Exhibit W

Generation of Solid Waste and Wastewater

Biglow Canyon Wind Farm
December 2025

Prepared for

Portland General Electric Company

Prepared by

TETRA TECH

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Acronyms and Abbreviations

AC	alternating current
ASC	Application for Site Certificate
BCWF or Existing Facility	Biglow Canyon Wind Farm
BESS	battery energy storage system
BIGL or Project Developer	BIGL bn, LLC
BMP	best management practice
Certificate Holder or PGE	Portland General Electric Company
Council or EFSC	Oregon Energy Facility Siting Council
ESCP	Erosion and Sediment Control Plan
EPA	U.S. Environmental Protection Agency
Li-ion	lithium-ion
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODOE	Oregon Department of Energy
RCRA	Resource Conservation and Recovery Act
RFA	Request for Amendment
Site Certificate	Site Certificate on Amendment 3
Solar Components	photovoltaic solar energy generation and battery storage
SPCC	Spill Prevention, Control, and Countermeasure

1.0 Introduction

The Portland General Electric Company (PGE or Certificate Holder) submits this Request for Amendment (RFA) 4 to the Site Certificate on Amendment 3, issued October 31, 2008 (Site Certificate) for the Biglow Canyon Wind Farm (BCWF or Existing Facility) to add photovoltaic solar energy generation and battery storage (Solar Components) to the operating BCWF.

BCWF, owned and operated by PGE, is located within an approved site boundary comprising approximately 25,000 acres, approximately 4.5 miles northeast of the town of Wasco in Sherman County, Oregon. The BCWF operates under the Site Certificate from the Oregon Energy Facility Siting Council (Council or EFSC) as administered by the Oregon Department of Energy. BCWF currently consists of 217 wind turbines, with a maximum blade tip height of 445 feet, and a peak generating capacity of 450 megawatts (MW).

In RFA 4, PGE proposes to add up to 125 MW alternating current (AC) generating capacity from photovoltaic solar arrays and 125 MW in battery storage capacity (Solar Components) in approximately 1,445 acres of land (Solar Area) sited within the existing BCWF site boundary Solar Micrositing Area (RFA 4 Site Boundary[1]).

The Solar Micrositing Area is approximately 1,924 acres and provides a conservative estimate of the maximum area needed for development, micrositing, and temporary disturbances from the Solar Components during construction, rather than the anticipated temporary and permanent disturbance footprint. Within the Solar Micrositing Area, the Certificate Holder has identified a reduced footprint where Solar Components will be concentrated (Solar Area; 1,445 acres). Solar Components will include solar arrays, inverters, battery energy storage system (BESS) facilities and their subcomponents (i.e., inverters), a collector substation, approximately 600 feet of a new 230-kilovolt generation tie transmission line, medium voltage collector lines, operations and maintenance (O&M) structures, site access roads, internal roads, perimeter fencing, facility entry gates, and temporary laydown areas. The maximum generating capacity from the Solar Components will be 125 MW AC, and the infrastructure will be fenced within the Solar Micrositing Area and will cover up to 1,445 acres (Solar Area).

PGE will own and operate the Solar Components as a part of the BCWF (together, Amended Facility or Facility), which, to date, have been developed by BIGL bn, LLC (BIGL or Project Developer). BIGL, in its capacity as the project developer, supports PGE in this RFA 4 and may construct and temporarily operate the Solar Components on behalf of PGE under a Build-Transfer Agreement.

Exhibit W identifies the waste minimization measures that are in compliance with the approval standard found in Oregon Administrative Rules (OAR) 345-022-0120 and follows the submittal requirements in 345-021-0010(1)(w). The information summarized in this exhibit and described in RFA 4 demonstrate that the Facility, as proposed, can be designed, engineered, constructed,

[1] Note, as described in further detail in Section 4.1.1.2 of the RFA 4 Division 27 document, the Solar Micrositing Area is the equivalent of the RFA 4 Site Boundary.

operated, and retired in a manner that satisfies the applicable Council standards. The proposed changes in RFA 4 do not alter the Certificate Holder's ability to comply with the Council's earlier findings and applicable Site Certificate Conditions.

