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Document Title:	CEC App_Chapter 3_Facility Closure_Darden Clean Energy
Description:	This chapter discusses facility closure. Section 3.1 discusses temporary facility closure, and Section 3.2 discusses permanent facility closure. Section 3.2, Permanent Closure, is based in part on the Project's Reclamation Plan (Appendix H, TN 252922), which describes the framework for decommissioning and reclamation for the Project.
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3 Facility Closure

Facility closure can be temporary or permanent. Temporary closure is defined as a shutdown for a period exceeding the time required for normal maintenance, with an intent to restart in the future. Causes for temporary closure may include equipment upgrades and repowering the Project or damage to the Project components from earthquake, fire, storm, or other natural acts. Permanent closure is defined as a cessation in operations with no intent to restart operations. Section 3.1 discusses temporary facility closure, and Section 3.2 discusses permanent facility closure. Section 3.2, Permanent Closure, is based in part on the Project's Reclamation Plan (Appendix H), which describes the framework for decommissioning and reclamation for the Project.

3.1 Temporary Closure

The Project's equipment has a useful life of up to 35 years. At that time, the Applicant would seek to either repower or decommission the Project. In order to repower, the Project components would likely be optimized to increase the Project's efficiency by swapping out inverters for more efficient units, and potentially swapping out some of the solar facility's photovoltaic panels. Ground disturbing work would not be necessary for optimization activities. The Project would be offline for several weeks or months during optimization activities, but would subsequently continue delivering electricity to the wholesale market for many decades.

For a temporary closure where there is no release of hazardous materials, such as in the case of repowering, the Project would maintain security of the Project components and would notify the California Energy Commission and other responsible agencies as required by law. Where the temporary closure includes damage to the Project components, and where there is a release or threatened release of regulated substances or other hazardous materials into the environment, procedures would be followed set forth in accordance with emergency response procedures set forth in the Emergency Action Plan and the Hazardous Materials Business Plan. Refer to sections Section 5.9, *Hazardous Materials Handling*, and Section 5.10, *Worker Safety*, for a description of the Hazardous Materials Business Plan and Emergency Action Plan respectively. Procedures would include methods to control releases, notification of applicable authorities and the public, emergency response, and training for personnel in responding to and controlling releases of hazardous materials. Once the immediate problem is solved and the regulated substance/hazardous material release is contained and cleaned up, temporary closure would proceed as described above for a closure where there is no release of hazardous materials.

3.2 Permanent Closure

When the Project, excluding the utility switchyard, is permanently closed, the closure procedure would follow a decommissioning and reclamation plan, which is described in the Project's Reclamation Plan (Appendix H). At the time of decommissioning, all decommissioning related activities would follow the then-applicable laws, ordinances, regulations, and standards. This section summarizes the decommissioning plan. Refer to the Reclamation Plan in Appendix H for additional details.

Upon decommissioning, a majority of Project components would be suitable for recycling (e.g., the electrolyzer stacks would most likely be resold to the original vendor for metals recycling) or reuse (e.g., compressors, pumps, reverse osmosis and Electrodeionization system, transformers,

rectifiers). All dismantling, removal, recycling, and disposal of materials generated during decommissioning would comply with rules, regulations, and prevailing federal, state, and local laws at the time decommissioning is initiated and would use approved local or regional disposal or recycling sites as available.

Decommissioning activities would require similar equipment and workforce as construction. It is anticipated that the decommissioning activities for the Project can be completed in up to a 3-year period. The following activities would be involved:

- Removal and transportation of all Project components from the Project site
- Removal of the solar panels, solar panel racking, steel foundation posts and beams, inverters, transformers, overhead and underground cables and lines, equipment pads and foundations, equipment cabinets, and ancillary equipment
- Discharge and removal of the battery modules and electrical equipment
- Dismantling and removal of the electrolyzer facility and wastewater treatment plant
- Removal of civil facilities, access roads, security fence, and drainage structures and sedimentation basins

The panels could be sold into a secondary solar photovoltaic panel market or returned to the original vendor for recycling and reuse of materials. Compressors, pumps, reverse osmosis and Electrodeionization units, and the control and safety equipment would have to be dismantled, electronics and cabling recycled, and remaining equipment either recycled as scrap metal or disposed of at a landfill. Catalysts and gear and lube oil would be discarded as per requirements on the manufacturer safety data sheets.

The majority of the components of the solar facility are made of materials that can be readily recycled. If the panels can no longer be used in a solar array, the frames, glass, and semiconductors can be recycled and reused. Other components of the solar facility and green hydrogen facility, such as the tracker structures and mechanical assemblies and pipe racks can be recycled, as they are made from galvanized steel. Equipment such as drive controllers, inverters, transformers, rectifiers, and switchgear can be either reused or their components recycled.

The equipment pads are made from concrete, which can be crushed and recycled. Underground conduit and wire can be removed by uncovering trenches, removing the conduit and wire, and backfilling. The electrical wiring is made from copper and/or aluminum and can be reused or recycled, as well. It is estimated that 100 percent of copper components would be recycled and approximately 50 percent of aluminum and other components would be recycled.

The Project site would be restored and reclaimed to the extent practicable to pre-construction conditions consistent with site lease agreements and landowner coordination. After all equipment and infrastructure is removed during decommissioning, any holes or voids created by poles, concrete pads, and other equipment would be filled in with native soil to the surrounding grade. All access roads and other areas compacted by equipment during the decommissioning would be decompacted to a depth necessary to ensure proper density of topsoil, drainage of the soil, and root penetration prior to fine grading and tilling to a farmable condition consistent and compatible with the surrounding area and associated land use. It is anticipated that most of the site would be returned to farmland and/or pasture after decommissioning through implementation of appropriate measures to facilitate such uses. If no specific use is identified, the Project site would be vegetated with grassland seed mix comprised of a combination of native and naturalized grasses and forbs. The goal of the reclamation would be to restore natural hydrology and vegetative cover to the greatest extent practicable while minimizing new disturbance and removal of existing vegetation.