# Exhibit O Water Requirements

West End Solar Project September 2022

Prepared for EE West End Solar LLC

### Prepared by

TETRA TECH

Tetra Tech, Inc.

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#### Attachments

Attachment O-1. Record of Correspondence with the City of Hermiston

### Acronyms and Abbreviations

EE West End Solar LLC
million gallons
operations and maintenance
Oregon Administrative Rule
West End Solar Project

## **1.0** Introduction

EE West End Solar LLC (Applicant), a subsidiary of Eurus Energy America Corporation, proposes to construct the West End Solar Project (Project), a solar energy generation facility and related or supporting facilities in Umatilla County, Oregon. Exhibit O was prepared to meet the submittal requirements per Oregon Administrative Rule (OAR) 345-021-0010(1)(o), related to water use.

## 2.0 Description of Water Use - OAR 345-021-0010(1)(o)(A)

OAR 345-021-0010(1)(o) Information about anticipated water use during construction and operation of the proposed facility. The applicant shall include:

OAR 345-021-0010(1)(0)(A) A description of the use of water during construction and operation of the proposed facility.

#### 2.1 Construction

During construction, the Project will require an anticipated maximum of 12.8 million gallons (Mgal) of water. The primary drivers of water use during construction are road construction and dust control. Water trucks will be used to control dust generation in all disturbed areas during road construction, foundation installation, final cleanup, reclamation, and restoration. Water may be used for fire prevention, but such use would be periodic and likely minor; this would involve stationing a water truck at the job site to keep the ground and vegetation moist to be prepared for extreme fire conditions.

For the construction of foundations, concrete will be transported to the site in concrete trucks. Therefore, no water is anticipated to be needed for concrete mixing on site. The Applicant will implement dust control measures at all areas disturbed by construction activities in a manner that avoids erosion and sediment discharge and is consistent with the best management practices presented in the 1200-C Construction Stormwater National Pollutant Discharge Elimination System Permit that will be obtained prior to construction.

During construction, equipment will be cutting, moving, and compacting the subgrade surface; stockpiling soils for later use; and performing decompaction (as needed) and final grading for site revegetation. Depending on weather conditions, water trucks patrolling the site to control dust will make as many as one pass per hour, wetting down disturbed and exposed soils. Once site preparation work is complete, meaning all soil disturbance is completed and the site is ready for revegetation, dust control becomes minimal. Water is not anticipated to be needed for site revegetation, which would instead rely on natural precipitation and native seed types that are adapted to the rainfall regime of the region.

#### 2.2 Operation

During operation, the Project will require very limited amounts of water. The Applicant conservatively assumes that solar modules will be washed twice per year, which will require approximately 1.65 Mgal of water per year. Water will be applied via a tanker truck and will not have any cleaning solvents in it. Employee sanitation during operations will be provided in the form of a hand-washing station and portable toilets. Drinking water will be purchased in bottles and stored in the operations and maintenance (0&M) enclosure.

## 3.0 Water Sources – OAR 345-021-0010(1)(0)(B)(C)

OAR 345-021-0010(1)(0)(B) A description of each source of water and the applicant's estimate of the amount of water the facility will need during construction and during operation from each source under annual average and worst-case conditions.

OAR 345-021-0010(1)(0)(C) A description of each avenue of water loss or output from the facility site for the uses described in (A), the applicant's estimate of the amount of water in each avenue under annual average and worst-case conditions and the final disposition of all wastewater.

#### 3.1 Water Sources

The Applicant's third-party construction contractor can obtain construction water from the City of Hermiston under an existing municipal water right. Water will most likely be contracted with the Project construction contractor, though the Applicant may contract directly with the supplier. Letters documenting formal commitments from the water supplier will be provided prior to construction. Based on communications with the City of Hermiston (Attachment 0-1), the Applicant believes the contacts made to date, which amount to a non-binding commitment to supply up to 18.3 Mgal, will be sufficient for Project construction. Water for solar panel washing will also be obtained from the City of Hermiston, which will amount to significantly less than the up to 18.3 Mgal for Project construction (see Section 3.2 for quantities).