2.0 Description of Solid Waste and Wastewater Generation – OAR 345-021-0010(1)(w)(A)

OAR 345-021-0010(1)(w) Information about the applicant's plans to minimize the generation of solid waste and wastewater and to recycle or reuse solid waste and wastewater, providing evidence to support a finding by the Council as required by OAR 345-022-0120. The applicant must include:

OAR 345-021-0010(1)(w)(A) A description of the major types of solid waste and wastewater that construction, operation and retirement of the facility are likely to generate, including an estimate of the amount of solid waste and wastewater;

Response: As detailed in the following sections, although the proposed changes will result in additional solid waste and wastewater for the Solar Components, the Certificate Holder can still comply with all Site Certificate conditions for waste minimization previously adopted by the Council for compliance with OAR 345-022-0120. Site Certificate Conditions applicable to solid waste and wastewater and that apply to the Solar Components (Council 2008) include:

- Condition 26: Work in compliance with a final Erosion and Sediment Control Plan (ESCP) as required under the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Discharge General Permit 1200-C (see Exhibit I for further information).
- Condition 80: Compliance with hazardous materials laws and protection of public health, safety and the environment.
- Condition 81: Implementation of proper hazardous material spill reporting and mitigation measures.
- Condition 82: Provide portable toilets during construction.
- Condition 83: Discharge sanitary wastewater in compliance county permit requirements.
- Condition 84: Implement Construction Waste Management Plan.
- Condition 85: Compliance with measures for disposal of onsite waste concrete.
- Condition 86: Implementation of proper concrete truck wash down measures to prevent runoff.
- Condition 87: Implement Operations Waste Management Plan.

The Certificate Holder proposes the following modifications to Site Certificate Condition 88:

(88) During operation of the facility, the certificate holder may engage in solar panel and blade-washing activities but shall ensure that these activities do not cause runoff of washwater from the site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall not use acids, bases or metal brighteners with the wash water. The certificate may use biodegradable, phosphate-free cleaners sparingly. [Amendment #~~42~~]

As outlined in Section 6 of the Division 27 document, the following Site Certificate Conditions are proposed for the Solar Components:

- Condition 130: Implement Hazardous Materials Management and Monitoring Plan.
- Condition 131: Implement Spill Prevention, Control, and Countermeasures (SPCC) Plan.

2.1 Solid Waste

The following sections identify the types and quantities of solid waste anticipated to be generated throughout the Solar Components. Solid waste disposal will be provided through a private contract with local commercial haulers.

2.1.1 Construction

Construction of the Solar Components will generate a small amount of non-hazardous solid waste, which are handled by a local solid waste hauler and are managed through the implementation of measures outlined in the Construction Waste Management Plan (Site Certificate Condition 84). The types of solid waste will be similar to those from construction of the previously approved BCWF and associated infrastructure, given that the same types of construction materials will be used (see Exhibit G). Note that the wind portion of the BCWF is already operational; thus, the materials associated with the constructed portions of the Existing Facility are not repeated for the purposes of this analysis. Similarly, the quantities of materials previously documented in previous amendments for the Existing Facility are not repeated and the quantities provided in this exhibit are for only the Solar Components.

Waste materials generated through construction of the additional solar modules, BESS, and associated infrastructure will primarily consist of scrap metal (e.g., wire and rebar scraps), dirt and rock spoils, wood, concrete, concrete waste and other packaging materials, which are consistent with materials previously considered by Council. It is estimated that cumulative Solar Components construction will produce approximately 12,000 cubic yards of waste during active construction (most of which will be from packaging materials), estimated to span approximately 17 to 19 months, which will be disposed of following the Construction Waste Management Plan consistent with Site Certificate Condition 84. Overall, the solid waste types and quantities from construction are typical of any large-scale construction project. Large dumpsters (e.g., approximately 10 tons each) will be used during construction to accommodate solid waste produced during active solar module installation.

Construction and grading of the access roads proposed inside the perimeter security fencing for the solar areas are expected to produce negligible amounts of dirt and rock spoils that will need disposal, because cut and fill measures are expected to balance the need for and use of soils. Foundation excavations for the solar inverter and transformer stations, BESS, O&M buildings, and proposed collector substations are not expected to produce significant amounts of dirt and rock spoils. These materials will be either spread on-site in compliance with soil conservation, erosion and sediment control measures under Condition 26 of the Site Certificate or hauled off-site to in compliance with any applicable law or regulation.

