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Description:	STAFF'S RECOMMENDATION TO LICENSE GREENLEAF 1 TEMPORARY POWER GENERATORS (21-TPG-02)
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State of California **The Resources Agency of California**

M e m o r a n d u m

To: Drew Bohan, Executive Director **Date:** September 8, 2021

From: **California Energy Commission**
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Subject: STAFF'S RECOMMENDATION TO LICENSE GREENLEAF 1 TEMPORARY POWER GENERATORS (21-TPG-02)

The California Energy Commission's (CEC) Siting, Transmission, and Environmental Protection Division staff hereby submits this recommendation to the Executive Director to grant a license for two temporary power generators at the site of the decommissioned Greenleaf 1 Cogeneration facility in accordance with Governor Newsom's Proclamation of State of Emergency issued on July 30, 2021 (Emergency Proclamation), and the CEC's August 17, 2021, Order number 21-0817-2 regarding the process for licensing new emergency and temporary power generators.[1,2]

On September 3, 2021, Calpine Greenleaf Holdings, Inc. (GLH) filed a self-certification application with the CEC requesting a license to temporarily host and operate two 30 megawatt (MW) General Electric Company (GE) TM2500-G4 gas turbine package units at the site of the decommissioned 49.5 MW Greenleaf 1 Cogeneration facility in Sutter County. The approximately 60 MW natural gas-fired simple cycle electric generating facility, named Greenleaf 1, would be sited adjacent to and east of the Sutter Energy Center (SEC) [criterion (a)(1)]. The SEC is a 578 MW natural gas-fired, combined-cycle electrical generating facility that was certified by the CEC (97-AFC-02) on April 4, 1999 and began commercial operation on July 2, 2001. The California Department of Water Resources (CDWR) has contracted with GE and Kiewit Power Contractors, Inc for the procurement, design, construction, and commissioning of the natural gas-fired temporary power generators (TPGs). GLH or its affiliate would operate Greenleaf 1 under a contract with CDWR. The facility is planned to commence commercial operation on September 17, 2021, if licensed. Based on the information available

1 Governor Newsom's July 30, 2021 Emergency Proclamation can be viewed here: https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf.
2 CEC's August 17, 2021 Order No. 21-0817-2 can be viewed here: https://www.energy.ca.gov/filebrowser/download/3659.

at the time of review, the project would deliver net peak energy by October 31, 2021 [criterion (a)(2)].

The TPGs would be available to be deployed during a grid emergency due to a sudden energy supply shortage in California resulting from an extreme heat wave or wildfire event, as designated and directed by the California Independent System Operator (CAISO). The TPGs would reduce the strain on energy infrastructure, increase energy capacity, and make energy supply more resilient this year to protect the health and safety of Californians.

Staff reviewed the self-certification filed by GLH and provides the summary below to support the Executive Director's verification that the self-certification is complete and meets the requirements of section (a) of CEC Order number 21-0817-2. Therefore, staff recommends that the Executive Director file a decision granting the license subject to the conditions and reporting requirements in **Attachment 1**.

Installation

The TPGs would be installed on previously disturbed land at the site of the decommissioned Greenleaf 1 Cogeneration Facility (see **Figure 1**) [criterion (a)(3)]. The total area is approximately 0.85 square acre. The nearest residence is on Township Road approximately 1,700 feet northeast of the project site.

GLH's existing electrical, natural gas, and water infrastructure would be modified to integrate the new TPGs. Site preparation includes the placement of gravel, approximately 945 feet of aboveground pipe for natural gas and water connections, and construction of 300 feet of new access road required to avoid aboveground piping for the natural gas line. For electric connection, two existing generator step-up units would be used to step up the voltage to interconnect into GLH's existing 115 kilovolt (kV) transmission lines which, would provide power to the CAISO controlled grid [criterion (a)(1) and (a)(3)iv]. Approximately 750 feet of aboveground conduit is required to connect the existing transformer to the TPGs. The TPGs would utilize an existing natural gas line, located at the northeast corner of the site, to interconnect and receive natural gas from the Pacific Gas and Electric Company (PG&E) natural gas system [criterion (a)(3)ii]. Demineralized water for NOx control would be provided from the SEC site through an existing pipeline. [criterion (a)(3)iii]

As described below, the TPGs will be retrofitted with a selective catalytic reduction (SCR) system and catalytic oxidation system as soon as practicable. CDWR has indicated that the SCR system will be available and installed by late 2022. [criterion (a)(4)]

Air Quality

The natural gas-fired TPGs are expected to operate very infrequently and during grid emergencies only, as designated and directed by the CAISO, until they meet all local, state, and federal regulatory requirements. Because the TPGs will only operate under emergency conditions for a limited time, this emergency operation is not expected to result in a significant emissions increase (an increase in emissions that is significant for that pollutant that is defined and regulated under the United States Environmental Protection Agency's (U.S. EPA) New Source Review program).

As required by the Emergency Proclamation, the California Air Resources Board (CARB) is developing a mitigation strategy to offset emissions associated with emergency operations of these units. The mitigation plan must include investments to improve air quality in communities, with a particular focus on disadvantaged communities, and to reduce risk to sensitive populations. Details of mitigation options will be determined through a public process. To the extent feasible, CARB will gather local perspectives on how best to mitigate the effects of local increases of emissions to potential and historically affected parties.