#### 3.2 Amounts

#### 3.2.1 Construction

During construction, the Project will require an anticipated maximum of approximately 12.8 Mgal of water. This water will be used in activities such as road construction, installation of collector lines, and other activities. Water will also be used for dust control on dirt and gravel roads and laydown areas. Water use totals are presented in the format of Project construction taking place in a single 12-month construction period. Thus, under typical environmental conditions, the average monthly water demand will be approximately 1 Mgal.

Water will be required for grading of parking areas and other incidental uses required in the construction of the Project. Approximately 10.5 Mgal of water will be required for civil and site preparation including road compaction and dust control. This water will be applied via tanker truck in a manner that avoids erosion and subsequent sediment discharge, and is consistent with the best management practices included in the final Erosion and Sediment Control Plan that will be completed prior to construction (see Attachment I-1 for example erosion and sediment control measures and best management practices).

The quantity and frequency of water used for dust suppression will be highly dependent on site and seasonal conditions. Actual dust control water use will vary, depending on the timing of construction and the season, precipitation, soil conditions, temperature, and frequency of repeat disturbance; none of which can be controlled or easily estimated by the contractor. Generally, the quantity of water used for dust suppression, accounting for worst-case dry and dusty conditions, will be 30,000 to 50,000 gal per day, when warranted. Fewer than 50,000 gal will be used for potable drinking water and portable toilet facilities available to construction workers over the 12-month planned construction timeframe.

### 3.2.2 Operations

Once the Project is constructed, there will be limited need for water. Water primarily will be used for cleaning activities such as periodically washing down the solar modules (panels). Bottled water will be used for employee drinking and portable toilets will be used for sanitation during operations.

Depending on the effects of solar module dust and dirt on energy production (referred to as soiling), the solar modules will be washed. For the purpose of this analysis, it is conservatively assumed that they will be washed twice a year, which will require approximately 1.65 Mgal of water per year. This water will be obtained from City of Hermiston under an existing municipal water right. Water will be applied via a tanker truck and will not have any cleaning solvents in it. Employee sanitation during operations will be provided in the form of a portable hand-washing station and portable toilets. Drinking water will be purchased in bottles.

#### 3.3 Disposal

The Applicant does not anticipate any discharge of water from the Project. During construction, water loss will occur primarily through evaporation and infiltration from wetted road surfaces. Because of the relatively low rates of water use and application, it is assumed that no run-off will occur outside of the Site Boundary. Water used for foundations will remain in the concrete mix. Panel washing will be performed using chemical free water via mechanical sprayers. Sprayer volumes will be adjusted to a minimum in order to not only clean as many panels as possible per gallon but also to minimize the amount of water that drains on to the ground. Minimizing the amount of water that hits the ground will help reduce the amount of weed growth. No water used for the Project will be discharged into wetlands, lakes, rivers, or streams. During construction,

sanitary facilities will be portable toilets that will not require water. Portable toilets will be maintained by a licensed service provider.

## 4.0 Thermal Power Plants – OAR 345-021-0010(1)(0)(D)

OAR 345-021-0010(1)(0)(D) For thermal power plants, a water balance diagram, including the source of cooling water and the estimated consumptive use of cooling water during operation, based on annual average conditions.

The Project is not a thermal power plant. Thus, OAR 345-021-0010(1)(0)(D) is not applicable.

## 5.0 Explanation of Lack of Need for Groundwater/Surface Water Permit or Water Right Transfer – OAR 345-021-0010(1)(0)(E)

OAR 345-021-0010(1)(0)(E) If the proposed facility would not need a groundwater permit, a surface water permit or a water right transfer, an explanation of why no such permit or transfer is required for the construction and operation of the proposed facility.

The Project does not need any groundwater permits, water rights, or surface water permits. As discussed above, water for construction and operation can be obtained from the City of Hermiston under an existing municipal water right.

