DOCKETED

Docket Number:	15-AFC-02
Project Title:	Mission Rock Energy Center
TN #:	212200
Document Title:	Sheryl Hamlin Comments: NRG Rejects Mission Rock Site
Description:	N/A
Filer:	System
Organization:	Sheryl Hamlin
Submitter Role:	Public
Submission Date:	7/8/2016 9:27:59 AM
Docketed Date:	7/8/2016

Comment Received From: Sheryl Hamlin
Submitted On: 7/8/2016
Docket Number: 15-AFC-02

NRG Rejects Mission Rock Site

Please read NRG's analysis of the Mission Rock site and why it is unacceptable for a plant of this size . Thanks

Additional submitted attachment is included below.

DOCKETED

Docket Number:	15-AFC-01
Project Title:	Puente Power Project
TN #:	207096
Document Title:	Applicant's Alternative Sites Summary
Description:	N/A
Filer:	Paul Kihm
Organization:	Latham & Watkins LLP
Submitter Role:	Applicant Representative
Submission Date:	12/21/2015 3:30:19 PM
Docketed Date:	12/21/2015

Application for Certification
(15-AFC-01)

Puente Power Project (P3)
Oxnard, CA

Alternative Sites Summary

December 2015

Submitted to:
The California Energy Commission

Prepared by: AECOM

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LIST OF ACRONYMS AND ABBREVIATIONS

AFC	Application for Certification
AFY	acre-feet per year
APN	Assessor's Parcel Number
AWPF	Advanced Water Purification Facility
CCC	California Coastal Commission
CEC	California Energy Commission
COC	Condition of Certification
CURB	City Urban Restriction Boundary
dBA	A-weighted decibels
EC	Energy Coastal
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
kV	kilovolt
LCP	Local Coastal Plan
LORS	laws, ordinances, regulations, and standards
MGS	Mandalay Generating Station
MW	megawatt
NAVD88	North American Vertical Datum of 1988
NWI	National Wetlands Inventory
OBGS	Ormond Beach Generating Station
P3	Puente Power Project
RFO	Request for Offer
SCE	Southern California Edison
SOAR	Save Open Space and Agricultural Resources
UWCD	United Water Conservation District

PUENTE POWER PROJECT (15-AFC-01)
ALTERNATIVE SITES SUMMARY

1.0 INTRODUCTION

In the Puente Power Project (P3 or Project) Application for Certification (AFC), NRG Oxnard Energy Center LLC (Applicant) indicated that analysis of alternative sites for P3 is not a strict legal requirement. It was documented further in Section 5 of the AFC that alternative sites could not meet the project objectives, namely the obligations of the executed contract between Applicant and Southern California Edison (SCE). For these reasons, an alternatives analysis was not presented in the AFC. In its August 10, 2015, Issues Identification Report (TN #205664), California Energy Commission (CEC) staff indicated that analysis of alternative site locations may be warranted, and identified two possible alternative sites. The alternative sites identified by the CEC staff are shown on Figure 1, and identified herein as Sites 1 and 2, respectively:

- Site 1: Ormond Beach Generating Station (OBGS)
- Site 2: Existing location of Mandalay Generating Station (MGS) Units 1 and 2

The City of Oxnard (City) also requested that CEC staff and Applicant review alternative sites for the development of P3. The City initially introduced five potential alternative sites in its presentation at the August 27, 2015 Informational Hearing (TN #205930). The City subsequently refined the suggested sites, and included a sixth site for consideration. These six alternative sites are presented in "Oxnard NRG P3 Alternative Sites," docketed on October 8, 2015 (TN #206301). The six alternative sites identified by the City are shown on Figures 1 and 2, and are identified as follows:

- Site 3: Sanitation District Flower Field
- Site 4: Beedy Street
- Site 5: Power Machinery/Camino Real Business Park
- Site 6: Del Norte and East 5th Street Industrial Park
- Site 7: Mission Rock Energy Center
- Site 8: Ormond Beach Parcels (various locations near Edison Drive/Hueneme Road)

Although the Applicant continues to believe that analysis of alternative sites is not required, the Applicant has reviewed the alternative sites suggested by the CEC staff and the City (collectively referred to herein as the Alternative Sites), compared them to the proposed Project site (referred to herein as the Proposed Site), and completed an analysis of whether development of P3 at any of the Alternative Sites would:

- satisfy project objectives;

- meet certain site screening criteria, including site control; site size and usability; proximity to electrical infrastructure and other linears; proximity to sensitive receptors; proximity to socioeconomically disadvantaged communities; and compliance with land use laws, ordinances, regulations, and standards (LORS); and

- result in reduced potential environmental impacts when compared to the Proposed Site

In addition, the Applicant evaluated the susceptibility of the Alternative Sites to natural hazards associated with climate change and sea-level rise, and compared it to the susceptibility of the Proposed Site. Definition and description of the project objectives, screening criteria, environmental considerations, and natural hazards addressed in this analysis are provided in Sections 2 through 4.

2.0 PROJECT OBJECTIVES

SCE issued the 2013 Local Capacity Requirements Request for Offers for the Moorpark Sub-Area (Track 1) in September 2013. SCE sought to procure between 215 and 290 megawatts (MW) of electrical capacity in the Moorpark Sub-Area of the Big Creek/Ventura local reliability area to meet long-term local capacity requirements by the beginning of 2021, due to the expected retirement of once-through cooling generating facilities.

As described in the AFC (see Executive Summary, Section 1.4), the Applicant has identified the following eight basic objectives for the development of P3.

- Objective #1: Fulfill the Applicant's obligations under its 20-year Resource Adequacy Purchase Agreement with SCE, requiring development of a 262-MW nominal net output of new, more flexible and efficient natural-gas generation at the site of the existing MGS.

- Objective #2: Provide an efficient, reliable, and predictable power supply by using a simple-cycle, natural-gas–fired combustion turbine to replace the existing once-through cooling generation.

- Objective #3: Support the local capacity requirements of the California Independent System Operator Big Creek/Ventura Local Capacity Reliability area.

- Objective #4: Develop a 262-MW nominal net power-generating plant that provides efficient, operational flexibility with rapid-start and fast-ramping capability to allow efficient integration of renewable energy sources in the California electrical grid.

