of visual barrier, etc.	X B.10
S-6	SEPA Checklist - Noise and Public Services	The response states that TUUSSO would coordinate with Fire District No.2/Kittitas Valley Fire and Rescue and Fire District No. 1 to provide PV training to fire responders and construction staff.	Clarify whether the fire district training would be one training or regular trainings to fire districts scheduled periodically during the life of the facility or reference the relevant discussion within the ASC.	X B.7.a.4 B.15.a
S-7	SPEA Checklist - Public Services	The current response focuses on utilities associated with housing.	Clarify whether any additional utilities would be needed or are planned for installation at any of the sites or reference the relevant discussion within the ASC.	X B.15.b

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