

Attachment A: Station Service

Introduction

California Energy Commission staff prepared this concept paper to address how electricity used to serve station service load is treated in California's Renewables Portfolio Standard (RPS) program, and to express staff's views on how the Energy Commission could clarify how station service is defined and applied.

The California RPS is based on the procurement of renewable electricity, or renewable electricity credits, supplied to California end-use customers from power plants that are certified by the Energy Commission as eligible renewable energy resources. Station service for power plants, also commonly called parasitic load, generally means the energy consumed by an electric generating facility for power plant operations. Station service is the electrical load demanded by various ancillary or auxiliary equipment required to operate plant components such as fans, pumps, lighting, pollution controls, etc., which is typically, but not always, provided by the power plant itself. It can also be provided by grid electricity or by another generating unit at or adjacent to the power plant.

Regardless of the power source, an overarching principle that applies to most RPS programs (and other regulatory and voluntary renewable energy programs) is that electricity used for station service should not result in the creation of renewable energy credits (RECs). Doing so would allow the power that is used to produce electricity and not delivered to the end use customer to count for RPS. Although this general concept of netting or deducting¹ electricity generation used to serve station service loads from a facility's total electrical output to determine the appropriate REC creation is widely accepted, there is no corresponding universal definition of station service. Nor is there agreement about how to apply a single definition of station service across the variety of renewable electrical generation facilities, technologies and renewable energy programs that rely on the Western Renewable Energy Generation Information System (WREGIS) tracking system.

This concept paper provides Energy Commission staff's views on how station service should be defined and applied, promotes dialogue among stakeholders regarding station service for California's RPS, and clarifies the Energy Commission's position on station service. After considering public comments received in response to this paper, and with input and guidance from Commissioner David Hochschild, Lead Energy Commission commissioner on RPS policy issues, staff may consider clarifications or revisions regarding station service, as appropriate, to a future edition of the *Renewables Portfolio Standard Eligibility Guidebook*.

¹ Generation for station service that is powered by conventional energy (i.e. non-renewable energy sources such as fossil fuels) must be deducted from the renewable power plant's metered output to avoid "greening" conventional energy inputs that would otherwise not be netted from the total generation metered at the renewable power plant.

Background

Energy Commission staff proposed language directly addressing station service in the draft seventh edition of the *RPS Guidebook*. However, when the Energy Commission considered adoption of the seventh edition of the *RPS Guidebook* at its April 30, 2013 business meeting, Chair Robert Weisenmiller directed staff to “leave the status quo language,”² and not incorporate the language relating to station service power in the main body of the guidebook. The Energy Commission subsequently adopted the guidebook with the status quo language at the business meeting. The status quo language continues deference to the WREGIS Operating Rules regarding station service. Language proposed in the outstanding issues section of the guidebook relating to station service was adopted as part of the *RPS Eligibility Guidebook, Seventh Edition*, and states that the WREGIS definition for station service remains in effect, and station service load is not eligible for the RPS.

Before the adoption of the Energy Commission’s *Renewables Portfolio Standard Eligibility Guidebook, Seventh Edition*, the *RPS Guidebook* did not directly address station service; rather, the sixth edition guidebook informs RPS participants that the generation of all facilities serving retail sellers and local publicly owned electric utilities must be tracked in WREGIS “according to the provisions and exceptions provided in this guidebook for the generation to be counted as an RPS-eligible resource for RPS compliance.”³ The sixth edition of the *RPS Guidebook* further states that “an RPS-certified facility must remain registered in the WREGIS system and comply with all WREGIS rules, and all generation from that facility must be tracked in the WREGIS system to be considered RPS-eligible, with the limited exceptions noted in this section. Failure to remain registered in the WREGIS system, or the inability to provide proof of registration in WREGIS upon request, may result in the facility’s RPS certification being revoked.”⁴ Similar language can be found in the seventh edition of the *RPS Guidebook*.

Thus, rather than specifically addressing this issue, the Energy Commission deferred to the WREGIS Operating Rules for defining station service and to WREGIS staff for applying this definition to the creation of WREGIS Certificates (RECs in the WREGIS system) used for California’s RPS. This included WREGIS’s application of the May 2012 *Program Administrator’s Advice Letter to WREGIS Regarding Stations Service*,⁵ which was developed with input from Energy Commission staff and other program administrators.