- Objective #5: Have the project designed, permitted, built, and commissioned by June 1, 2020.

- Objective #6: Minimize environmental impacts and development costs by siting on an existing brownfield site and reusing existing transmission, water, wastewater, and natural-gas infrastructure.

- Objective #7: Site the project on property that has an industrial land use designation with consistent zoning.

- Objective #8: Safely produce electricity without creating significant environmental impacts.

3.0 SITE SCREENING CRITERIA

To assess their potential for development, the Applicant has evaluated whether each of the Alternative Sites meet certain site screening criteria related to the practical ability to develop the Project. Some of these criteria (e.g., the need to develop linear facilities) are also relevant to the analysis of relative environmental impacts.

Each of these criteria and how it was applied is described below:

1. **Site Control –** For an Alternative Site to be considered feasible, the Applicant must be able to obtain control over the site —including the necessary construction laydown, parking, and associated linears—within a reasonable period of time and at reasonable cost.

2. **Site Size and Usability –** Any Alternative Site must be large enough to accommodate the operating facility and construction-phase parking and laydown area. At the Proposed Site, only approximately 3 acres of currently vacant land is required for development of the Project. This

is because the Project would be able to reuse and repurpose existing MGS infrastructure and use vacant land within the existing 36-acre MGS facility for construction parking and laydown areas. This is also true for Alternative Site 2 (MGS Units 1 and 2 Alternative). Any other Alternative Site would have to meet this minimum site size plus adequate space for equipment being repurposed at the Proposed Site, the supporting administration building, operation and maintenance facilities, construction-related laydown and parking, and the permanent easements for utility/linear interconnects. Therefore, to accommodate construction and operation of the Project, a currently undeveloped site should be a minimum of approximately 10 acres. Consideration was also given to the suitability of the topography and geology of the Alternative Sites, and to the associated costs to make such sites suitable, if feasible.

3. **Electrical Infrastructure –** The Project will need to deliver power to the grid. This interconnection will need to be to the 220-kilovolt (kV) transmission lines that are part of the Moorpark Sub-Area of the Big Creek/Ventura Local Reliability Area. Therefore, all of the Alternative Sites were reviewed to assess distance to this interconnection.

4. **Other Linears –** In addition to proximity to an appropriate electrical interconnection, any Alternative Site must be reasonably capable of being interconnected to other necessary utilities and infrastructure, such as natural gas, water, sewer, storm drains, and paved roads. This requires an analysis of linear distances, complexity of installation, ability to obtain necessary rights to install linear facilities, compliance with LORS along the linear route, environmental impacts, engineering, and costs. The Applicant evaluated each Alternative Site for access to the following resource types:

   · Natural gas main that has sufficient volume and pressure capacity
   · Water source that has sufficient physical and contractual capacity
   · Sewer line of sufficient physical and contractual capacity
   · Site access

5. **Proximity to Sensitive Receptors** – The Alternative Sites were evaluated for the distance between the site and the nearest receptor, including any "sensitive receptors," (e.g., schools, churches or jails); the total number of receptors in proximity to the site; and receptor population density. More distance and less density generally reduce potential environmental impacts to affected receptors. For example, P3 will operate at the Proposed Site at acceptable noise levels that meet all LORS, and there will be no impacts to sensitive receptors. The City of Oxnard's most stringent allowable exterior sound level for residential areas is 50 A-weighted decibels (dBA) between 10 p.m. and 7 a.m. The predicted project operation noise contour map is included as Figure 4.7-1 in the Project Enhancement and Refinement. The estimated distance from the power plant to the predicted 50-dBA noise contour is approximately 1,000 to 1,500 feet.

   Therefore, for the purposes of this analysis, a criterion of 1,500 feet from the nearest sensitive receptor was used.

6. **Proximity to Socioeconomically Disadvantaged Communities** – Each Alternative Site was evaluated to determine whether the Project would result in a significant impact to minority and low-income communities, or in disproportionate impacts to these populations.

7. **Land Use LORS –** To be considered a feasible alternative, an Alternative Site must have, or reasonably be able to attain, compatible zoning and General Plan designations and provisions.

8. **Environmental Considerations** – The Applicant analyzed potential environmental impacts associated with each of the 16 environmental resource areas for each Alternative Site in comparison to those of the Proposed Site. The environmental resource areas are discussed in Section 4.0.

4.0 ENVIRONMENTAL CONSIDERATIONS

The Applicant analyzed potential environmental impacts associated with each of the 16 resource areas for each Alternative Site in comparison to the Proposed Site. The environmental resource areas are identified below and summarized in Table 2.

- Air Quality – For Air Quality analysis, a similar 262-MW natural-gas–powered peaking project has been assumed to be built on each of the Alternative Sites. All Alternative Sites are in the same local air shed and topographical setting. The Ventura County Air Pollution Control District is the lead agency to issue the Authority to Construct and Permit to Operate. Alternative Sites with receptors closer than those of the Proposed Site may have an incremental increase in potential for significant air quality impacts when compared to the Proposed Site.

- Biological Resources – Each of the Alternative Sites is on previously disturbed land. The Applicant assessed the potential biological constraints of each site (e.g., potential presence of sensitive species or habitats on or near the site) and reviewed the National Wetland Inventory (NWI) for presence of wetlands.

- Cultural Resources – Each of the Alternative Sites is on previously disturbed land (i.e., surface disturbance). The Applicant assessed the relative likelihood of discovering archaeologically sensitive resources on and below the surface at each site. Due to their locations, some sites may have an increased likelihood of culturally significant resources present.

- Geological Hazards and Resources – Each Alternative Site was evaluated with respect to potential geologic hazards, although each of the sites are in the same general seismic area and underlain by similar geologic formations. Sites were compared to the distance from potentially active or active faults (see Table 3).

- Hazardous Materials – Because a similar project would be built on each of the Alternative Sites, hazardous materials use, storage, and disposal would be about the same for all the Alternative Sites. Alternative Sites with receptors closer than that of the Proposed Site may have incrementally higher risks of potentially significant impacts associated with unanticipated hazardous materials releases than those of the Proposed Site.