Projected Emissions

Emissions guarantees are valid for the ambient temperature range from 9°F to 118°F and a gas turbine generator load between 50% and 100% of capacity as defined in steady state conditions. Emission guarantees are as follows:

- NOx: 25 ppmvd at 15% O_2,
- CO: 203 ppmvd at 15% O_2.

Current best available control technology (BACT) limits for these TPGs under air district rules and regulations are as follows:

- NOx: 5 ppmvd at 15% O_2,
- CO: 6 ppmvd at 15% O_2,
- VOC: 2 ppmvd at 15% O_2.

The TPGs would comply with PM10 and SO_2 BACT requirements by using pipeline quality natural gas.

The selective catalytic reduction (SCR) and oxidation catalyst are advanced active emission control technology systems that are not off-the-shelf products and require custom engineering design before manufacture, delivery, and installation. There is a 10 to 12-month lead time for delivery and it would take an additional 1 to 2 months for installation. In September 2021, CDWR will start negotiations with GE to procure the SCR for the Greenleaf 1 TPGs [criterion (a)(4)]. SCR commissioning is anticipated by late 2022. Once these post combustion controls are installed on the TPGs, a BACT determination will be made by the Feather River Air Quality Management District (FRAQMD) to ensure the TPGs are in compliance with permit

requirements. The SCR and oxidation catalyst are expected to bring the remaining criteria pollutants (i.e., NOx, CO, and VOCs) into compliance with BACT.

FRAQMD is in the process of granting Authority to Construct (ATC) and Permit to Operate (PTO) permits to the TPGs. The PTO would rely on the Emergency Proclamation and the United States Department of Energy's (DOE) Section 202(c) order, which would temporarily waive federal permitting requirements, such as the National Ambient Air Quality Standards under the Clean Air Act, as the TPGs are unable to comply without the SCR installed. The project operator would report emissions from the TPGs in excess of federal air permits to the CEC for transmittal to the CARB [criterion (d)]. The operators are expected to bring the TPGs into compliance with all regulatory requirements by the earliest feasible opportunity.

Table 1. TM2500-G4 Steady State Estimated Emissions - Gas Fuel Operations							
Ambient Temp	F	100	100	100	100	100	100
GTG Load	%	100	90	80	70	60	50
NOx	lb/hr	26.7	26.7	26.7	26.7	26.7	26.7
CO	lb/hr	33.2	34.9	33.1	30.8	26.5	30.4
VOC	lb/hr	2.3	2.4	2.3	2.1	1.8	2.1
PM10/PM2.5	lb/hr	4	4	4	4	4	4
SOx	lb/hr	0.2	0.19	0.17	0.16	0.14	0.12

Table 2. TM2500-G4 Startup & Shutdown Estimated Emissions - Gas Fuel Operations							
Event	**Duration (min)**	**Heat Input (MMBtu - HHV)**	**NOx (lb)**	**CO (lb)**	**VOC (lb)**	**PM10/PM2.5 (lb)**	**SOx (lb)**
Startup	10.0	19.6	3.1	19.4	0.8	0.5	0.1
Shutdown	9.0	23.4	3.4	21.6	0.9	0.6	0.3

Stack Information

Exhaust parameters vary with ambient conditions. Since the TPGs are only expected to operate during grid emergencies, which are expected to occur on hot days, the following stack information and parameters reflect those for a 100-degree day:

- Stack Height: 26' 1-1/4"
- Exhaust Velocity: 190 ft/s
- Exhaust Temperature: 982.7 °F
- Exhaust Flow: 178.1 lb/s

Testing Requirements

GE has provided emission guarantees for NOx and CO based on the following EPA source test methods:

- NOx: EPA METHOD 20 (25 ppmvd at 15% O_2)
- CO: EPA METHOD 10 (203 ppmvd at 15% O_2)
- PM10/2.5 and SO_2 emissions would meet BACT requirements through the use of natural gas fuel.

Additional source testing verification is not proposed as these TPGs are expected to operate very infrequently and during grid emergencies only, as designated and directed by the CAISO, until they meet all local, state, and federal regulatory requirements. Performing additional source testing would require the TPGs to operate for prolonged periods of time that they would not otherwise experience.

Biological Resources

Because the TPGs would be placed on previously graveled or paved substrates, no direct impacts such as loss of federally- or state-protected plants, wildlife, or habitat are expected. Similarly, the proposed access road is located onsite in previously disturbed areas, with no biological constraints identified. Indirect impacts such as lighting, installation and operational noise, and stormwater runoff are expected to be minimal and temporary. Wildlife likely have habituated to such activities at adjacent industrial facilities.

NOx emissions from operation of the TPGs would result in nitrogen deposition from the atmosphere to the biosphere. Excessive nitrogen deposition can act as a fertilizer and promote the growth of non-native vegetation. The increased dominance and growth of invasive annual grasses is especially prevalent in low-biomass vegetation communities that are naturally nitrogen-limited. Based on CEC staff's best estimate, the TPGs would run infrequently and during grid emergencies only, as designated and directed by the CAISO. Therefore, CEC does not expect that this low production would adversely affect state or federally sensitive species or habitat. Deposition of nitrogen oxides is not expected to adversely affect state- or federally-protected species or habitat; therefore, no mitigation is required.