WREGIS

In response to a statutory mandate to “design and implement an accounting system to verify compliance with the renewables portfolio standard by retail sellers and local publicly owned electric utilities, to ensure that electricity generated by an eligible renewable energy resource is counted only

2 From the transcript of the Energy Commission April 30, 2012 Business Meeting, page 51, line 21.

3 California Energy Commission RPS Eligibility Guidebook, Sixth Edition, August 2012. Page 13.

4 *ibid.* Page 57.

5 <http://www.wecc.biz/WREGIS/MtgDocs/Forms/DispForm.aspx?ID=41>.

once for the purpose of meeting the RPS of this state or any other state...”⁶ the Energy Commission, along with the Western Governors’ Association and the Western Regional Air Partnership, began the development of WREGIS a decade ago. WREGIS became operational in June 2007 and began creating WREGIS Certificates at that time. Following a 90-day trial period, which ended in September 2007, WREGIS was deemed to have met the functional requirements established by the Energy Commission to meet the legislative mandate. The Energy Commission subsequently revised its RPS Eligibility Guidebook to require all generating facilities, retail sellers, procurement entities and third parties participating in California’s RPS to register with and use WREGIS by May 1, 2008.⁷

The Energy Commission requires RECs used for RPS compliance to be tracked in WREGIS as part of its RPS eligibility requirements, as set forth in the *RPS Eligibility Guidebook*. WREGIS provides a definition of station service in its Operating Rules, as follows: “The electric supply for the ancillary equipment used to operate a generating station or substation.”⁸

Energy Commission staff agrees with this general definition; however, difficulties arise when determining how to apply this definition to the specific operations of a variety of electric generating facility types and technologies. For example, it is unclear what does and does not fall under the category of “ancillary equipment,” and whether station service must be netted (or deducted) during times when the generating facility is not operating. The WREGIS Operating Rules state that a WREGIS Certificate (representing 1 megawatt-hour) or REC may be created for any renewable energy production serving “a load that would have been served by the grid if not for the generator (on-site load).”

Although WREGIS is designed to be policy neutral, it is necessary and appropriate for WREGIS to establish and administer rules and procedures to operate its accounting and tracking system effectively and fairly. WREGIS stakeholders developed these rules and procedures. As described in its Operating Rules, input from more than 400 participants gathered over a period of more than three years developed and guided WREGIS’s functional design. WREGIS is currently governed by a committee consisting of stakeholder representatives, and is a Board Committee of the Western Electricity Coordinating Council (WECC). In addition, all active account holders are invited to join the Stakeholder Advisory Committee (SAC), which serves as an advisory body to the WREGIS Administrator and the WREGIS Committee on the implementation and operation of the WREGIS system.

To help the WREGIS Administrator apply the definition of station service, the Program Administrators of participating states and programs in WREGIS convened a working group in January 2012. The working group quickly concluded that deferring to WREGIS’ rules minimizes each state or program’s direct oversight of ensuring that RECs are not created for station service. Further, because WREGIS is a regional accounting system, the working group agreed that it made sense for each state and program within the region to rely on one set of rules for REC creation, including a single definition for station service. A single definition facilitates the transparency of what a REC represents, which is important in a

6 Public Utilities Code Section 399.25, subdivision (b). The statutory mandate was previously codified in Public Utilities Code Section 399.13, subdivision (b), as enacted by Senate Bill 1078 (Stats. 2002, ch. 516).

⁷ *Renewables Portfolio Standard Eligibility Guidebook, Third Edition*, December 2007, pg. 46.

⁸ WREGIS Operating Rules, December 2010. Page 6.

regional tracking system wherein RECs can be traded among all WREGIS account holders. In May 2012, the working group developed an “advice letter” to guide WREGIS staff when determining which station service loads should be deducted or netted from reported generation resulting in the creation of RECs.⁹

Defining Station Service

Station service is often referred to as the difference between a power plant’s gross electric output and its net electric output. Gross electric output is usually a direct measurement of the generator’s output, and net output is typically derived by subtracting from the gross output all electrical power utilized in the plant by auxiliary equipment such as pumps, motors and pollution control devices. Various definitions of station service or parasitic load for power plant systems can be found in electricity industry literature and in governing rules for various programs. Examples of these definitions follow.