- Land Use Zoning and Compatibility – The Proposed Site and all but one of the other Alternative Sites are zoned “heavy industrial” and therefore compatibly zoned for the proposed Project. One site is zoned agricultural/greenbelt and would need to be rezoned (“public-quasi public”) via City Council discretion following approval of the AFC by the CEC.

- Noise – Because a similar project would be built on each of the Alternative Sites, the noise profile will be similar. The noise-related impacts due to the Project at any of the Alternative Sites will vary in comparison to the Proposed Project, based on the distance to sensitive receptors. The proximity to sensitive receptors was used as a criterion to assess whether an Alternative Site would have greater or lesser impacts than the Proposed Site.

- Paleontological Resources – Each of the Alternative Sites is on previously disturbed land, but resources could be present at or beneath the surface. The Applicant believes that paleontological resources impacts for each Alternative Site are similar to those for the Proposed Site.

- Public Health – Potential public health impacts will vary based on proximity of Alternative Sites to sensitive receptors in comparison to the Proposed Site. Alternative Sites with receptors closer than those of the Proposed Site may have an incremental increase in potential for significant public health impacts when compared to the Proposed Site.

- Socioeconomics – The Project will provide economic benefits (e.g., wages and tax revenue) to the jurisdiction in which it is developed. Seven of the eight sites are located in the City of Oxnard or in the City's sphere of influence (Site 7 is in an unincorporated area). The Applicant determined that the Project's socioeconomic impacts would be about the same for each of the Alternative Sites, assuming that the Alternative Site could be contracted in a manner similar to that of the Proposed Site. That may not be a realistic assumption, because the Proposed Site is the only site that is contracted and before the California Public Utilities Commission for a pending decision in the very near term. For this comparative analysis, the Applicant looked at the minority populations immediately surrounding each Alternative Site to assess a site's potential to impact a sensitive population.

- Soils – Soils impacts would mainly arise at each of the Alternative Sites during the early construction phase as the site is brought to proper grade. Each of the Alternative Sites has been previously disturbed. Some of the Alternative Sites (e.g., those currently being used as farmland) are anticipated to require more significant grading than the Proposed Site, which is graded or paved.

- Traffic and Transportation – During the construction phase, each Alternative Site would necessitate the same amount of materials, workers, and services. However, Alternative Sites that require the installation of offsite linears (gas and/or water) would introduce added construction-phase traffic flow issues due to the pipelines being constructed in public roads. Development of a project near an airport could pose a safety risk to airplanes approaching and taking off from the airport, and airplanes could pose a risk to the respective Alternative Sites; therefore, the distance to the closest airport to each site was reviewed and compared to the Proposed Site (see Table 3).

- Visual Resources – The Proposed Site will result in reduction of potential visual impacts, with the removal of MGS Units 1 and 2 and the addition of a single slightly lower single stack that lacks the more prominent features of a steam boiler power plant. Each of the Alternative Sites adds potential visual impacts with the addition of power generation equipment and supporting infrastructure, including new transmission lines and buildings that are not currently present at any Alternative Site with the exception of Site 1, Ormond Beach Generation Station. With visual mitigations, the visual impacts associated with each of the Alternative Sites would be similar. Each Alternative Site that has receptors closer than that of the Proposed Site may have an incremental increase in potential for significant visual impacts when compared to the Proposed Site. For the purposes of this comparison analysis, the proximity to sensitive receptors and the length of electrical interconnection were used as criteria to assess whether the respective Alternative Sites would have greater or lesser impacts than the Proposed Site.

- Waste Management – The current environmental conditions of each of the Alternative Sites (aside from Site 1 and Site 2, which the Applicant also owns) are not known in comparison to the environmental conditions of the Proposed Site. Phase I and possible Phase II Environmental Site Assessments would be required at each Alternative Site to identify potential impacts (e.g., hazardous material, including agricultural/pesticide contamination, may be present that would

necessitate remediation). Where the environmental conditions of the Alternative Sites are unknown, they may be more significant than those of the Proposed Site.

- Water Resources – All of the sites except Site 7 would rely on the same recycled/potable water supplier, which is the City of Oxnard. For this comparison analysis, each Alternative Site's ability to connect to existing potable water and/or recycled water infrastructure was reviewed. With respect to wastewater, each Alternative Site's ability to connect to existing sewer infrastructure was also reviewed. Feasibility of connection to water supply and wastewater infrastructure is related to distance and complexity of the installation. Because a similar project would be built on each of the Alternative Sites, the amount of water used and the amount of wastewater generated by the Project would be about the same for six of the eight Alternative Sites. The Proposed Site and Sites 1 and 2 are owned by the Applicant, and have available water and wastewater infrastructure.

  Sites may be vulnerable to flooding at different degrees, based on their respective locations. Maps developed by the Federal Emergency Management Agency (FEMA) delineate inundation areas for 100- and 500-year floods. The potential flood risk for each site was identified from the available FEMA maps (see Table 3).

  In addition, sites along the coast may be affected by sea-level rise or tsunami impacts, if not protected by beach dunes or other factors. Sites that are inland and elevated would not be expected to be affected by sea-level rise or tsunami inundation. For this analysis, the locations of the Alternative Sites in comparison to the Proposed Site were considered in the comparative analysis.

- Worker Safety – Because a similar project would be built on each of the Alternative Sites, worker safety considerations would be about the same for all Alternative Sites. With implementation of CEC Conditions of Certification, the potential impacts to worker safety would be less than significant for all of the Alternative Sites.

5.0 ALTERNATIVE SITE ANALYSIS

For the purposes of this analysis, the Alternative Sites were delineated by their Ventura County Assessor's Office parcel numbers (see Figures 1 and 2, Alternative Site Locations).

Each of the Alternative Sites and associated linears is evaluated below in comparison to the criteria described above. Highly favorable attributes are identified, as are qualities that render a site infeasible. Unless otherwise noted, all elevations are relative to the North American Vertical Datum of 1988 (NAVD88). Table 1 summarizes key property criteria for each site. Table 2 summarizes the potential environmental impact issues in comparison to the Proposed Site for each of the environmental topics covered in the AFC. Because potential impacts associated with the Project at the Proposed Site are addressed in detail in the AFC and supporting materials, including Applicant's responses to data requests, the discussion here is in summary form only. Table 3 summarizes the potential hazard issues for each site.