As required by the CEC, Calpine will implement a Workers Environmental Awareness Program (WEAP) based on the SEC's existing WEAP to educate and train on-site staff to recognize, avoid, and report biological resources. [criterion (a)(5)]

Cultural Resources

The Greenleaf 1 project site was surveyed for cultural resources in 1984, prior to its construction. No cultural resources were identified on the project site. Additionally, the proposed package units would be installed at a formerly paved portion of the Greenleaf 1 project site. Therefore, no impacts on cultural resources are expected.

If excavation of utility trenches or other ground disturbance is required to install the TPGs, Calpine will implement responsible best management practices required by the CEC to prevent or ameliorate the impact of inadvertent cultural resource discoveries. These practices are based on Calpine's existing WEAP at the adjacent Sutter Energy Center under CEC jurisdiction. The best practices will consist of retaining an environmental coordinator to oversee compliance with mitigation requirements; including procedures for responding to inadvertent discoveries of cultural resources or human remains in the WEAP; and implementing stop-work, assessment, and reporting procedures in the unlikely event of an inadvertent discovery [criterion (a)(5)].

Environmental Justice

CEC staff reviewed and applied the environmental justice methodology used by DOE—the Federal Interagency Working Group on Environmental Justice and NEPA Committee's Community Guide to Environmental Justice and NEPA Methods—to determine whether the project is located in an environmental justice community. CEC staff also used the methodology in the U.S. EPA's Guidance on Considering Environmental Justice During the Development of Regulatory Actions, which is consistent with the DOE methodology. Based on these methodologies, CEC staff used the most current data available, which is from the U.S. Census, to determine whether the population in the census tract in which the project is located (06101051000) is considered an environmental justice community based on minority (race or ethnicity) or low-income status. CEC staff used 2019 5 Year American Community Survey data at the census tract level, specifically, the DP05 ACS Demographic and Housing Estimates for minority data and S1701 Poverty Status in the Past 12 Months for low-income data. Based on this data, CEC staff determined that the population within the project's census tract is considered an environmental justice population based on low-income status.

In addition to identifying whether the population residing within the project area (census tract in which the project is located) is considered an environmental justice community, CEC staff also looked to the current environmental setting in which the project is proposed to determine whether the project's census tract can be considered environmentally burdened. This consideration is separate from whether a population is considered an environmental justice population, or not. This additive consideration can provide more environmental information on metrics such as air pollution, water pollution, wastewater discharges, hazardous waste presence, versus an environment with low pollution levels and few contaminated properties.

At the Federal level, the tool to conduct this analysis is EJSCREEN. CEC staff used this public online screening tool to better understand the demographic and environmental risk indicators in a geographic area (project's census tract) to ensure that community concerns are not overlooked. It presents demographic and environmental information for a selected geography. The individual indicators have a score. CEC staff compared the environmental indicators with all of those in California. There is no overall score, unlike the overall score provided by the

CalEnviroScreen tool. CEC staff interprets percentiles at 90 or above, compared with statewide levels, to be worth noting when considering how a project would impact a community. None of the EJ Indexes applicable to Greenleaf Unit 1 had percentiles at 90 or above. The highest percentile, 76, was for the wastewater discharge indicator. The project would not contribute to an increase in wastewater discharged and thus not disproportionately impact this population.

At the California State level, the tool to conduct this analysis is CalEnviroScreen version 3.0. CEC staff used this public online screening tool to determine if the site is located within a disadvantaged community (DAC) and confirmed that the census tract within which the Greenleaf 1 site is located has an overall CalEnviroScreen percentile of 54.41 and thus is not considered a DAC. Scores are presented for the individual indicators and a total overall score is provided. The scores are compared with all the scores throughout California's roughly 8,000 census tracts. An overall score in the 75th percentile or above, is considered a DAC.[3]

Staff does not anticipate that the installation and operation of the TPGs at the proposed site would overburden or disproportionately impact an EJ population. CARB is responsible for developing and implementing a State-funded plan to mitigate the effects of additional emissions authorized by the Emergency Proclamation beyond ordinarily permitted levels. The mitigation plan will include plans to invest in programs to improve air quality in communities and to reduce the risk to sensitive populations.

Facility Design

The CEC would verify that design and construction of the facility complies with the applicable California Building Code through a third-party California-licensed delegated chief building official (DCBO) contractor. Verification would include review of materials and methods documentation of the facility design and construction to be submitted by the project operator, followed by onsite inspections by the DCBO and CEC staff [criterion (a)(6) and (a)(8)]. If any significant code-violation items are found, the DCBO would include them in a report as punch-list items and will follow up to ensure that they are resolved.