- Green-E defines parasitic load as “a load that contributes to the process of electricity generation.”¹⁰
- The Bonneville Power Administration defines station service as “power a generating plant uses for basic operation, or when a plant requires additional power on startup.”¹¹
- Duke Energy defines station service to include “such loads as the cooling water pumps, lubricating oil pumps, feedwater pumps, lighting transformers, control systems, etc., that are necessary for plant operation.”¹²
- South Coast Air Quality Management District defines net electrical energy as “the electrical energy produced by a generator, less the electrical energy consumed by any auxiliary equipment necessary to operate the engine generator and, if applicable, any heat recovery equipment, such as heat exchangers.”¹³
- The U.S. Environmental Protection Agency describes parasitic loads as “in-facility electrical loads” such as “pumps, fans, electric motors, and pollution control equipment” that “reduces the amount of power that can be delivered to the transmission grid for distribution and sale to customers.”¹⁴
- The U.S. Energy Information Administration (EIA) defines station use as “energy that is used to operate an electric generating plant. It includes energy consumed for plant lighting, power, and auxiliary facilities, regardless of whether the energy is produced at the plant or comes from another source.”¹⁵ EIA defines net generation as “the amount of gross generation less the

9 <http://www.wecc.biz/WREGIS/MtgDocs/Forms/DispForm.aspx?ID=41>.

10 http://www.green-e.org/docs/energy/Appendix%20D_Green-e%20Energy%20National%20Standard.pdf.

11 http://transmission.bpa.gov/ts_business_practices/Content/PDF_files/Individual_BPs/Gen_Imbalance.pdf

12 http://www.energy.ca.gov/sitingcases/morrobay/documents/applicants_files/AFC_vol_1a/app_1a_20_ProjectDescription.pdf,

13 <http://www.aqmd.gov/rules/reg/reg11/r1110-2.pdf>.

14 <http://www.epa.gov/nsr/ghgdocs/electricgeneration.pdf>.

15 <http://www.eia.gov/tools/glossary/index.cfm?id=S>).

electrical energy consumed at the generating station(s) for station service or auxiliaries. Electricity required for pumping at pumped-storage plants is regarded as electricity for station service and is deducted from gross generation.”¹⁶

- For its verification of greenhouse gas emissions data, the California Air Resources Board similarly defines net power generation as “the gross generation minus station service or generating unit service power requirements (also known as parasitic load).¹⁷ Because the ARB uses this definition of net power generation for evaluating the efficiency of generating units, net power generation is intended to include only the unit service power requirements during the time when the unit is generating power.
- The U.S. Energy Association, the U.S. member committee of the World Energy Council, defines auxiliary equipment to include “all of the equipment except the boiler and turbine (e.g., fans, pumps, drive motors, valves, gauges, bag filters, water treatment, and lighting) needed to complete the generation process.”¹⁸
- The Energy Commission’s power plant site certification regulations in the California Code of Regulations, Title 20, section 2003 (c), defines the “minimum auxiliary load” as “the electrical rating (in MW) of the sum of the minimum continuous and the average intermittent on-site electrical power requirements necessary to support the maximum gross rating as defined in subsection (b) of this regulation and which are supplied directly by the power plant. For geothermal projects, the minimum auxiliary load includes the minimum electrical operating requirements for the associated geothermal field which are necessary for and supplied directly by the power plant. Discretionary loads, i.e., those which can be curtailed without precluding power generation, are not included in minimum auxiliary loads.”¹⁹
- FERC has defined station service, or station power service, to be the “electrical energy used for the heating, lighting, air-conditioning, and office equipment needs of the building on a generating facility’s site, and for operating the electric equipment that is on the generating facility’s site.”²⁰

Although these definitions are not identical, they are similar and can be used as a proxy for an industry standard. Even under this guidance, problems can arise when considering the various renewable energy technologies (and the numerous variables within each technology) used by renewable electric generation facilities with generation tracked by WREGIS.

Energy Consumption

16 <http://www.eia.gov/tools/glossary/index.cfm?id=N>.

17 CARB, Technical Guidance for Verifiers, May 2011. www.arb.ca.gov/cc/reporting/ghg-ver/revised_verification_guidance.pdf

18 <http://www.usea.org/archive/climatechange/Chapter4/4.4.html>.

19 California Code of Regulations, Title 20, Section 2003(c).0-2012-002.

20 *PJM Interconnection, LLC*, 94 FERC 61251 (2001).

All electric generation facilities must consume energy to generate electricity. Although there are significant differences in the processes of generating electricity among the various resources and technologies that are considered renewable by the states and programs using WREGIS, there are similarities. These similarities can be used to classify how energy used at the facility contributes to the facility's electricity generation. The types of operations necessary to generate electricity can generally fall into one of the following categories.