Table 1
Summary of Alternative Sites

Number[4]	Name and/or Address	Assessor's Parcel Number[1]	Owner[1]	Applicant Site Control	Acres[1]	Distance to Electricity (miles)[2]	Distance to Gas (miles)[2]	Distance to Water Supply (miles)[2]	Distance to Wastewater (miles)[2]
Proposed Site	MGS 393 North Harbor Boulevard, Oxnard, CA	1830022025	NRG	Yes	36	0 to 220 kilovolts (kV)	0	0 onsite 3.5 offsite	0 onsite 1 offsite
1	Ormond Beach Generating Station 6635 Edison Drive, Oxnard, CA	2310040280	NRG	Yes	37	0 to 220 kV	0	0 onsite potable water 1.2 offsite recycled water	0 onsite 1.2 offsite sewer
2	MGS 393 North Harbor Boulevard, Oxnard, CA	1830022025	NRG	Yes	36	0 to 220 kilovolts (kV)	0	0 onsite 3.5 offsite	0 onsite 1 offsite
3	Sanitation District Flower Field	1380190155	Ventura Regional Sanitation District	No	26.43	0 to 220 kV	0.5	0.6	0.5
4	Beedy Street	1330190110	Ventura County	No	6.07	2.2 to 220 kV	1	2	1
5	Power Machinery/ Camino Real Business Park	2160030120	Alice Ranch Company	No	40.57	4 to 220 kV	1	4	0.1
6	Del Norte/E. 5th Street, Oxnard, CA	2160160295	Todd Industrial Park LLC	No	25.16	3 to 220 kV	1	4	0
7	Mission Rock Energy Center	0900190165	Mission Rock Energy Center LLC	No	9.79	3 to 220 kV	0.7	2	2
8	Ormond Beach	2310093155	Reita USA LLC	No	7.49	0.2 to 220 kV	0.4	0.8	0

Sources:

[1] From Ventura County Assessor. Acreage shown in table represents size of entire parcel. Sites 4 and 8 would be combined with adjacent parcels to create a parcel of 10 acres or more. Site 7 is slightly less than the 10-acre criterion; however, because another entity is potentially developing this site with a similar project, Applicant has retained the site in this analysis.

[2] Distances are approximate and reflect "as-the-crow-flies" distances to nearest assumed point of connection.

[3] Ventura County Watershed FEMA Mapping, http://www.vcwatershed.net/publicMaps/crs.

[4] Sites 3 through 8 are the City's suggested Alternative Sites (TN #205930 and 206301). For both Sites 4 and 8, the City suggested numerous parcels as potential alternative sites; therefore, for the purposes of this analysis, Applicant used a representative parcel as described herein. Sites 1 and 2 are CEC's suggested Alternative Sites (TN #205664). Both the Proposed Site and Site 2 are within the 36-acre MGS property; the Proposed Site is in the vacant northern portion, and Site 2 is in the footprint of the existing MGS Units 1 and 2.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site[1]