Hazardous Materials

No acutely toxic hazardous materials would be used on site during operation, and none of the proposed-for-use materials would pose significant risk of off-site impacts because of the quantities on site, their relative toxicity, their physical state, or their environmental mobility. The hazardous materials to be used for the TPGs would also be added to the existing site's Hazardous Materials Business Plan to inform first responders during an emergency. The existing site's Emergency Action Plan would include any required emergency response actions,

3 CalEPA 2017 – California Environmental Protection Agency (Cal/EPA). Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De Leon), April 2017. Available online at: https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf.

including facility evacuation, hazardous material spill clean-up, and fire prevention. The proposed project would have a less than significant impact to the public and meets the self-certification requirements related to Hazardous Materials. [criterion (a)(5)]

Hydrology and Water Quality

The TPGs would be located on previously disturbed land adjacent to the SEC site. If a project would disturb a total of 1.0 acre or more of land, it would have to file for coverage under the Construction General Permit (CGP). The CGP is a National Pollutant Discharge Elimination System (NPDES) permit administered by the State Water Resources Control Board (State Water Board) which includes filing a construction Stormwater Pollution Prevention Plan (SWPPP). However, according to communication between CDWR and the State Water Board staff, the State Water Board allows for emergency projects to start construction before a CGP has been issued provided that the project operator files for coverage within 30 days of start of construction. CDWR was informed by the State Water Board through email communication that because of the low rain erosivity of the project site the requirements of a CGP/SWPPP could be waived. The rain erosivity for the site is low primarily because it is unlikely that the site would receive any significant rain since construction would occur mostly outside the rainy season (October-May). CDWR asked and the State Water Board issued a waiver for the requirements of a construction SWPPP through WDID 5S51W005182 [criterion (a)(5)].

Since the TPGs would operate as a simple cycle, the project is exempt from the requirements for an industrial SWPPP.

Demineralized water for NOx control would be piped from SEC via an existing water line [criterion (a)(3)iii]. The amount of water needed for the TPGs would be minimal and is not expected to cause SEC to exceed its permitted annual water consumption.

The proposed project would have a less-than-significant impact to the public and meets the self-certification requirements related to Hydrology and Water Quality.

Land Use

The proposed project meets the self-certification requirements related to Land Use. GLH provided a copy of a Grant Deed with its self-certification exhibiting control over the site [criterion (a)(3)]. The TPGs would be located on previously disturbed land at a site that was formally used for energy production. Accordingly, the site has the ability to accommodate additional generating capacity. CDWR identified the Greenleaf 1 site as one of a very few in California capable of rapidly developing generation capacity.

The project site is zoned Industrial/Miscellaneous Industrial. The project site is not mapped or zoned as Farmland, agriculture, forest land, or timberland, and is not located in an area

designated by the California Public Utilities Commission as Fire Threat. Additionally, the project would not remove healthy, mature scenic trees.

Transmission Systems

The proposed interconnection to the existing switchyard, including the step-up transformer and breakers, appear to be adequately sized. The CAISO has applied for a limited tariff waiver to the Federal Energy Regulatory Commission for the interconnection of the Greenleaf temporary generation, thus initiating the interconnection process as required for the self-certification process. The proposed project meets the self-certification requirements related to receiving authorization to interconnect the TPGs to the transmission grid. [criterion (a)(7)]

Noise

The expected sound emissions from the TPGs at the existing Greenleaf site were modeled using an industry-accepted sound prediction model. The structures associated with both the existing Greenleaf plant and the adjacent Sutter combined cycle facility were included in the model to take into account their effect on sound propagation in various directions. Based on this modeling, the noise levels would not exceed 60 dBA at the project boundaries, would be approximately 43 to 49 dBA at the residential receptors northeast on Township Road and 42 dBA at the residential receptor northwest on Pierce Road.[4] The US EPA's recommended threshold for residents is 55 dBA during the daytime hours of 7 a.m. to 10 p.m. and 45 dBA during the nighttime hours of 10 p.m. to 7 a.m. The project's noise level would be below this nighttime threshold for most of these receptors, except the nearest residence northeast on Township Road. Any nighttime operation, when it would be desirable to keep the sound level at or below 45 dBA, would be unlikely or rare. The project's noise impact to the public would be less than significant and the project meets the self-certification requirements related to noise. [criterion (a)(6)]

Modeling results are usually accurate, and CEC staff does not anticipate any noise-related concerns. However, to ensure the public can report any undesirable noise conditions associated with the project, staff has included a noise complaint reporting and resolution process in **Attachment 1**.

4 50 dBA is equivalent to rain, car driving at approximately 25 mph at 100 feet, or quiet conversation.
60 dBA is equivalent to a gas lawnmower at approximately 300 feet, or car driving at 65 miles/hour at approximately 150 feet.