Construction of the Solar Components will create some concrete waste from the construction of foundations for the solar inverter/transformer stations, BESS, O&M buildings, and collector substations. Note that for the construction of foundations, the Certificate Holder or Engineering, Procurement, Construction contractor will buy concrete directly from licensed suppliers (i.e., with a valid water use license) in the area; on-site batch plants are not proposed at this time. Concrete truck chutes may need to be washed down at each foundation site to prevent the concrete from hardening within the chutes. In these cases, the concrete wastewater will be washed out into a dedicated concrete washout area located within each foundation excavation consistent with Site Certificate Condition 86. The soil used to construct the washout area berms (along with any concrete solids) will be buried as part of the foundation backfill. This method for concrete washout water management is a regularly utilized best management practice (BMP) for construction of solar generation facilities within the area and has been accepted by the Oregon Department of Environmental Quality (ODEQ).

2.1.2 Operation

The increased number of solar modules, BESS, and related infrastructure proposed with the Proposed Facility will not change the way that operational solid waste will be handled from what the Council previously considered for the Existing Facility. An insignificant amount of solid waste is expected to be generated during O&M of the Solar Components. This waste may include equipment and components that are replaced, packing materials for replacement components, and waste typical of a small office. It is estimated that no more than 2 cubic yards of waste will be produced monthly during operations, to be disposed of at the Wasco County Landfill or Columbia Ridge Landfill, as identified in the Application for Site Certificate (ASC). The waste will be handled according to the Operations Waste Management Plan (Site Certificate Condition 87).

The BESS may also generate incidental waste from repair or replacement of electrical equipment. The BESS will require augmentation to compensate for degradation. Augmentation will add additional batteries to maintain output, but degraded batteries would not be removed from service. For this analysis, it is assumed that batteries are only removed due to needed repair or replacement during operations, and replacement of batteries for degradation would only happen at decommissioning.

For the replacement of lithium-ion (Li-ion) batteries during operation, the Certificate Holder will follow the handling guidelines of 49 Code of Federal Regulations (CFR) 173.185 (Department of

Transportation Pipeline and Hazardous Material Administration) related to the shipment of Li-ion batteries. Licensed third-party battery suppliers will be responsible for transporting batteries to and from the Solar Components in accordance with applicable regulations. Spent batteries will be disposed of at a facility permitted to handle them, in compliance with applicable Resource Conservation and Recovery Act (RCRA) and Toxic Substances Control Act regulations administered by the U.S. Environmental Protection Agency (EPA) or ODEQ. Note that used Li-ion batteries may contain hazardous waste and will be handled and disposed of per the most up-to-date guidelines at the end of their life, and in compliance with Site Certificate Conditions 80 and 130 (as proposed).

Repair or replacement of the solar modules and associated electrical equipment could generate incidental waste. However, a solar module typically lasts at least 25 years without significant degradation in function, and will be replaced infrequently, if at all. Operation of the solar modules and associated infrastructure will not result in a significant amount of solid waste.

2.1.3 Decommissioning

The increased number of solar modules and BESS will not change the way that decommissioning solid waste will be handled from what the Council previously considered. The anticipated working life span of the Solar Components is 40 years, after which time the Solar Components may be extended, repowered, or decommissioned. Solar Components decommissioning is discussed in greater detail in Exhibit X. In the event the Solar Components would be decommissioned, and the site restored to a useful, non-hazardous condition for other uses, the amount of solid waste can be inferred from the materials inventory provided in Exhibit G. Should the Solar Components be decommissioned, the components will be disassembled, and the materials will be recycled, sold for scrap, or taken to a landfill following the requirements that will be outlined in a retirement plan, per Site Certificate Conditions 109 and 116. Such components and equipment include the solar modules, steel mounting racks, posts, and trackers; inverters, transformers, and battery energy storage modules; concrete and aggregate used for foundations and road construction; the proposed substations and O&M buildings; and other associated structures. Ancillary components, such as concrete foundations and gravel, will be removed in a manner similar to the methodology approved in the ASC. Concrete foundations would be cut and removed to a minimum depth that would be outlined in a retirement plan. Underground cables would typically be left in place, as removing them would cause unnecessary habitat disturbance. Metals and electrical components are expected to be recycled as scrap rather than disposed of in a landfill wherever possible. The portions of concrete foundations that are removed would be disposed of as construction waste or crushed and disposed of at an appropriate location onsite with permission from the landowner, otherwise, excess concrete will be disposed of at a licensed landfill (per Site Certificate Condition 85). Transformers and other substation equipment would be removed to be reconditioned for use elsewhere or recycled as scrap metal.