Utilization of the Energy Resource

All electric generation facilities use an energy resource or potential as a power source to drive the generation of electricity. Different approaches must be taken to generate electricity from the different energy resource types, but all generation technologies must implement some method of converting the energy resource to a usable form of energy. Some energy resources can directly power a generator in a renewable electric generation facility, such as wind, hydroelectric, and hydrokinetic energy resources. Similarly, solar photovoltaic facilities directly generate electricity from the sun by the photoelectric effect. Other renewable energy resources cannot be directly converted, but rather must undergo some conversion of the fuel to generate electricity, either directly from the converted fuel or indirectly by heating a working fluid²¹ such as Brayton cycle or Rankine cycle.

Secondary Processes

The process of utilizing the energy resource may require additional energy loads that can typically be provided by the electric generation facility. These loads are generally stationary parts, at least while operating, of the electric generation facility that are either necessary to generate electricity or are used to control the generation of electricity by manipulating the generation equipment. These additional loads include pumps, condensers, feathering systems, tracking systems, water flow control systems, pollution control systems, and general plant control systems.

However, some additional loads, such as pumps, must begin before the generation of electricity can commence. For example the primary working fluid in the Rankine cycle, typically water, must first be pumped to high pressure before being heated. Secondary working fluids in solar thermal and geothermal operations used to collect the thermal energy from the resource, which is then transferred to the primary working fluid, also must be in operation before the facility can generate electricity.

These secondary processes are typically on the same site as the generating equipment, though this is not a requirement. For example, the owner of a steam turbine may choose to purchase heated synthetic oil from a neighboring solar collector which is used to heat water that will turn the turbine. Despite the separate ownership and project sites these two pieces of equipment should be considered a single facility as electricity could not be generated without both sets of equipment. Additionally, the synthetic

²¹ Plants may contain more than one working fluid. The primary working fluid is used to turn the turbine generator, while a secondary working fluid is used to collect the thermal energy of the facility, which is then transferred to the primary working fluid.

oil is not used as a fuel for the steam generator, but rather a medium to collect and transfer thermal energy from the renewable energy resource.

Fuel Processing

Fuels are substances that are burned or otherwise modified to produce energy.²² Most fuels used to generate electricity are not usable in their raw form, but require processing to collect, condense, liquefy, gasify, shred, sort, or clean. These processes generally do not add or create an energy potential in the fuel, but rather convert the energy potential to a more beneficial form for the electricity generation process. The processing of the fuel may be done exclusively for use in an electric generation facility, and may be done at the site of the facility. However, these processes may be independent of any electricity generation process. For example, a landfill may be required by law to collect all methane emitted by the waste and destruct that methane. The landfill owner may choose to destroy the methane by generating electricity instead of flaring the gas, providing an added benefit to the destruction of the methane rather than flaring the gas.

Fuel Transportation

Fuel transportation is a necessary part of generating electricity. There are two general types of fuel transportation: 1) transportation to the electric generation facility and 2) transportation within the facility.

Offsite Fuel Transportation: Offsite fuel transportation includes delivery of the fuel from the source location to the onsite, or nearby, fuel storage area for ready to use fuel. This transportation is necessary for most biofuel facilities to generate electricity, but how the transportation energy is expended or how much is expended in moving that resource does not impact the electricity generation potential at the facility. For example, a biomass facility that consumes 100 tons of fuel a month will generate the same amount of electricity from that 100 tons whether the fuel came from a co-located timber mill or from a timber mill located 300 miles away, but the energy expended to transport that fuel from the timber mill 300 miles away will be significantly greater.

Onsite Fuel Transportation: For purposes of this concept paper, onsite fuel transportation includes any transportation of the ready to use fuel from an onsite, or nearby, fuel storage area to the combustion chamber. These fuel delivery systems are different from the transportation to the facility site, because it can be for no other purpose than to provide fuel to the primary generating equipment for the generation of electricity. As a result, it is similar to the pumping loads required to move synthetic oils through a solar collection field. In the absence of the generation facility this energy use would not occur.²³

22 "fuel." *World Encyclopedia*. 2005. *Encyclopedia.com*. 7 Jun. 2013 <<http://www.encyclopedia.com>>.

23 In some instances the absence of a biomass-fueled power plant could increase the energy expenditure necessary to transport the biomass for disposal. For example, if a biomass-fuel power plant collocated with a lumber mill shuts down additional energy may be required to transport the mill wood waste from the mill to another biomass-fueled power plant or to a disposal site.