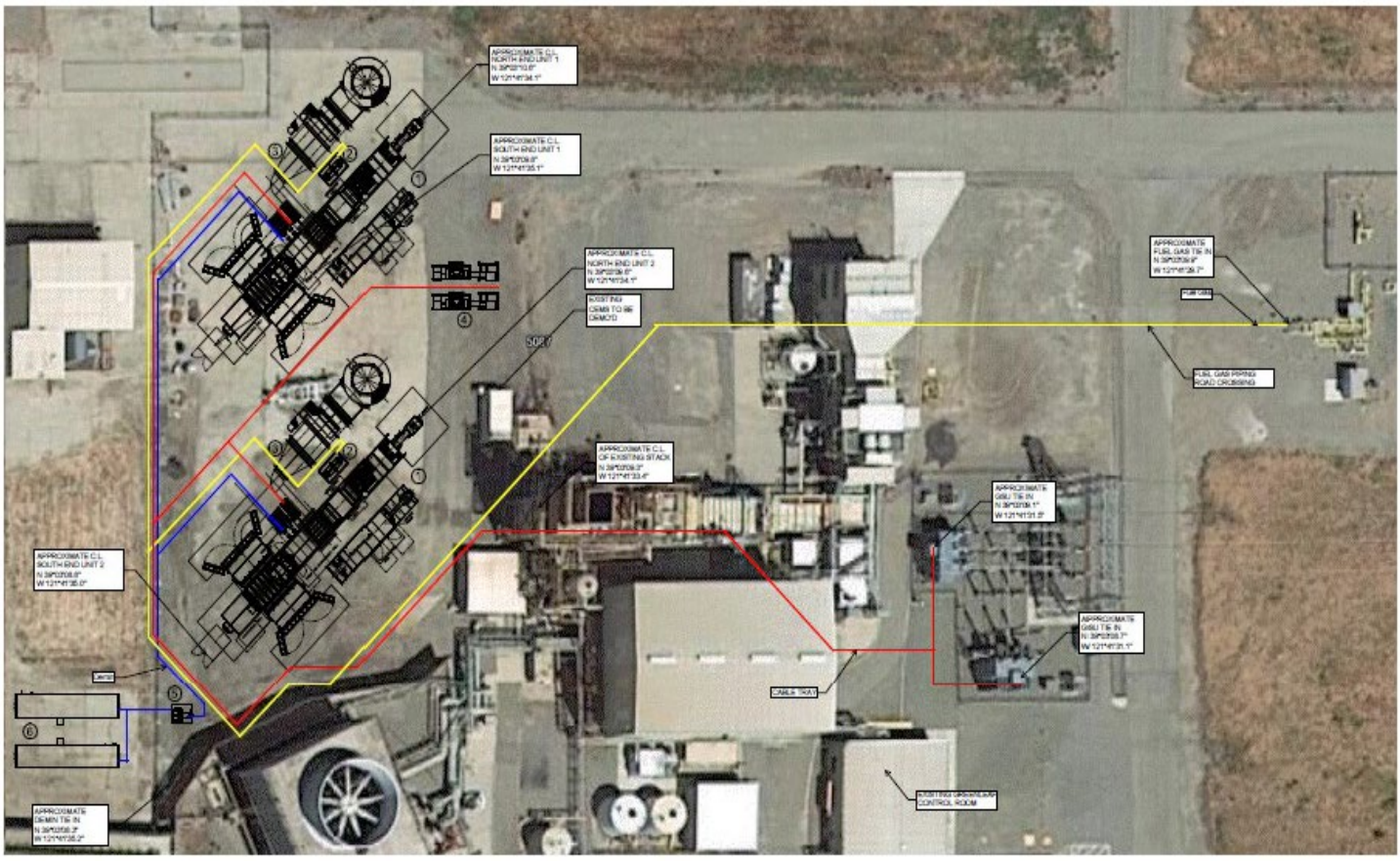

Figure 1: Site Plan
Source: TN 239598 Calpine Greenleaf Holdings, Inc Self-Certification Application

ATTACHMENT 1:
LICENSE FOR GREENLEAF 1 TEMPORARY POWER GENERATORS (21-TPG-02)
CONDITIONS AND REPORTING REQUIREMENTS (CRR)

CRR-1: The project operator shall provide a quarterly compliance report to the CEC Compliance Project Manager (CPM) including a record of the number of persons who have completed the Workers Environmental Awareness Program training in the prior quarter and a running total of all persons who have completed the training to date. The signed training acknowledgement forms from construction shall be kept on file by the project operator for a period of at least 6 months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for 6 months following the termination of an individual's employment.

CRR-2: The project has been issued a waiver of the requirements of a construction stormwater pollution prevention plan (SWPPP) by the State Water Resources Control Board based on the low erosivity of the site. However, the project operator shall implement stormwater best management practices (BMPs) to ensure that no contaminated water is discharged off-site. Examples of contaminated water include dust suppression water, equipment wash water, and contact stormwater and sediment laden stormwater in the unlikely event that significant rain falls on the project site during construction.

CRR-3: Prior to operation of the temporary power generators, the project operator shall notify the residences within 3500 feet from the project site, by mail or by other effective means, of the commencement of project operation. The notification shall include a telephone number for use by the public to report any undesirable noise conditions associated with the operation of the project. Within five business days, project personnel shall notify the CPM that the above notification has been sent.

If the project receives a noise complaint, project personnel shall document and investigate the complaint to determine the source of the noise. If the investigation determines that the noise is project related, project personnel shall attempt to resolve the complaint to the satisfaction of the complainant.

The project operator shall use the attached Noise Complaint Resolution Form or a functionally equivalent procedure, to document and respond to the noise complaint. The completed form shall be submitted to the CPM within three business days following its completion.

If project personnel and complainant cannot reach consensus, project personnel shall notify the CPM.

CRR-4: If a cultural resource is found during installation of the project, the project operator shall provide the following documentation to the CPM:

- A description of the cultural resource, the circumstances surrounding its discovery, actions taken to protect the resource, and the disposition of any artifacts or features that came into the project operator’s possession.

- A confidential map of the discovery location on an aerial photograph or project plans.
- Photographs of the cultural resource and constituent artifacts or features.