The decommissioning of the BESS will involve disposing of battery components at an off-site facility designed and approved for disposal or recycling of batteries by licensed third-party battery suppliers, who will be responsible for transporting batteries to and from the Proposed Facility in

accordance with applicable regulations. The batteries will be disposed of at the time of decommissioning in the same manner described above for operational replacement. Ancillary components of the BESS will also be removed in a manner similar to the methodology of the other concrete pads.

2.2 Wastewater

Wastewater generated by the Solar Components during construction will be from the following construction activities: portable toilets, dust abatement, mixing of concrete, concrete equipment washwater, and concrete washout water. Wastewater generated by the Solar Components during operation will be from the following activities: wastewater produced from the proposed and existing O&M buildings and from periodic washing solar panels. This section discusses how each of these types of wastewaters will be handled throughout the life of the Solar Components. The nature of the Solar Components is such that it will not produce industrial wastewater.

2.2.1 Sanitary Wastewater

Sanitation during construction activities will be addressed through the provision of portable toilets located throughout the Solar Components construction area at locations that will be determined by the construction contractor prior to and during construction. Portable toilets will be provided by a licensed subcontractor, who will be responsible for servicing the toilets at regular intervals and disposing of wastewater in accordance with local jurisdictional regulations (Site Certificate Condition 82). The construction contractor will ensure that a sufficient number of toilets are provided, and that the licensed subcontractor complies with applicable regulations, including the use of holding tanks for biological waste that conform to OAR 340-071 and transportation of waste in accordance with Oregon Revised Statute 466.005.

The proposed O&M building will include toilets for use by maintenance staff during operations; the existing O&M buildings will also be available during operations. These on-site septic systems within the O&M buildings will be licensed, constructed, and maintained in compliance with state permit requirements and will have a discharge capacity of less than 2,500 gallons per day (per Site Certificate Condition 83)

2.2.2 Construction

The Certificate Holder expects the volume of wastewater to be generated during construction to be approximately 26 million gallons under worst-case conditions through all phases of construction, the majority used for dust control (see Exhibit O). Dust abatement and control will result in by far the most wastewater during construction (approximately 22 million gallons). Other construction activities that will produce small amounts of wastewater include mixing of concrete, washing equipment and vehicles, and washing concrete trucks after delivery of concrete loads. No construction water will be discharged into wetlands, streams, and other waterways. Due to the dry conditions at the Solar Components and the relatively low rates of water use and application, it is

expected that any excess water used during construction will be lost within or near the Solar Micrositing Area through evaporation and infiltration.

Water for dust control will be sprayed onto disturbed areas by water truck during construction (per Site Certificate Condition 34) and result in water loss primarily through evaporation and infiltration. Water trucks will be used to control dust generation throughout the construction site, in all disturbed areas including but not limited to foundation installations and trenching for collector lines. Water for dust control and road compaction will be applied via tanker truck in a manner that avoids erosion and sediment discharge and is consistent with the best management practices presented in the NPDES 1200-C permit (Site Certificate Condition 26).

Wastewater will also be generated as concrete washout water produced during construction of foundations. Concrete truck chutes will be washed down at each foundation site to prevent the concrete from hardening within the chutes. Concrete wastewater will be handled as previously described, using BMPs for the construction, which have been accepted by ODEQ. Concrete wastewater will be washed out into a dedicated concrete washout area located within each foundation excavation (Site Certificate Condition 86). The soil used to construct the washout area berms (along with any concrete solids) will be buried as part of the foundation backfill (Site Certificate Condition 86).

