

## DOCKETED

<b>Docket Number:</b>	15-AFC-02
<b>Project Title:</b>	Mission Rock Energy Center
<b>TN #:</b>	207151-2
<b>Document Title:</b>	Executive Summary
<b>Description:</b>	N/A
<b>Filer:</b>	Sabrina Savala
<b>Organization:</b>	Mission Rock Energy Center, LLC
<b>Submitter Role:</b>	Applicant
<b>Submission Date:</b>	12/30/2015 3:48:08 PM
<b>Docketed Date:</b>	12/30/2015

# Executive Summary

Mission Rock Energy Center, LLC (Mission Rock) proposes to construct, own, and operate an electrical generating plant in Ventura County, California. The Mission Rock Energy Center (MREC) will be a natural gas-fired, simple-cycle combustion turbine electrical generating facility rated at a nominal generating capacity of 275 megawatts (MW), co-located with battery units for the storage of electricity that can deliver an additional 25 MW.

## Project Objectives

The MREC's primary objective is to combine dispatchable, operationally flexible, and efficient energy generation with state-of-the-art energy storage technology, to meet the need for new local capacity in the Moorpark Subarea of the Big Creek/Ventura local reliability area of Southern California Edison's (SCE's) service territory. The same energy storage system that provides MREC with black start capability will also provide an additional 25 MW/100 MW hours of flexible, preferred resource capacity to the grid. The energy storage system will be used to store energy during times of over-generation, which may be caused by intermittent renewable generation, and delivered back to the grid when needed.

The MREC will thus provide a resource to balance the variability of renewable resources, to satisfy peak energy and capacity needs during high load events, and to support the electrical grid during outages of transmission lines and other generating facilities. The California Independent System Operator (CAISO) has identified a near-term need for new power facilities that can support easily dispatchable and flexible system operation.

## Project Location

The MREC will be located in unincorporated Ventura County, west of the City of Santa Paula, at 1025 Mission Rock Road. The MREC site is located in the Santa Clara River Valley in an area that is zoned Industrial (Ventura County M-3, with minimum lot size of 10,000 square feet) in an existing industrial park. Adjacent or nearby land uses to the north include an asphalt and concrete processing, automobile dismantling, and oil field operations facilities; and vehicle storage and repair yards. Agricultural land uses are found to the east and west. The Ventura County Jail is located to the southwest. The MREC site is a 9.79-acre parcel that is currently used for recreational vehicle and boat storage and is covered in asphalt concrete.

## Project Elements

The main project elements, including linear facilities and construction laydown areas are as follows:

- Five General Electric Energy LM6000 PG combustion turbine generators (CTGs) (or equivalent) equipped with selective catalytic reduction (SCR) air emissions control equipment and associated support equipment for nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) control. There is room on the MREC site for a sixth LM6000 CTG if needed in the future.
- Lithium-ion and/or flow batteries in enclosed systems. Approximately 20 enclosures will house lithium-ion or flow batteries with nominal capacity of 25 MW or 100 MWh.
- Interconnection to SCE's Santa Clara Substation via a new 6.6-mile, 230-kV transmission line that runs west-southwest from the MREC site to the SCE substation.
- Natural gas pipeline connection via 2.4 miles of new 16-inch-diameter pipe that will run southwest from the project site along Shell Road and the Southern Pacific Railroad right-of-way to interconnect

with Southern California Gas Company's existing high-pressure natural gas transmission pipeline (Line 404/406).

- A new 1.7-mile-long pipeline will bring treated recycled water from the Limoneira Company water treatment facility.
- Industrial wastewater consisting of reverse osmosis system reject and cooling tower blowdown from the chiller system will be discharged through Green Compass Environmental Solutions, Inc.'s (formerly Southern California Waste Water Company) to an existing pipeline in Shell Road, adjacent to the MREC site.
- Temporary construction facilities will include a 2.89-acre worker parking and laydown area immediately north of the MREC site.