If human remains are found during installation of the project, the project operator shall document the discovery as described in the bulleted list above and demonstrate compliance with California Health and Safety Code, Section 7050.5(b). Demonstration of compliance may include:

- Telephone conversation logs
- Copies of email exchanges
- Minutes from field meetings

The project operator shall provide the documentation described in the previous paragraphs with the reports required under CRR-1, in a confidential appendix. The project operator shall keep this documentation on file for at least 6 months following the start of commercial operation.

CRR-5: After construction is complete, the project operator shall submit Semi-Annual Compliance Reports; the project may be required to submit additional compliance reports as mandated by other CRRs. The reports are due to the CPM at a date agreed to by the CPM. Each Semi-annual Compliance Report shall identify the reporting period and shall contain the following:

- An updated compliance matrix, in a spreadsheet format. The compliance matrix must identify the following:
  - the technical area and number of the conditions and reporting requirements;
  - a brief description of the submittal required;
  - the date when the submittal is required and the expected or actual submittal date; and
  - the compliance status of each condition and reporting requirement.
- A summary of the current project operating status and an explanation of any significant changes to facility operations;
- Documents required by specific conditions and reporting requirements to be submitted along with the Semi-Annual Compliance Report as attachments; and
- A listing of filings made to, or permits issued by, other governmental agencies during the year.

CRR-6: The project operator shall provide access to the CEC for inspection of the power generating equipment and site and provide all available documentation regarding equipment and site as requested by the CEC. The project operator shall report and

provide copies of all incidents, complaints, notices of violation, notices of fines, official warnings, and citations, within seven days of receipt or occurrence, to the CPM. Complaints shall be logged and numbered.

CRR-7: At the end of the life of the permit, to ensure that a planned facility closure does not create adverse environmental, health, and safety impacts, the project operator shall submit a facility closure plan to the CEC for review and approval at least 6 months (or other time period agreed to by the CPM) prior to commencement of closure activities.

CRR-8: An Environmental Coordinator (EC) shall be retained by the project operator. The EC shall have the authority to review and approve the following materials and assume the following duties:

- per CCR-9, design the Worker Environmental Awareness Program;
- issue stop-work orders as per CCR-9;
- Report to the CPM, CDFW or USFWS any take of special status plants, wildlife, or habitat (per CCR-11);
- the EC shall have the following qualifications: at minimum, hold a bachelors degree in Environmental Science, Environmental Planning, Urban Planning, or a related field, and have a minimum of 3 years of applicable, relevant experience; and
- the EC shall be available to the CPM or their CEC staff-designee, for consultation and updates upon request.

CCR-9: The project operator shall implement a Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation and closure, is informed about sensitive biological and cultural resources associated with the project.

The WEAP must:

- be developed by or in consultation with the EC and consist of an on-site or training center presentation in which supporting written material and electronic media are made available to all participants;
- discuss the locations and types of known sensitive biological resources on the project site and adjacent areas;
- present the reasons for protecting these resources;
- include a discussion of applicable laws and penalties under law;
- include samples or visuals of artifacts that might be found in the project vicinity;
- include a discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;

- include a discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;
- present the meaning of various temporary and permanent habitat protection measures;
- identify whom to contact if there are further comments and questions about the material discussed in the program;
- include instruction that work crews are to halt work in the vicinity of a potential cultural resources discovery, and shall contact their supervisor, and that redirection of work would be determined by the construction supervisor, EC, and CPM; and
- include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.

Verification: The project operator shall provide a quarterly compliance report to the CPM, a record of the number of persons who have completed the training in the prior months and a running total of all persons who have completed the training to date. The signed training acknowledgement forms from construction shall be kept on file by the project operator for a period of at least 6 months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for 6 months following the termination of an individual's employment.

CRR-10: The project operator shall undertake the following:

- provide representative schematics, diagrams, or shapefiles of the final package unit configuration and linear connections;
- design, install, and maintain project-related features such as access roads and storage and parking areas to avoid identified sensitive resources;
- stake or fence the limits of the work zone and access roads, and prohibit any offsite use or impacts;
- eliminate from landscaping or revegetation plans any List A California exotic pest plants of concern as defined by the California Exotic Pest Plant Council;
- prescribe a road sealant that is non-toxic to wildlife and plants; and
- design, install, and maintain any additional necessary facility lighting to prevent side casting of light toward native habitat.

Verification: Implementation of the measures shall be reported in the quarterly compliance reports by the project operator.

CRR-11: The project operator shall implement the following measures to manage its construction site (and related facilities) in a manner to avoid or minimize impacts to local biological and cultural resources:

- Install temporary fencing and provide wildlife escape ramps for construction areas that contain steep-walled holes or trenches if outside an approved, permanent exclusionary fence. The temporary fence shall be hardware cloth or similar material that is approved by the CPM, and California Department of Fish and Wildlife (CDFW);
- ensure that all food-related trash is disposed of in closed containers and removed at least once a week;
- prohibit feeding of wildlife by staff and subcontractors;
- prohibit non-security-related firearms or weapons on site;
- prohibit pets on site;
- report all inadvertent deaths of sensitive species to the Environmental Coordinator, who will, within 24 hours, notify the CPM, CDFW and United States Fish and Wildlife Service, as appropriate; and
- minimize use of rodenticides and herbicides in the project area.