## 6.0 Information to Support Issuance of Groundwater/Surface Water Permit or Water Right Transfer – OAR 345-021-0010(1)(0)(F)

OAR 345-021-0010(1)(0)(F) If the proposed facility would need a groundwater permit, a surface water permit or a water right transfer, information to support a determination by the Council that the Water Resources Department should issue the permit or transfer of a water use, including information in the form required by the Water Resources Department under OAR Chapter 690, Divisions 310 and 380.

The Project does not need any groundwater permits, water rights, or surface water permits at this time. Thus, OAR 345-021-0010(1)(o)(F) is not applicable.

## 7.0 Mitigation Measures – OAR 345-021-0010(1)(0)(G)

OAR 345-021-0010(1)(0)(G) A description of proposed actions to mitigate the adverse impacts of water use on affected resources.

No adverse impacts are expected to result from Project water use during construction or operation; therefore, no mitigation measures are proposed.

## 8.0 Conclusions

The information provided in this exhibit demonstrates that construction and operation of the Project will not result in significant adverse impacts to water resources. Therefore, the Applicant has satisfied the requirements of OAR 345-021-0010(1)(o).

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## Attachment O-1. Record of Correspondence with the City of Hermiston

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From:	Roy Bicknell
То:	Gulick, Kristen; Alex Mccann
Subject:	RE: Response Needed ASAP: Hermiston Water Department Agreement with West End Solar Project (Eurus
	Energy; Tetra Tech)
Date:	Thursday, June 3, 2021 6:02:25 AM

**CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments.

Kristen,

At this time, it appears the City can still provide the water as the letter states, under normal conditions.

Thank you~Roy

Roy Bicknell Water Superintendent City of Hermiston 541-567-5521



From: Gulick, Kristen <Kristen.Gulick@tetratech.com>
Sent: Monday, May 24, 2021 11:44 AM
To: Alex Mccann <amccann@hermiston.or.us>
Cc: Roy Bicknell <rbicknell@hermiston.or.us>; Roy Bicknell <rbicknell@hermiston.or.us>
Subject: Response Needed ASAP: Hermiston Water Department Agreement with West End Solar
Project (Eurus Energy; Tetra Tech)
Importance: High

STOP and VERIFY This message came from outside of the City of Hermiston.

Hello,

I am contacting you on behalf of the proposed West End Solar Project (West End). West End would be an approximately 45 MW solar project with related or supporting facilities including a battery energy storage system in Umatilla County, Oregon. West End would be owned and operated by Eurus Energy America (Eurus). More information on West End can be found here: <u>https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WES.aspx</u>. We are reaching out to you today to inquire about the possibility of the Hermiston Water Department providing up to 18.3 million gallons of water for construction of West End. This is our current, conservative, estimate of water use anticipated for facility construction over a 9 to 12month period. Tetra Tech is under contract to Eurus through the Oregon Dept. of Energy's (ODOE) permitting process. To this end, we will provide to ODOE evidence of consultation with local municipalities that we have been in contact regarding obtaining water for the construction of West End. At this point in the process, Eurus is not required to have entered into a contract with the Hermiston Water Department for water supply, we just need to demonstrate to ODOE that we have been in consultation with the Hermiston Water Department and that yes, you are licensed to supply water to Eurus, how much, your water right permit number(s), and seasonal constraints. Any letter from you to me on this subject does not constitute a contract and you are under no obligation to supply water for the facility, we just need to demonstrate to ODOE that you have water to sell and that we could use as a water supplier if we, at a later date, come to an agreement to do so.

If you could please provide a letter addressing the West End Solar Project as soon as possible, that would be greatly appreciated. It can be a statement on your letterhead with your signature if you like, or even a reply to this email.

Thank you!

Kristen Gulick (she / her) | Environmental Planner Kristen.Gulick@tetratech.com

#### Tetra Tech | Portland

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