General Operations

General operations at the facility such as control and monitoring equipment, facility lighting, and general office needs consume energy, are necessary for the operation of the facility, and generally must occur near the generation equipment. However, these activities do not directly contribute to the production of electricity, but rather help control the generation equipment for optimal operations, ensure safety at the plant, or allow the plant to operate.

Maintenance and Miscellaneous Processes

Maintenance activities generally require the facility to be shut down or decrease the output of the facility for a period of time greater than normal operations. These activities include regularly scheduled maintenance, emergency repair work, and, in the case solar facilities, mirror or panel washing. Each of these processes is necessary for the generation of electricity, but they are not part of the electricity generation process.

Other miscellaneous processes that are part of operating an electric generation facility include security, worker transportation, and inspection work. The amount of energy expended for these purposes has little or no impact on the generation or electricity and is generally not considered energy contributing to the electricity generation process.

Construction and Initial Operations

The construction of facilities and the production of the construction materials consume energy. These processes are typically one-time, or periodic, energy expenditures that allow the facility to operate. Accounting for these energy contributions would be extremely difficult and would require a life cycle analysis of all construction and manufacturing activities associated with electric generation facilities. Initial operations at a facility are one time, or limited occurrences, energy expenditures that do not directly contribute to electricity generation, such as the liquefaction of molten salts at a thermal plant or testing control systems before the generation of electricity begins. The initial operations do not include the initial startup of the plant or any testing process occurring while electricity is being generated or as part of a test including electricity generation.

Additional Considerations

As members of the WREGIS station service working group, Energy Commission staff considered many approaches for how station service could be applied across different resources and technologies. These considerations included the following:

- The use of devices powered by non-electrical energy (i.e. diesel, natural gas) necessary for power plant operations in place of grid or self-generated electricity.
- The timing of serving station service load relative to when the generating facility is operating.

- The location of the energy consumption, changing the borders of an electric generation facility to place auxiliary loads outside the physical or legal boundaries of the facility site without any change in facility operation.

These considerations raise potential and significant arbitrage opportunities as identified and discussed in the May 2012 *Program Administrator's Advice Letter to WREGIS Regarding Station Service*.²⁴ Energy Commission staff believe that station service loads cannot cease to be station service loads simply by changing the source of the power, the time of operation relative to the generation of electricity, or the legal boundaries of the facility.

Station Service

For many renewable technologies, station service load requires a relatively small fraction of a facility's electrical output – wind and photovoltaic systems, for example, use minimal electricity to power operating equipment such as computers, inverters, tracking systems, and blade feathering. For other technologies, such as biomass, geothermal, and solar thermal electric, station service loads can consume a substantial percentage of the facility's output. The power consumed by station service loads is an important economic and efficiency consideration when developing power plants that use these technologies.

The WREGIS station service working group, with input from Energy Commission staff, grouped energy use associated with electrical generation facilities into three different categories:

1. Directly contributing to electricity generation: utilization of the energy resource(s). These processes are not station service loads; rather it is the prime generating equipment and processes.
2. Station service loads: secondary processes, general operations, and onsite fuel transportation. The energy consumption powering these processes should be provided by the electrical generation facility before the electrical generation is measured for RPS purposes, or subtracted from the gross output of the facility.
3. Energy Consumption not contributing to electricity generation: fuel processing, offsite fuel transportation, maintenance and miscellaneous processes, and construction and initial operations. Energy consumption used for these purposes is not considered to contribute or support the generation of electricity when determining the net output of an electrical generation facility for RPS programs.

The Energy Commission staff supports continued treatment of station service in the WREGIS system as described the May 2012 *Program Administrator's Advice Letter to WREGIS Regarding Station Service*.

These station service loads are ineligible for California's RPS under the status quo, and staff recommends continuing this treatment with clarification as needed. At this time WREGIS will not create RECs for generation determined to be station service under its definition in the WREGIS Operating Rules.

²⁴ <http://www.wecc.biz/WREGIS/MtgDocs/Forms/DispForm.aspx?ID=41>, downloaded July 1, 2013.

While WREGIS has the functionality to track station service generation separate from the remainder of the facility's output and create certificates that are labeled "station service," staff does not believe adding this functionality to California's REC tracking system is warranted, as the Energy Commission would be unable to verify any RECs associated with station service load as California RPS eligible under the current *RPS Guidebook*.