Verification: Implementation of the measures shall be reported in the quarterly compliance reports by the Environmental Coordinator. Within 30 days after completion of project deployment, the project operator shall provide to the CPM, for review and approval, a written construction termination report identifying how environmental resource measures have been completed. This report may or may not be coincidental with the quarterly monitoring report.

CRR-12: Unless determined necessary on an ongoing basis, improvements to the site made for the project such as concrete pads, gravel lining, and temporary or permanent fencing must be removed once the project's permit has expired.

Verification: Within one month of permanent cessation of operation, the project operator shall provide a final report documenting removal of project facilities (this may or may not be coincidental to the quarterly report).

CRR-13: The project operator shall comply with the terms and conditions of the Authority to Construct (ATC) and the Permit to Operate (PTO) issued by the Feather River Air Quality Management District (FRAQMD).

In the event that the air district finds the project to be out of compliance with the terms and conditions of the ATC/PTO, the project operator shall notify the CPM of the violation, and the measures taken to return to compliance, within five days of the occurrence of the violation.

CRR-14: The project operator shall provide an emissions reporting protocol to the CPM for review and approval. The emissions reporting protocol shall explain the procedures for estimating criteria pollutant emissions during emergency operation and reliability testing. The protocol shall list the calculation methodologies, operational parameters used to quantify emissions (e.g., fuel flow, gross calorific value of fuel, predetermined emission factors, water injection, megawatts, etc.), and any assumptions made in the estimate. The protocol shall be submitted at the end of each operating quarter for approval.

Upon approval of the protocol, the operational emissions shall be reported using and presenting the same calculation methodologies, operational parameters and assumptions as contained in the approved emissions reporting protocol. Emissions shall be reported to the CPM quarterly. In addition to emissions reporting, the reported data shall include fuel use, hours of operation and times of operation, and energy produced by that use and operation.

NOISE COMPLAINT RESOLUTION FORM

Calpine Greenleaf 1 State Power Augmentation Site
NOISE COMPLAINT LOG NUMBER _____ Complainant's name and address: Phone number: _____
Date complaint received: _____ Time complaint received: _____
Nature of noise complaint:
Definition of problem after investigation by plant personnel: Date complainant first contacted: _____
Description of corrective measures taken: Complainant's signature: _____ Date: _____
This information is certified to be correct: Plant Manager's Signature: _____

ATTACHMENT 2: SELF-CERTIFICATION CHECKLIST

TEMPLATE FOR LICENSING NEW EMERGENCY AND TEMPORARY POWER GENERATORS			
LICENSE APPLICANT ENTITY: **Calpine**	**APPLICANT PRIMARY CONTACT NAME:** **Barbra McBride**	**EMAIL ADDRESS:** **Barbara.McBride@calpine.com**	**PHONE NUMBER:** **925-570-0849**

COLUMNS BELOW FOR CEC STAFF USE ONLY

	SELF-CERTIFICATION YES OR NO	PROVIDE WITH CHECKLIST	DOCUMENTATION PROVIDED AS ATTACHMENT	ADEQUATE YES OR NO	INFORMATION NEEDED TO MAKE ADEQUATE	APPLICABLE ENVIRONMENTAL CONDITIONS
Cover Letter	N/A	Letter dated and signed by each applicant attesting under penalty of perjury to the application's truth and accuracy.	Cover letter provided with template	YES	N/A	N/A
General Project Description	N/A	Provide a general description of the proposed temporary power generator site and a site map delineating the fence line.	Attachment 1, General Project Description	YES	N/A	N/A
III. CRITERIA AND PROCEDURES						
(a)(1) The power generator(s) will deliver 10 MW or more on a single grid intertie.	YES	Unit description, manufacturer specifications and cut sheets for engine-generator package.	Attachment 2, TM 2500 brochure. Attachment 10, pp. 1-11.	YES	N/A	N/A
	YES	Description and one-line diagram showing the generating unit's proposed intertie to the substation, including GSU, breakers and switches.	Attachment 3, Project one-line diagram.	YES	N/A	N/A
(a)(2) the power generator(s) will deliver net peak energy no later than October 31, 2021.	YES	Schedule showing estimated major milestones including generator delivery, interconnection agreements, fuel and demin water availability.	Attachment 4, Project Equipment Delivery Schedule.	YES	N/A	N/A

	SELF-CERTIFICATION YES OR NO	PROVIDE WITH CHECKLIST	DOCUMENTATION PROVIDED AS ATTACHMENT	ADEQUATE YES OR NO	INFORMATION NEEDED TO MAKE ADEQUATE	APPLICABLE ENVIRONMENTAL CONDITIONS
(a)(3) The owner or operator has control over the site, and	YES	Copy of proof of site control (e.g., certificate of title, a deed, ALTA survey, lease agreement or other legal document specifying ownership).	Attachment 5, Grant Deed for the project site, which is owned by GLH and is subject toa site agreement between GLH and DWR for the facility.	YES	N/A	N/A
(a)(3)i. generation will be located in a previously disturbed site;	YES	Date-stamped photographs, aerial photographs, maps, or documents that show the site consists-or consisted of- a concrete pad, pavement, gravel, previously excavated, compacted, or otherwise improved area.	Attachment 6 contains photographs of the site which is the decommissioned Greenleaf-1 Cogen facility.	YES	N/A	N/A
	YES	A description of previous disturbances or development of the candidate site.	Attachment 1, The site is a decommissioned power plant site.	YES	N/A	N/A
(a)(3)ii. generation will use natural gas as soon after construction as practicable;	YES	Initial fuel plan if not natural gas, and description of plan and schedule for conversion to natural gas.	Attachment 1, Greenleaf will utilize natural gas.	YES	N/A	N/A
(a)(3)iii. there is a secure water supply for the project; and	YES	Description of planned demin water supply including source, storage and replenishment methods.	Attachment 1, Sutter Energy Center will supply demin water to the facility though an existing pipeline.	YES	N/A	N/A
(a)(3)iv. there is an available grid interconnection.		See (a)(7) below.				
(a)(4) The power generator(s) can accommodate best available control technology (BACT) and the owner or operator will install BACT as soon as practicable. Operators of sites on	YES	Description of plan for how and when the engine-generator will be made BACT	Attachment 10, PDF pp.12-13 DWR has indicated that the SCR will be available and installed by late 2023.	YES	N/A	N/A