Washing of vehicles and equipment to prevent the spread of weeds will also generate small amounts of wastewater. Vehicle and equipment washing will occur at the temporary construction areas, and wastewater from these activities will be covered by the general NPDES 1200-C stormwater permit (Site Certificate Condition 26). The estimated amount of wastewater for vehicle and equipment washing is expected to be minor compared to overall Solar Components water use. The amount of water used for vehicle and equipment washing will be sufficiently small that it will not create runoff but will instead infiltrate into the ground.

Stormwater is not considered to be wastewater. Stormwater will be managed in accordance with the terms of the NPDES 1200-C stormwater permit (Site Certificate Condition 26). Stormwater will be diverted around construction sites as much as possible. Precipitation that falls on a construction site will be allowed to run back to natural drainages, with erosion and sedimentation control systems in place to maintain water quality.

2.2.3 Operation

Wastewater generated during operations will include sanitation at the proposed and existing O&M buildings and solar panel washing. The disposition of sanitary sewer from the O&M buildings are described above.

Operational wastewater sources will also include maintenance activities associated with the solar array. There may be periodic washing of the solar modules to minimize the effects of dust and dirt on energy production which will be dependent on weather conditions (e.g., during drought conditions when there is more dust the panels may require washing). The water used for array cleaning is not anticipated to require off-site disposal due to the extremely high evaporation rate

and expected infiltration at the site. Any washwater will likely evaporate before it could be collected for transport off-site. Therefore, washwater will be evaporated or infiltrated into the ground. No acids, bases, or metal brighteners will be used in the washwater and biodegradable, phosphate-free cleaners may be used sparingly. Solar panel washing will adhere to the same measures outlined in Site Certificate Condition 88 (which currently applies to turbine blade washing of the Existing Facility; see proposed modifications to the condition in Section 2.0).

The Certificate Holder will ensure that there is no runoff of washwater from the site or discharges to surface waters, storm sewers, or dry wells. No new operational wastewater sources will result from BESS operations.

2.2.4 Decommissioning

During retirement, wastewater will result primarily from dust control while restoring the site, if grading is required. If required, the Certificate Holder expects the volume of water for dust suppression during retirement to be less than the volume used during construction. The number of on-site workers, and generation and handling of sanitary wastewater, will be comparable to construction. The Proposed Facility retirement is discussed in greater detail in Exhibit X.

3.0 Description of Waste Management and Disposal Structures, Systems, and Equipment – OAR 345-021-0010(1)(w)(B)

OAR 345-021-0010(1)(w)(B) A description of any structures, systems and equipment for management and disposal of solid waste, wastewater and storm water;

Response: The Certificate Holder will comply with all applicable waste handling and disposal regulations on all lands associated with the Solar Components. Solid waste will be stored in a manner that does not constitute a fire, health, or safety hazard until such waste can be hauled off-site for recycling or disposal, as appropriate. The following sections describe the handling and disposal of waste planned for the Solar Components.

3.1 Construction

Construction will not add any new types of waste not previously contemplated for the Facility by the Council, and as a result, no new structures, systems, or equipment will be needed to manage and dispose of construction waste that was not previously considered. All waste will be disposed of following the Construction Waste Management Plan (Site Certificate Condition 84). Standard construction waste bins will be kept on-site to keep construction debris until it is hauled off-site. Separate containers for small quantities of hazardous materials, such as oily rags or contaminated soil from minor spills, will be provided according to the contractor's SPCC Plan (per proposed Site Certificate Condition 131; see Section 6 of the Division 27 document); hazardous materials will

continue to be used and handled in accordance with Site Certificate Condition 80 as well as proposed Site Certificate Condition 130 and comply with all applicable laws and regulations. As noted earlier, materials will be recycled as feasible.

Areas around infrastructure for the Solar Components will be kept in an orderly condition throughout the construction period. Waste generated during construction will be temporarily collected at each construction site and then consolidated into larger disposal containers at the temporary construction yard(s). Disposal and recycling containers will be labeled by waste type to segregate materials as appropriate for recycling or disposal.