## Project Benefits

The MREC will provide the following key environmental and economic benefits:

- **Key Project for Integrating Renewables:** The MREC will provide peaking power, energy storage, rapid start, and synchronous condenser voltage support services that are essential to integrate intermittent renewable energy sources into the electrical grid.
- **Local Reliability Support in the SCE Moorpark Subarea:** As aging coastal plants using once-through cooling retire, MREC will provide much-needed generation for local reliability in SCE's Moorpark Subarea. This area has been specifically identified by the CAISO as needing local reliability generation and ancillary grid services.
- **Minimized Land Use Impacts:** The project is sited on a brownfield site within an industrial park that is currently paved and used for vehicle storage. The site is zoned General Industrial (M3). There are no schools, residential areas, parks or recreational areas, or other sensitive land uses surrounding the site. The project is consistent with the applicable local land uses and land use plans.
- **Substantial Property Tax Revenue to Ventura County:** The MREC is expected to generate approximately \$3,500,000 in property tax per year of which approximately \$460,000 will go to the Briggs Elementary School, approximately \$380,000 will go to the Santa Paula High School, and approximately \$530,000 will go to the Ventura County General Fund.
- **Numerous Construction Jobs:** The MREC will provide for a peak of approximately 146 construction jobs over a 23-month construction and commissioning period.
- **Local Job Creation and Economic Benefits:** The MREC will have 15 full-time employees, all of whom will reside in the local area. The MREC will not significantly impact local housing, educational, or emergency response resources. In addition to the direct employment benefit, the MREC will require and use the services of local or regional firms for major maintenance and overhauls, plant supplies, and other support services throughout the life of the MREC.
- **Recycled Water Usage:** Recycled water is used exclusively for NO<sub>x</sub> control and power augmentation in the gas turbines. Potable water is only used for domestic purposes and secondary fire suppression.
- **No Significant Air Quality Impacts:** The MREC will use Best Available Control Technology (BACT) to reduce air emissions to minimal levels, and will provide air mitigation and improvements with the Ventura County Air Pollution Control District to ensure there are no significant air quality impacts from MREC.

- **No Significant Visual and Noise Impacts:** The MREC will be located in an industrial zone, immediately surrounded by other industrial uses such as asphalt recycling and auto dismantling facilities.

## Project Ownership

Mission Rock will construct, own, and operate the MREC. Mission Rock is wholly owned by Calpine Corporation (Calpine). Calpine has been providing clean, reliable power for more than 30 years and is capable of delivering nearly 27,000 MW of clean, reliable electricity to customers and communities in 19 U.S. states and Canada. Calpine's fleet of natural gas-fired plants is among the youngest and cleanest in the country. Calpine also operates the largest single renewable geothermal power resource in the world at The Geysers in Lake and Sonoma Counties, California. In California, Calpine owns and operates more than 5,000 MW of combined-cycle baseload and peaking, 500 MW of simple-cycle peaking, and 700 MW of renewable power capacity.

## Project Schedule

Mission Rock is filing this Application for Certification (AFC) under the California Energy Commission's (CEC) 12-month licensing process. Construction of the MREC is expected to begin in November 2018. Pre-operational testing of the power plant is expected to begin in April 2020, and full-scale commercial operation is expected to begin by September 2020.

## Environmental Considerations

Pursuant to the requirements set forth in existing environmental laws and the CEC's regulations, sixteen areas of possible environmental impact from the MREC were investigated. Detailed descriptions and analyses of these areas are presented in Sections 5.1 through 5.16 of the AFC. As discussed in detail in this AFC, with the implementation of the proposed mitigation measures and the anticipated Conditions of Certification, there will be no significant unmitigated environmental impacts associated with the construction and operation of MREC. This Executive Summary highlights six subject areas that have historically been of interest in CEC proceedings: air quality, biological resources, cultural resources, land use, noise, visual resources, and water resources.

### Air Quality

An assessment of the potential impact on air quality was conducted based on the MREC emission estimates and air dispersion modeling. As discussed in Section 5.1, the predicted impacts are expected to be less than the California Ambient Air Quality Standards for the attainment pollutants (CO, NO<sub>x</sub>, and sulfur dioxide). The MREC site is located in an area designated by the U.S. Environmental Protection Agency as non-attainment for ozone and California Air Resources Board as non-attainment for ozone and particulate matter with a diameter less than 10 microns (PM<sub>10</sub>) and with a diameter less than 2.5 microns (PM<sub>2.5</sub>). MREC's potential air quality impacts will be mitigated by the installation and operation of BACT for the combustion turbines, and the acquisition of emission reduction credits and VCAPCD mitigations for any remaining emissions. As a result, the MREC will have no significant adverse impact on air quality or public health. See Section 5.1 for a detailed analysis of air quality and Section 5.9 for public health.

### Biological Resources

The MREC site is located on a paved brownfield site. The generator tie-line crosses agricultural areas and undeveloped hills vegetated in chaparral and the natural gas and water supply pipelines cross agricultural and industrial areas. While potentially sensitive habitats, including riparian areas and waters

of the U.S. (including wetlands) occur in the area surrounding the MREC site, the MREC would not directly impact these areas.