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Air Quality	Located in Ventura County Air Pollution Control District. Air Quality impacts less than significant with implementation of CEC COCs. Closest sensitive receptor: 2,460 feet.	Lesser Closest sensitive receptor: 6,500 feet.	Similar Closest sensitive receptor: 1,960 feet.	Greater Closest sensitive receptor: 900 feet.	Greater Closest sensitive receptor: 100 feet.	Greater Closest sensitive receptor: 300 feet.	Greater Closest sensitive receptor: 980 feet.	Greater Closest sensitive receptor: 1,000 feet.	Similar Closest sensitive receptor: 2,360 feet.
Biological Resources	Biological constraint on site is low, but is elevated due to surrounding habitat. McGrath Lake is approximately 500 feet north. No wetlands onsite.	Greater Surrounding area is a regional priority for ecological restoration. Given the extensive restoration efforts, impacts at this site would be somewhat greater than at the Proposed Site. Biological constraint on site is low, but is elevated due to surrounding habitat.	Similar	Greater Site is immediately adjacent to the Santa Clara River, which is designated critical habitat for the southern steelhead and southwestern willow flycatcher. River ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species.[3] Site is adjacent to a freshwater emergent wetland. Biological constraint on site is low, but is elevated due to river proximity.	Greater Santa Clara River is within approximately 0.25 mile of the site. The river is a highly sensitive habitat, supporting many threatened and endangered species.[3] Site is adjacent to a recharge basin and freshwater emergent wetland. Biological constraint on site is low, but is elevated due to river proximity.	Lesser Biological constraint appears low. No wetlands on site.	Lesser Biological constraint appears low. A roadside ditch on the site's southern boundary is mapped in the NWI as a riverine wetland.	Greater A drainage channel adjacent to the site's southern boundary contains mapped forested/shrub wetlands and freshwater pond features. Site is situated within 0.25 mile of the Santa Clara River, which is designated critical habitat. River ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species.[3] Biological constraint on site is low, but is elevated due to river proximity.	Similar Overall biological constraint appears low. No wetlands on site.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Cultural Resources	Site is previously disturbed; cultural resources impacts less than significant with implementation of CEC COCs.	Similar	Lesser Project would be built on footprint of power plant.	Greater Elevated archaeological sensitivity due to proximity of river.	Greater Elevated archaeological sensitivity due to proximity of river.	Similar	Similar	Greater Elevated archaeological sensitivity due to proximity of river.	Similar
Geological Hazards	Closest potentially active or active fault is approximately 1 mile away.	Lesser Closest potentially active or active fault is approximately 5 miles away.	Similar	Similar Closest potentially active or active fault is approximately 1.5 miles away.	Similar Closest potentially active or active fault is approximately 0.7 mile away.	Similar Closest potentially active or active fault is approximately 1.2 miles away.	Lesser Closest potentially active or active fault is approximately 2 miles away.	Greater Closest potentially active or active fault is approximately 0.3 mile away.	Lesser Closest potentially active or active fault is approximately 5.3 miles away.
Hazardous Materials	Closest sensitive receptor: 2,460 feet. Hazardous Materials impacts less than significant with implementation of CEC COCs.	Lesser Closest sensitive receptor: 6,500 feet.	Similar Closest sensitive receptor: 1,960 feet.	Greater Closest sensitive receptor: 900 feet.	Greater Closest sensitive receptor: 100 feet.	Greater Closest sensitive receptor: 300 feet.	Greater Closest sensitive receptor: 980 feet.	Greater Closest sensitive receptor: 1,000 feet.	Similar Closest sensitive receptor: 2,360 feet.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Land Use Zoning and Compati-bility	Zone Heavy Industrial Closest sensitive receptor: 2,460 feet.	Similar Zoned Heavy Industrial Closest residence is 6,500 feet.	Similar Zoned Heavy Industrial Closest sensitive receptor: 1,960 feet.	Greater Zoned Agricultural/ Greenbelt Would require rezoning from Greenbelt to Industrial. Two potential SOAR Ordinances that could apply to this site—the County's SOAR Ordinance, and the City's SOAR Ordinance. Currently in active agricultural production. Closest sensitive receptor: 900 feet. River Ridge Golf Club is east of the site. The Santa Clara River Trail, a public pedestrian and bicycle path that follows the Santa Clara River, is north of the site off of Monarch Lane and is accessible from the site.	Greater Zoned Heavy Industrial Adjacent to County Juvenile Justice Complex (sensitive receptor). Adjacent to residential area. Surrounding uses include industrial and commercial. Closest sensitive receptor: 100 feet.	Greater Zoned Heavy Industrial Site currently used for agriculture. Surrounding uses include farmland and a church. Closest sensitive receptor: 300 feet (Church). Closest residence is 1,450 feet.	Greater Zoned Heavy Industrial Surrounding uses include industrial and farmland. Closest sensitive receptor: (residence) 980 feet.	Greater Zoned Heavy Industrial Surrounding uses include industrial and farmland, with marshes to the south. Approximately 800 feet southeast of Ventura County Jail (sensitive receptor). Closest residence is 1,000 feet.	Similar Zoned Heavy Industrial Closest residence is 2,360 feet.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Noise and Vibration	Closest sensitive receptor: 2,460 feet	Lesser Closest sensitive receptor: 6,500 feet	Similar Closest sensitive receptor: 1,960 feet.	Greater Closest sensitive receptor: 900 feet	Greater Closest sensitive receptor: 100 feet	Greater Closest sensitive receptor: 300 feet	Greater Closest sensitive receptor: 980 feet	Greater Closest sensitive receptor: 1,000 feet	Similar Closest sensitive receptor: 2,360 feet
Paleontological Resources	Site is previously disturbed; paleontological resources impacts less than significant with implementation of CEC COCs	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Public Health	Impacts less than significant Closest sensitive receptor: 2,460 feet.	Lesser Closest sensitive receptor: 6,500 feet.	Similar Closest sensitive receptor: 1,960 feet.	Greater Closest sensitive receptor: 900 feet. River Ridge Golf Club is east of the site.	Greater Closest sensitive receptor: 100 feet. Site is adjacent to County Juvenile Justice Complex and residential area. Surrounding uses including body works, vehicle repair and storage, automobile/truck part suppliers also pose higher risk.	Greater Closest sensitive receptor: 300 feet (a church).	Greater Closest sensitive receptor: 980 feet. Adjacent uses including a regional recycling facility, future bio-gen, and oil refinery also pose higher risk.	Greater Closest residential sensitive receptor: 1,000 feet. Approximately 800 feet southeast of Ventura County Jail (sensitive receptor).	Similar Closest sensitive receptor: 2,360 feet.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Socio-economics Economic Benefits	Impacts less than significant. Project will provide economic benefits to local community.	Similar[2]	Similar[2]	Similar[2]	Similar[2]	Similar[2]	Similar[2]	Similar benefits, but economic benefits will not go to City of Oxnard	Similar[2]
Socio-economics Environ-mental Justice	The project will not have significant adverse health, safety, or environmental impacts for all affected populations, including minority populations; therefore, the proposed project will not cause or contribute to disproportionate impacts upon minority populations.	Greater Site is adjacent to census tracts with the highest density of minorities in the City of Oxnard.	Similar	Similar	Greater Site is adjacent to census tracts with the highest density of minorities in the City of Oxnard.	Greater Site is adjacent to census tracts with the highest density of minorities in the City of Oxnard.	Greater Site is adjacent to census tracts with the highest density of minorities in the City of Oxnard.	Similar	Greater Site is adjacent to census tracts with the highest density of minorities in the City of Oxnard.
Soils	Site is previously disturbed; soil impacts less than significant with implementation of CEC COCs.	Similar Site previously disturbed, and similar linears.	Lesser Project would be built on footprint of existing power plant, not soil.	Greater Site currently used for agriculture. Greater soil disturbance associated with linears.	Greater Site previously disturbed. Greater soil disturbance associated with linears.	Greater Site currently used for agriculture. Greater soil disturbance associated with linears.	Greater Site previously disturbed. Greater soil disturbance associated with linears.	Greater Site previously disturbed. Greater soil disturbance associated with linears.	Greater Site previously disturbed. Greater soil disturbance associated with linears.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Traffic and Transportation	Construction traffic impacts mitigated by traffic control plan.	Similar	Similar	Greater Additional construction phase traffic impacts for installation of offsite linears.	Greater Additional construction phase traffic impacts for installation of offsite linears.	Greater Additional construction phase traffic impacts for installation of offsite linears. Airport < 2 miles from site.	Greater Additional construction phase traffic impacts for installation of offsite linears. Airport < 2 miles from site.	Greater Additional construction phase traffic impacts for installation of offsite linears.	Greater Additional construction phase traffic impacts for installation of offsite linears.
Visual Resources	Visual Impacts less than significant	Similar Closest sensitive receptor: 6,500 feet.	Similar	Greater Due to proximity to river and numerous residences to south and southeast.	Greater Due to proximity to river. Closest sensitive receptor: 100 feet and >2 miles of new transmission lines.	Greater Closest sensitive receptor: 300 feet and 4 miles of new transmission lines.	Greater Closest sensitive receptor: 980 feet and 3 miles of new transmission lines.	Greater Due to proximity to river. Closest sensitive receptor: 1,000 feet and 3 miles of transmission lines.	Greater Nearby sensitive receptors and new transmission lines.
Waste Management	Waste Management impacts less than significant with implementation of CEC COCs.	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Water Resources	P3 will use <20 AFY of water and generate <10 AFY of wastewater. Connections are to existing onsite infrastructure. Site is not in designated floodplain.	Similar Site is not in designated floodplain.	Similar Site is in 500-year floodplain.	Greater Similar water use and wastewater generation, but installation of water/ wastewater linears may make connection infeasible. Site is not in designated floodplain.	Greater Similar water use and wastewater generation but installation of water/ wastewater linears may make connection infeasible. Site is not in designated floodplain.	Greater Similar water use and wastewater generation, but installation of water/ wastewater linears may make connection infeasible. Site is in 500-year floodplain.	Greater Similar water use and wastewater generation but installation of water/ wastewater linears may make connection infeasible. Site is not in designated floodplain.	Greater Similar water use and wastewater generation but installation of water/ wastewater linears may make connection infeasible. Portion of site is in 100-year floodplain.	Greater Similar water use and wastewater generation but installation of water/ wastewater linears may make connection infeasible. Site is not in designated floodplain.