Disposal and recycling containers will be of adequate size, design, and number to handle the amount of waste being generated. Containers approximately 10 tons in capacity will be used to collect scrap metal, wood, and paper products, and other recyclable materials.

Solid waste generated during construction will be hauled away for recycling or disposal, as appropriate. Paper products and other materials—such as batteries, glass, metals, and plastic—will be recycled when practicable. As disposal and recycling containers reach capacity, they will be removed to disposal facilities that can handle these materials, and the containers will be replaced with empty units. Removal of the waste to appropriate disposal facilities will be done by a licensed waste hauler, under contract to the construction contractor (Site Certificate Condition 84). Licensed waste haulers must comply with OAR 340-093-0220 for transportation of wastes.

Soil and rock materials from foundation excavations will be spread within the temporary disturbance areas during construction or removed from the excavation site as soon as practicable. Most excess spoils will be incorporated into grading activities as fill material. Excess spoils would be a very small amount, and any excess spoils from excavation of the foundations will be spread out around the foundations. Disturbed soil and rock materials will be contained using appropriate BMPs as part of the NPDES 1200-C permit to prevent sedimentation release to local habitat. The construction contractor will arrange off-site disposal of excess, non-clean fill soils if this should be necessary, and will otherwise dispose of clean fill soils onsite.[2]

The construction contractor will submit a plan for approval by the Certificate Holder on how solid waste materials during construction activities will be reused, recycled, or disposed of in accordance with Site Certificate Condition 84. That plan will specify the number and types of waste containers to be maintained at construction sites and the temporary construction areas, and how waste is to be segregated for recycling or disposal. It will also specify the names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements.

Sanitation during construction activities will be addressed through the provision of portable toilets (per Site Certificate Condition 82). Other types of wastewater generated during construction will be

[2] Per OAR 340-093, "Clean Fill" means material consisting of soil, rock, concrete, brick, building block, tile, or asphalt paving that does not contain contaminants which could adversely impact the waters of the State or public health. This term does not include putrescible wastes, construction and demolition wastes, and industrial solid wastes.

allowed to evaporate and infiltrate into the ground. Stormwater will be managed using BMPs in accordance with the terms of the NPDES 1200-C stormwater permit (Site Certificate Condition 26).

3.2 Operation

Any solid waste generated by the operation of the solar modules, BESS, and associated infrastructure will be collected by the maintenance crews and transported by a licensed waste hauler to off-site to facilities such as Wasco County Landfill or Columbia Ridge Landfill that handle the disposal or recycling of these items. Waste generated at the proposed O&M buildings will be collected in appropriate waste or recycling containers, to be removed by a licensed waste hauler. All operational waste will be handled according to the Operations Waste Management Plan (Site Certificate Condition 87).

Self-contained battery components and spent batteries will be removed and disposed of or recycled by a licensed vendor in compliance with applicable RCRA and Toxic Substances Control Act regulations administered by the EPA or ODEQ. The batteries will be handled by a licensed third-party battery supplier in accordance with applicable regulations.

Batteries may require periodic replacement if a component is found to be faulty; otherwise, the batteries are not expected to be replaced during the life of the Proposed Facility. Modules lose their effectiveness through repeated charge/discharge cycles. To account for the degradation, additional batteries and associated equipment would be periodically augmented as needed to maintain 500 megawatt-hours, up to a total of 126 containers with batteries installed at the site over the life of the facility. However, degraded batteries would not be removed and replaced; they would continue to operate at the degraded capacity. If batteries are replaced during operations, the Proposed Facility operator will disconnect and de-energize the battery system prior to removal from the installed racks and package the batteries for transport to an approved facility.

The solar panel wash water will evaporate or will infiltrate into the ground near the point of use as allowed under the terms and conditions of the Facility's Water Pollution Control Facility Permit. No additional industrial wastewater streams will be generated during operation of the solar modules. No additional structures, systems, or equipment are required for stormwater resulting from the addition of the solar modules.

3.3 Decommissioning

Waste produced from retirement activities will be managed in a similar manner to the waste produced during construction. At the end of the Solar Components' useful life, it will be dismantled, and components sold for reuse or scrap as practicable. Otherwise, components will be recycled or disposed of at a solid waste facility.