which generators and equipment procured by DWR have been located shall collaborate with DWR on the installation of BACT.		compliant as soon as practicable.				
(a)(5) The owner or operator will implement best management practices and a worker environmental awareness program, as appropriate, during installation and removal of the power generators to protect any environmental resource.		Copy of worker environmental awareness program, storm water pollution prevention, if applicable, and other associated best management practices that will be implemented at the site.	Attachment 8: Sutter Energy Center WEAP Attachment 11, Contractor Hazardous Materials Business Plan for construction.	YES	N/A	CRR-1 CRR-2 CRR-4 CRR-8 CRR-9 CRR-10 CRR-11 CRR-12
(a)(6) The installation of the power generator(s) will be consistent with manufacturer specifications and safety codes and standards.	YES	Attestation letter with agreement to provide completed engineering drawings for installation of the power generator package and all associated appurtenances after commissioning.	Attachment 10, PDF pp.14-15.	YES	N/A	N/A
	YES	Manufacturer cut sheet(s) for all balance of plant appurtenances related to the power generator(s) package	See information on DWR FTP site.	YES	N/A	N/A
	YES	Manufacturer cut sheet(s) for the step-up transformer, if applicable	Attachment 9, Manufacture Cut Sheets.	YES	N/A	N/A
	YES	Manufacturer's cut sheet showing noise specification(s) for the turbine(s), gas compressor(s), and step-up transformer(s). Distance from the project fence lines to the turbine(s), gas compressor(s), and	See information on DWR FTP site. Attachment 10, PDF pp.16-19. Attachment 12, Package Unit Noise Study for Greenleaf 1 Site.	YES	N/A	CRR-3

		step-up transformer(s).				
	YES	Proof of contract and contact information for the party who will do the installation, and a copy of their Injury and Illness Prevention Plan.	Attachment 7, Contractor IIPP and Safety Program. Attachment 10, PDF pp. 20-22.	YES	N/A	N/A
(a)(7) The owner or operator has received authorization to interconnect the power generator(s) to the distribution or transmission grid by the relevant grid authority.	YES	Documentation from the California Independent System Operator or Interconnecting Utility indicating preliminary approval of the interconnection of the additional generation. And, when available, provide the Federal Energy Regulatory Commission approved generator interconnection agreement or modified existing interconnection agreement for the emergency generators.	The CAISO has prepared a draft amendment to the existing LGIA that would provide for the incremental capacity (10.8MW) required to operate at 60 MW. Concurrently, the CAISO has sought a tariff waiver at FERC se eking the authority to grant incremental capacity on a temporary basis. The execution of any amendment to the LGIA will be dependent upon FERC granting the waiver. See CAISO, Petition for Limited Tariff Waiver of the California Independent System Operator Corporation and Request for Shortened Comment Period and Expedited Commission Approval, filed in FERC Docket No. ER21-2753-000, (Aug. 25, 2021).	YES	N/A	N/A
(a)(8) The owner or operator will provide access to CEC for inspection of the power generating equipment and site, and provide all available documentation regarding the equipment and site as requested by the CEC.	YES	Statement of agreement that owner or operator will provide access to CEC for inspection and provide all available documentation requested by CEC.	See Cover Letter.	YES	N/A	CRR-5 CRR-6 CRR-7
(b) Within 10 days after an owner or operator files a self-certification,		N/A				

the Executive Director shall verify that the self-certification is complete and meets the requirements of section (a) and that, based on the information available at the time of review, the project will deliver net peak energy by October 31, 2021. The Executive Director shall file a decision on the self-certification granting or denying the license and may impose conditions or reporting requirements on the license as appropriate. The decision of the Executive Director is final and not subject to further consideration or appeal.						
(c) The owner or operator is authorized to operate the power generators up to 5 years from the date that the Executive Director grants the license.		N/A				
(d) To support the Emergency Proclamation's directive to the California Air Resources Board to develop and promptly implement a State-funded plan to mitigate the effects of additional emissions authorized by the Emergency Proclamation beyond permitted levels, all owners or operators of new and temporary power generators shall report emissions in excess of federal air permits to the CEC for transmittal to the California Air Resources Board.	YES	Statement of agreement that the owner or operator will report emissions data to the CEC.	See Cover Letter.	YES	N/A	CRR-13 CRR-14