The MREC will not affect special-status species or their habitats and federal or state permits related to biological resources will not be required. Using guidelines developed by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, Mission Rock is proposing avoidance and protection measures for biological resources, including special-status species that are found in locations near the MREC facilities. The mitigation measures will also reduce or eliminate impacts on other special-status species and species occurring within the MREC areas that do not have special protective requirements under the state and federal Endangered Species Acts. These mitigation measures will be further developed in the Biological Resources Mitigation Implementation Monitoring Plan (BRMIMP) that will be submitted to the CEC and natural resource agencies for approval. The BRMIMP also presents protection and mitigation measures issued by the natural resource agencies in each of their permit terms and conditions. MREC will have no significant impacts on biological resources. Section 5.2 provides a detailed discussion of potential impacts on biological resources from the construction and operation of MREC.

## Cultural Resources

Archaeological surveys have not located archaeological properties within the MREC's area of potential effects and consultations with Native Americans have not identified traditional cultural properties or other concerns. A historic architectural literature search indicates that Ventura County completed a historic architectural survey that encompassed the MREC site and generator tie-line right-of-way in 1996. This survey resulted in the identification of several hundred historic buildings and structures over a very large portion of the Santa Clara River Valley and proposed a historic district be designated for the western portion of the Santa Clara River Valley with a period of significance dating from 1860 to 1940 and historic theme of agricultural development.

The survey conducted for the MREC found 28 buildings and structures within 0.5 mile of the MREC or its generator tie-line, some of which were recorded in 1996 as part of the Santa Clara River Valley Historic District. None of these properties would be directly affected by construction or operation of the MREC, but some of these properties are will be affected by changes to their setting due installation of the generator tie-line. With the implementation of proposed mitigation measures, the MREC will have no significant impacts on cultural resources. Section 5.3 provides a detailed discussion of potential impacts on cultural resources from the construction and operation of the MREC.

## Land Use

MREC is consistent with all applicable federal, state, and local plans and policies, and, as such, there are no significant land use impacts associated with the implementation of the project. The MREC is subject to applicable policies in the Ventura County General Plan. The MREC has been designed to comply with the land use planning requirements of Ventura County. The MREC is on land that is zoned for General Industry (M3), where electric generation facilities are conditionally permitted. The project is consistent with General Plan policies related to sensitive lands, sensitive viewsheds, transportation, services, infrastructure, and environmental health. The MREC will not conflict with operations at nearby Santa Paula Airport, and will be compatible with General Plan policies related to transportation demand management and water use minimization. Section 5.6 contains a detailed discussion of MREC's land use.

## Noise

There will be no significant adverse noise impacts from the construction or operation of MREC. Noise from the MREC, with additional noise control incorporated in the design, will not exceed 49 decibels (A-weighted scale) (dBA) in the vicinity of the nearest receptor or 60 dBA at the second-nearest

receptor. These levels will comply with Ventura County's day, evening, and nighttime guidelines. In addition, as a simple-cycle peaking power plant, the MREC will be likely to operate mostly during times of very high electrical load, when baseload plants are not operating, when balancing renewables is necessary, or during emergency conditions. The most common times of operation will likely be afternoons during hot weather episodes. Nighttime operation of the MREC, while it may occur, will be relatively rare and full-load nighttime operation will be even less frequent. Section 5.7 contains a detailed discussion of the noise impact assessment of the MREC.

## Visual Resources

The MREC will not result in any adverse visual impacts, nor will it degrade the existing visual character or quality of the site and its surroundings. The existing visual character of the MREC area is agricultural and industrial, with scattered infrastructure. Therefore, even where it can be seen, it will not substantially degrade the visual quality of the surroundings.

The exhaust stacks will be MREC's most visually prominent features. These stacks will be visually absorbed by other vertical features currently visible in the area, namely, the adjacent Granite Construction Company's asphalt recycling plant, and would not appear in views from the known observation points to substantially encroach upon the existing views. The MREC is not located in a scenic or protected viewshed, and there are no state scenic highways in its vicinity. Section 5.13 contains a detailed discussion of the visual resources assessment.

## Water Resources

There will be no significant adverse impacts on water resources from the construction or operation of MREC. Recycled water will be supplied by the Limoneira Company via a new 1.7-mile-long pipeline. Additionally, some of the raw water will be used for miscellaneous onsite uses such as equipment washdown and landscape irrigation and fire suppression water. Section 5.15 contains a detailed analysis of water resources.