Once it is determined that the solar facilities will be decommissioned, the solar array will be removed and disposed of or recycled at the expected life span of 40 years. Decommissioning of the Solar Components is described in Exhibit X. If continued reuse is not practical, the array will be

dismantled and recycled to reclaim constituent parts, such as glass, aluminum, silicon solar cells, and metals.

The BESS will require disposal of the container structures housing the batteries and their constituent parts. The batteries will be disposed of at decommissioning in the same manner described above for operational replacement. Electrical systems and associated equipment will be disposed of as incidental waste and will be collected and recycled, as feasible. Non-recyclable wastes will be collected and transported to the Wasco County Landfill, Columbia Ridge Landfill, or other licensed facility identified at the time of decommissioning.

4.0 Actions or Restrictions to Reduce Consumptive Water Use – OAR 345-021-0010(1)(w)(C)

OAR 345-021-0010(1)(w)(C) A discussion of any actions or restrictions proposed by the applicant to reduce consumptive water use during construction and operation of the facility;

Response: The Certificate Holder will use appropriate BMPs to reduce water use to the greatest extent feasible. Solar facility construction by nature does not afford the construction contractor significant opportunities for reducing water use. Water will be used on an as-needed basis to construct concrete foundations and pads, suppress dust on the roads and other areas disturbed by grading, and wash out concrete truck chutes. Water will be used in areas of active construction or vehicle movement, only as needed for dust control. To reduce the water used for dust suppression, stabilization materials such as palliative mulch, may be used to lengthen the interval between necessary dust control water applications. Weather and soil conditions will be regularly monitored to minimize watering while maintaining regulatory compliance for fugitive dust issues. Water for dust control will not be applied if weather conditions are such that disturbed soils will remain sufficiently damp and fugitive dust will not be created.

Water used for solar panel washing will be limited to the minimum necessary for effective panel function. Operation of the Solar Components does not require consumptive water use, except for minimal amounts at the proposed O&M buildings similar in nature to typical office use (see Exhibit O). The water used at the proposed O&M buildings will meet building code requirements for water conservation practices. No additional water use, and therefore no additional actions to limit water use, will result from installation of the BESS.

5.0 Minimization and Recycling Plans – OAR 345-021-0010(1)(w)(D)

OAR 345-021-0010(1)(w)(D) The applicant's plans to minimize, recycle or reuse the solid waste and wastewater described in (A);

Response: The changes described in RFA 4 will result in additional solid waste in the form of potential solar modules, BESS, and associated part replacements during operation, and through decommissioning at the time of retirement. These materials will be recycled where practicable and disposed of at an approved disposal location where necessary consistent with Site Certificate Condition 87. When recycling is not feasible, the materials will be sorted and stored in dumpsters or other suitable containers and transported by a licensed waste hauler to an approved disposal location where necessary (Site Certificate Condition 87). All operational waste will be handled according to the Operations Waste Management Plan (Site Certificate Condition 87).

6.0 Waste-Related Impacts

6.1 Description of Impacts – OAR 345-021-0010(1)(w)(E)

OAR 345-021-0010(1)(w)(E) A description of any adverse impact on surrounding and adjacent areas from the accumulation, storage, disposal and transportation of solid waste, wastewater and stormwater during construction and operation of the facility;

Response: Solid waste, wastewater, and stormwater for the Solar Components will be generated and managed consistent with the methods and procedures that have been previously approved by the Council for the Facility, and through the Site Certificate conditions discussed throughout this exhibit. As a result, there will be no new, adverse impacts resulting from the changes proposed under RFA 4.

6.2 Evidence that Impacts are Minimal – OAR 345-021-0010(1)(w)(F)

OAR 345-021-0010(1)(w)(F) Evidence that adverse impacts described in (D) are likely to be minimal, taking into account any measures the applicant proposes to avoid, reduce or otherwise mitigate the impacts; and

Response: As noted above, there will be no new, adverse impacts resulting from the changes proposed under RFA 4. Generation of wastes from construction will be minimized by estimating material needs and employing efficient construction practices. Waste generated during construction and operation of the proposed Facility will be recycled when feasible (Site Certificate Conditions 84 and 87).