Table 2
Alternative Site vs. Relative Environmental Impact Compared to Proposed Site (Continued)

	Proposed Site	Site 1: Ormond Beach Generating Station	Site 2: MGS Units 1 and 2 Footprint	Site 3: Sanitation District Flower Field	Site 4: Beedy Street	Site 5: Power Machinery/ Camino Real Business Park	Site 6: Del Norte/E. 5th Street, Oxnard, CA	Site 7: Mission Rock Energy Center	Site 8: Ormond Beach
Worker Safety	Impacts to worker safety less than significant with implementation of CEC COCs.	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar

Notes

[1] The table addresses the magnitude of the impact within each of the environmental disciplines (i.e., is there a "lesser" or "greater" air quality impact). Where "similar" is indicated, it is assumed for the purposes of this analysis that the Project could be developed at the site.

[2] With respect to potential economic benefits, it is assumed for the purposes of this analysis, that the Project could be contracted.

[3] Sources: 70 Federal Register 52488; 78 Federal Register 344; The Nature Conservancy, 2008

AFY = acre-feet per year
CEC = California Energy Commission
COC = Condition of Certification
NWI = National Wetlands Inventory
P3 = Puente Power Project
SOAR = Save Open-Space and Agricultural Resources

Table 3
Exposure to Hazards

Site	Seismic Zone	Nearest Active Fault	Flood Risk[2]	Coastal Zone[3]	Approximate Site Elevation (NAVD)[4]	Airport[5]
Proposed Site	Seismically Active Area	1 mile	Not in floodplain	Yes, protected by dunes	14 feet	Oxnard Municipal Airport, 2 miles
Site 1: Ormond Beach Generating Station	Same as Proposed Site	5 miles	Not in floodplain	Yes, but dunes not as protective as at Proposed Site	13 feet	Naval Base Airport, > 2 miles
Site 2: MGS Units 1 and 2 Footprint	Same as Proposed Site	1 mile	In 500-year floodplain	Yes, protected by dunes	13 feet	Oxnard Municipal Airport, 2 miles
Site 3: Sanitation District Flower Field	Same as Proposed Site	1.5 miles	Reduced Risk due to levee	No: 2 miles inland	42 feet	Oxnard Municipal Airport, > 2 miles
Site 4: Beedy Street[1]	Same as Proposed Site	0.7 miles	Reduced Risk due to levee	No: 6 miles inland	97 feet	Oxnard Municipal Airport, > 2 miles
Site 5: Power Machinery/ Camino Real Business Park	Same as Proposed Site	1.2 miles	In 500-year floodplain	No: 7.5 miles inland	66 feet	Camarillo Municipal Airport, < 2 miles
Site 6: Del Norte/E. 5th Street, Oxnard, CA	Same as Proposed Site	2 miles	Not in floodplain	No: 7.5 miles inland	52 feet	Camarillo Municipal Airport, < 2 miles
Site 7: Mission Rock Energy Center	Same as Proposed Site	0.3 mile	Portion in 100-year floodplain	No: 12 miles inland	182 feet	Santa Paula Municipal Airport > 2 miles
Site 8: Ormond Beach[1]	Same as Proposed Site	5.3 miles	Not in floodplain	No	13 feet	Naval Base Airport, > 2 miles

Notes:

[1] For the purposes of this analysis, Site 4, Beedy Street is assumed to be the parcel designated as APN 1330190110, and Site 8, Ormond Beach is assumed to be the parcel designated as APN 2310093155.

[2] Sites may be vulnerable to flooding. Maps developed by the Federal Emergency Management Agency (FEMA) delineate inundation areas for 100- and 500-year floods.

[3] Along the coast, sites may be affected by sea-level rise or tsunami impacts, if not protected by beach dunes or other factors. Sites that are inland and elevated would not be expected to be affected by sea-level rise or tsunami inundation. It should be noted, however, that inland sites, especially those along major rivers such as the Santa Clara River, could be affected by climate-change–induced storms that could increase riverine flood elevations.

[4] All elevations are estimated and are North American Vertical Datum of 1988.

[5] Development of a project near an airport could pose a safety risk to airplanes approaching and taking off from the airport, and airplanes could pose a risk to the Alternative Sites.

APN = Assessor's Parcel Number
NAVD = North American Vertical Datum

5.1 PROPOSED SITE

The Proposed Site is within the boundaries of MGS, which is an existing natural-gas–fired steam electric generating facility.

5.1.1 Site Screening Criteria

A discussion of the site screening criteria as it applies to the Proposed Site is provided below.

Criterion #1: Site Control

Applicant has site control of the project and laydown areas at the Proposed Site.

Criterion #2: Site Size and Usability

The Proposed Site has sufficient and useable space available for the Project. The Project will be sited on approximately 3 acres in the northern portion of the 36-acre parcel and will comprise the northern portion of Assessor's Parcel Number (APN) 183-0-022-025. The topography of the site is flat. The Project will reuse and repurpose several existing MGS facilities, including the administration building, warehouse, water storage tanks, and ammonia tank that are outside of the 3-acre power block site, but within the MGS property. An additional 2 acres within the MGS property will be used for construction laydown, offices, and parking.