Geothermal Well Pumping Loads

The primary argument brought to the Energy Commission on this topic is the classification of geothermal pumps used to pump brine up from the geothermal well. Many representatives in the geothermal industry contend that the extraction of the geothermal brine from wells and the delivery of the brine to the geothermal generator should be considered fuel delivery (i.e. offsite fuel transportation), not station service. They argue that the extraction and transportation of the brine is similar to the delivery of biofuel, solid or liquid, from the fuel source to the electrical generation facility. This argument assumes the brine itself is the fuel for geothermal facilities.

Energy Commission staff agrees, as discussed above, that energy use for offsite fuel transportation - for fuel delivery from the source to the electric generation facility - should not be considered station service. Consequently, if geothermal brine is in fact the fuel for geothermal facilities, then the delivery of that fuel to the geothermal facility should not be considered station service, consistent with other renewable technologies. However, in this case, the brine is not the fuel. The heat from the geothermal resource is the power source for geothermal facilities. The brine is a medium necessary to use the geothermal energy in the power plant rather than the energy source itself. Fuels are substances that are burned or otherwise modified to produce energy.²⁵ Brine, unlike a biofuel, does not undergo any chemical reaction or other modification to release its energy; it is simply a fluid with a high thermal potential that is allowed to expand, or, in binary systems, is exposed to a low thermal potential (as in a heat exchanger) allowing it to dissipate heat.

Geothermal is defined as "of, relating to, or produced by the internal heat of the earth."²⁶ Thus, it is reasonable to conclude that a geothermal facility is powered by the internal heat of the earth and not by the geothermal brine, which is a "hot, concentrated, saline solution that has circulated through crustal rocks in an area of anomalously high heat flow"²⁷ that can flow into and out of this area. Many areas of high geothermal heat are permeable enough for water to naturally flow through or within it, though other areas require fracking to increase the permeability of the rock and the introduction of water to support electricity generation. As a result, geothermal resources can exist without naturally occurring brine. This suggests the brine is more accurately described as a heat transfer fluid, because while the brine is essential to the electricity generation process deployed at geothermal facilities, it is not essential to the existence of the geothermal resource.

25 "fuel." World Encyclopedia. 2005. *Encyclopedia.com*. 7 Jun. 2013 <<http://www.encyclopedia.com>>.

26 "geothermal." The Oxford Pocket Dictionary of Current English. 2009. *Encyclopedia.com*. 7 Jun. 2013 <<http://www.encyclopedia.com>>.

27 AILSA ALLABY and MICHAEL ALLABY. "geothermal brine." *A Dictionary of Earth Sciences*. 1999. *Encyclopedia.com*. 7 Jun. 2013 <<http://www.encyclopedia.com>>.

If the brine is assumed to be a heat transfer fluid for all geothermal facilities, it may be more appropriate to compare binary geothermal facilities to other electric generating facilities using binary systems. For example, the Solar Electric Generating System (SEGS) power plants located in Kramer Junction and Harper Lake, California,²⁸ use synthetic oils to collect energy from concentrated sunlight. The pumps used to move the synthetic oil through the solar collection field are considered station service. At the SEGS plants this synthetic oil is used to heat the working fluid, water, which drives the turbine generator. The same process occurs at binary geothermal facilities where the brine is used to heat the working fluid, an organic fluid such as isobutane, which drives the turbine generator. With the similarities in these two processes, contending that brine is the fuel for geothermal facilities is analogous to claiming that the SEGS plants are fueled by synthetic oil.

While the comparison of binary geothermal systems to binary solar thermal systems is not perfect, the solar collection system cycles the synthetic oil in a closed loop while brine is pumped ground water that flows through the geothermal resource; these two facility types have far more commonalities than a binary geothermal facility and a biofuel facility.

Conclusion

Energy Commission staff recommends that the *RPS Eligibility Guidebook* be revised in the future to clarify that the definition of station service used in the WREGIS Operating Rules should be followed for generation from eligible renewable energy resources in order to count for the California RPS. Staff also recommends that further clarification regarding how to apply the definition of station service be deferred to the WREGIS Administrator. By defining station service in a future edition of the *RPS Eligibility Guidebook*, the Energy Commission can provide regulatory certainty and transparency to this important issue. Further, retail sellers and local publicly owned electric utilities claiming procurement from eligible renewable energy resources are thereby provided a level playing field and reminded that generation supplying station service loads will not count toward California's RPS.

28 Nextera Energy fact sheet on the Solar Electric Generating Systems (SEGS) power plants:
http://www.nexteraenergyresources.com/pdf_redesign/segs.pdf