Because waste generation will be minimal, there is little anticipated adverse impact on surrounding areas from solid waste or wastewater due to construction, operation, or retirement of the Proposed Facility. Waste will be reused or recycled or, when necessary, disposed of at permitted disposal facilities. Any waste disposed of on-site (e.g., excess spoils from foundations) will be inert, disposed of in a manner consistent with applicable regulations, and protective of human health and the environment.

Water will be used primarily for dust control, concrete mixing, and concrete washout. None of these activities will produce wastewater that will affect area streams, wetlands, or groundwater supplies

(in compliance with Site Certificate Condition 86). Sanitary waste during construction will be handled by a licensed contractor according to applicable regulations (per Site Certificate Condition 82). Sanitary waste from the proposed O&M buildings during operation will be collected and treated by new septic systems; sanitary waste from the existing O&M buildings during operation will continue to be collected and treated by existing septic systems (per Site Certificate Condition 83). The Proposed Facility will not generate industrial wastewater or effluent.

On-site disposal of materials that qualify as clean fill under ODEQ's rules and guidance will be conducted in accordance with OAR 340-093 and other applicable regulations. To meet the clean fill definition, any inert construction debris to be disposed on-site as clean fill will be separated from other debris that is not inert or that otherwise does not satisfy ODEQ's definition of clean fill.

The Certificate Holder's proposed measures to avoid, reduce, and mitigate any impacts on-site or to adjacent land include storing and handling all cleaning products, paints and finishes, solvents, pesticides and herbicides, and other hazardous materials in containers that meet all federal, state, and local requirements for storage and containment (per Site Certificate Condition 80). As identified in the ASC and maintained for RFA 4, there will be no substantial quantities of these chemicals on-site. Petroleum products, including vehicle and equipment fuels, lubricating oils, and hydraulic fluids, will not be stored in substantial quantities on-site, but will instead be delivered on an as-needed basis using a specialized vehicle by a licensed contractor. The Certificate Holder does propose the temporary storage of some diesel fuel on-site during construction, but this will be in aboveground storage tanks in the construction yard(s), within an area that provides for secondary containment; secondary containment and refueling procedures for on-site fuel storage will follow the contractor's Hazardous Materials Management and Monitoring Plan (per proposed Site Certificate Condition 130). In addition, spill kits containing items such as absorbent pads will be located on equipment and in storage facilities to ensure a quick response to spills (Site Certificate Condition 81). Spills are proposed to be handled according to Site Certificate Condition 81 and proposed Site Certificate Conditions 130 and 131 (i.e., the implementation of a Hazardous Materials Management and Monitoring Plan and SPCC Plan, respectively). Waste disposal or recycling will be handled by a licensed contractor.

Transportation of wastes to landfills or recycling facilities will involve periodic truck trips over public and private roads between the Proposed Facility and the Wasco County Landfill or Columbia Ridge Landfill. Given the number and frequency of these trips, and the anticipated volume of waste materials, these trips are not anticipated to have adverse effects on the adjacent or surrounding areas (See Exhibit U for more detail on solid waste management).

6.3 Proposed Monitoring Plan – OAR 345-021-0010(1)(w)(G)

OAR 345-021-0010(1)(w)(G) The applicant's proposed monitoring program, if any, for minimization of solid waste and wastewater impacts.

Response: The Certificate Holder will monitor construction stormwater impacts in accordance with a NPDES 1200-C construction stormwater permit issued by ODEQ, and an associated ESCP (Site Certificate Condition 26; see Exhibit I for further information). The ESCP describes BMPs for

erosion and sediment control, spill prevention and response procedures, proper disposal procedures, regular maintenance for vehicles and equipment, and employee training on spill prevention.

No significant impacts from solid waste and wastewater are expected from construction and operation of the Proposed Facility. Waste management activities will be subject to periodic inspections to ensure compliance with applicable regulations and Site Certificate Conditions. Otherwise, no monitoring program aside from the ESCP is proposed.

7.0 References

Council (Oregon Energy Facility Siting Council). 2008. Final Order on Amendment #3 for the Biglow Canyon Wind Farm. Energy Facility Siting Council, Salem, Oregon. October 31, 2008. https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/BCW_final_order_amend_3_103108.pdf