Site access is easily afforded from Harbor Boulevard, local streets, and Highway 101.

Criterion #3: Electrical Infrastructure

At the Proposed Site, the new generating unit will tie into the existing Mandalay Switchyard, owned by SCE, using one of the breaker positions that will be vacated when MGS Units 1 and 2 are removed from service. No new offsite electrical linears will be required for the Proposed Site.

Criterion #4: Other Linears

Natural gas is supplied by Southern California Gas Company and the Project will connect to a new gas metering station within the MGS. No new offsite gas linears will be required for the Proposed Site.

The process water and potable water source will be supplied by the City of Oxnard; the point of connection will be to the existing MGS potable water supply. Recycled water is currently unavailable near the site; the nearest potential point of connection is approximately 3.5 miles away, at Fifth Street and Ventura Road. This connection was determined to be economically infeasible due to the small amount of water needed by the Project, the complexity of the installation (canal crossings, crowded utility corridor), and the uncertainty of the supply availability. Sanitary wastewater will be discharged to the MGS existing septic system. Process wastewater would be stored in one of the existing MGS retention basins, and ultimately discharged to the ocean via the existing outfall. The nearest potential point of connection to the City sewer system would be approximately 1 mile away; however, this connection was determined to be economically infeasible due to the small amount of wastewater generated by the proposed Project, and the relatively flat topography that would necessitate a lift station. No new offsite water linears will be required for the Proposed Site.

Criterion #5: Proximity to Sensitive Receptors

The closest existing residential neighborhood is the Oxnard Shores Mobile Home Park, about 3,900 feet south of the Proposed Site. The North Shore at Mandalay Bay is a proposed residential development scheduled to commence construction in 2016. The distance from the proposed P3 stack to the closest North Shore at Mandalay Bay development boundary is approximately 2,460 feet. The nearest non-residential sensitive receptor to the Proposed Site is the Leite Family Child Care facility on Reef Way,

approximately 5,500 feet to the southeast. These receptors are substantially further than the 1,500-foot receptor criteria. All environmental impacts presented by this site and associated linears can be mitigated using air emissions offsets, engineering design, and operational practices.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

The project will not have significant adverse health, safety, or environmental impacts for any affected populations including minority and low-income populations; therefore, the proposed Project will not cause or contribute to disproportionate impacts on disadvantaged populations.

Criterion #7: Land Use LORS

The MGS facility is bordered by sand dunes and the Pacific Ocean to the west; McGrath Lake State Park and land owned by SunCal to the north; industrial facilities to the north, south, and east; and agricultural uses farther to the east. The Proposed Site is within the City of Oxnard limits and is zoned as "Heavy Industrial," which is consistent with the Project. Industrial activities in the area include oil drilling and processing operations, and SCE-owned power-generating and transmission facilities.

The Proposed Site is in the City of Oxnard's Coastal Zone. The city considers the Coastal Zone the primary zone, and has established sub-zoning designations for land in the Coastal Zone. The Proposed Site has a subzoning designation of Energy Coastal (EC). The purpose of the EC sub-zone is to provide areas that allow for siting, construction, modification, and maintenance of power-generating facilities and electrical substations. An electrical power-generating plant and accessory uses normally associated with said power-generating facility is a conditionally permitted use in the EC sub-zone, subject to the approval of a coastal development permit (City Code Section 17-20), except in cases of CEC jurisdictional projects where that approval is subsumed within the CEC's certification.

As described in Section 4.6 of the AFC, on July 1, 2014, the City of Oxnard City Council adopted an interim urgency ordinance imposing a moratorium on certain developments in the coastal zone, pending the City's update to its Local Coastal Plan (LCP). At this time, it is not clear what the status of the moratorium or the LCP update will be when this AFC comes before the CEC for a decision. At that time, if the moratorium has been further extended and remains in place, or if the LCP has been updated and certified in a manner that is inconsistent with development of the P3 project, Applicant will seek a finding of overriding considerations from the CEC.

Criterion #8: Environmental Considerations

The Proposed Site minimizes environmental impacts by siting proposed facilities in an existing power plant facility and reusing and repurposing existing infrastructure. The AFC includes a detailed analysis of all 16 environmental resource areas, which are summarized in Table 2. As concluded in the AFC, all environmental impacts are less than significant.

5.1.2 Ability to Meet Project Objectives

The Proposed Site meets all Project objectives.

5.1.3 Summary

The Project would be built on a previously disturbed site within the boundaries of an existing power plant, which would allow repurposing and re-use of existing infrastructure, including water and gas supply pipelines and transmission lines, and would minimize environmental impacts to the maximum extent feasible.

5.2 ALTERNATIVE SITE 1 ORMOND BEACH GENERATING STATION

Alternative Site 1 is within the boundaries of the OBGS, which is an existing natural-gas–fired steam electric generating facility. The beaches adjacent to the site are designated critical habitat for the western snowy plover. The adjoining lands to the northwest and southeast contain mapped emergent and forested freshwater wetlands, some of which are designated tidewater goby critical habitat. Ormond Beach, where Alternative Site 1 is located, is a regional priority for ecological restoration, and many of the parcels surrounding the site are under the ownership of the California Coastal Conservancy, The Nature Conservancy, and the County of Ventura. Ormond Beach is considered by wetland experts to be the most important wetland restoration opportunity in southern California (California Coastal Conservancy, 2015). The California Coastal Conservancy is currently working to restore approximately 750 acres of wetlands in the vicinity of Site 1, and a feasibility study (Aspen Environmental Group, 2009) indicates that up to 1,756 acres surrounding the site are highly suitable for ecological restoration.

5.2.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 1 is provided below.

Criterion #1: Site Control

This site is owned and operated by NRG.

Criterion #2: Site Size and Usability

The project could be sited on approximately 3 acres in the eastern portion of the 37-acre parcel, and would comprise a portion of APN 231-0-040-280, located at 6635 Edison Drive in Oxnard, California. Similar to the Proposed Site, the Project could reuse and repurpose several existing OBGS facilities, including the administration building, warehouse, water storage tanks, and ammonia tank that are outside of the 3-acre power block site, but within the OBGS property. Additional area within the OBGS could be used for construction laydown, offices, and parking. NRG has site control of the Project and laydown areas at Site 1. The topography of the site is flat.

This site is accessible from State Route 1, Hueneme Road, and Edison Drive.

Criterion #3: Electrical Infrastructure

At Alternative Site 1, the new generating unit could tie into the existing Ormond Beach Switchyard, owned by SCE, using one of the breaker positions that would be vacated when OBGS Units 1 and 2 are removed from service. No new offsite linears would be required for Site 1.

The nearest 220-kV electrical interconnection is adjacent to this site. Therefore, the impacts of the transmission interconnection for this alternative project site location would be about the same as the Proposed Site.

Criterion #4: Other Linears

Natural gas is supplied by Southern California Gas Company, and the project could connect to a new gas metering station within the OBGS. Similar to the Proposed Site's onsite natural gas connection, this site alternative would also connect to the OBGS existing onsite natural gas connection. No new offsite gas linears would be required for Site 1.

The process water and potable water source would be supplied by the City of Oxnard; the point of connection could be to the existing OBGS potable water supply. The City of Oxnard Advanced Water Purification Facility (AWPF) at West Hueneme Road and South J Street is approximately 1.2 miles northwest of this site; therefore, a new connection to recycled water could be made.

Sanitary wastewater would either be discharged to the OBGS existing septic system, or to a new wastewater pipeline to the AWPF.

Process wastewater would be stored in one of the existing OBGS retention basins, and ultimately discharged to the ocean via the existing outfall. Alternatively, process wastewater could be discharged to a new wastewater pipeline to the AWPF.

Criterion #5: Proximity to Sensitive Receptors

The nearest receptor to Site 1 is the residence on E. McWane Boulevard, about 6,000 feet to the northeast.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

This site is adjacent to census tracts with the highest density of minorities in the City of Oxnard. Therefore, if this site were selected, the Project could have an increased impact on an existing socioeconomically disadvantaged community in comparison to the Proposed Site.

Criterion #7: Land Use LORS

This site is within the coastal zone, and zoned as "EC Coastal Energy Facility," which is consistent with the Project. The OBGS facility is bordered by sand dunes and the Pacific Ocean to the west; State Coastal Conservancy–owned land to the north, south, and east; and agricultural uses farther to the east. The State Coastal Conservancy acquired the first property—265 acres, including the former SCE tank farm—in 2002, in support of efforts to restore wetlands and associated habitat in the vicinity of Ormond Beach. Industrial activities in the area include metal manufacturing and SCE-owned power-generating and transmission facilities.

Similar to the Proposed Site, Site 1 is in the City of Oxnard's Coastal Zone. The city considers the Coastal Zone the primary zone, and has established sub-zoning designations for land in the Coastal Zone. The Proposed Site has a subzoning designation of EC. The purpose of the EC sub-zone is to provide areas that allow for siting, construction, modification, and maintenance of power-generating facilities and electrical substations. An electrical power-generating plant and accessory uses normally associated with said power-generating facility is a conditionally permitted use in the EC sub-zone, subject to the approval of a coastal development permit (City Code Section 17-20), except in cases of CEC jurisdictional projects where that approval is subsumed within the CEC's certification.

As described in Section 4.6 of the AFC, on July 1, 2014, the City of Oxnard City Council adopted an interim urgency ordinance imposing a moratorium on certain developments in the coastal zone, pending the City's update to its LCP.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental concerns would be generally similar to the Proposed Site, with the exception of biological resources and socioeconomics – environmental justice.

The site is located in a historic wetland that has been drained and filled, and is currently developed with an existing electric generating facility. Biological characteristics of Alternative Site 1 are fairly similar to those of the Proposed Site, in that the site exhibits low biological value due to prior development, but is in proximity to coastal biological resources. The beaches adjacent to the site are designated critical habitat

for the western snowy plover. The adjoining lands to the northwest and southeast contain mapped emergent and forested freshwater wetlands, some of which are designated tidewater goby critical habitat. Ormond Beach, where Alternative Site 1 is located, is a regional priority for ecological restoration, and many of the parcels surrounding the site are under the ownership of the California Coastal Conservancy, The Nature Conservancy, and the County of Ventura. Ormond Beach is considered by wetland experts to be the most important wetland restoration opportunity in southern California (California Coastal Conservancy, 2015). The California Coastal Conservancy is currently working to restore approximately 750 acres of wetlands in the vicinity of Site 1, and a feasibility study (Aspen Environmental Group, 2009) indicates that up to 1,756 acres surrounding the site are highly suitable for ecological restoration.

As discussed under Criterion #6, this site is adjacent to census tracts with a higher density of minorities than the Proposed Site.

5.2.2 Ability to Meet Project Objectives

Table 4 summarizes this site's potential ability to meet the project's objectives when compared to the Proposed Site.

Table 4
Alternative Site 1 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 1: Ormond Beach Generating Station	No	Yes	Yes	Yes	Unlikely	Yes	Yes	Maybe, but more costly

Notes:
COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.2.3 Summary

Applicant has control of Alternative Site 1, which offers potentially feasible land size; interconnection to gas, water and wastewater infrastructure; receptor distance; and zoning. Given the extensive restoration efforts underway in the area surrounding Alternative Site 1, potential impacts associated with development at this site would be somewhat greater than those at the Proposed Site.

5.3 ALTERNATIVE SITE 2: EXISTING LOCATION OF MGS UNITS 1 AND 2

Site 2 is within the boundaries of the MGS, which is an existing natural-gas–fired steam electric generating facility.

CEC staff suggested demolishing the existing MGS Units 1 and 2, and developing P3 in its footprint. Subsequent to and independent of this suggestion, Applicant refined the proposed Project to include demolition of MGS Units 1 and 2 following commissioning of P3 and decommissioning of MGS Units 1

and 2. The CEC staff proposal would essentially reverse the order of the demolition of MGS Units 1 and 2 and development of P3.

This alternative would include the following sequence of activities:

- Remove the existing MGS Units 1 and 2 from service.
- Decommission the retired facilities, which would consist of de-energizing electrical equipment; purging gases from equipment (e.g., natural gas, hydrogen); removing oil from all pumps, motors, pipes, oil reservoirs, transformers, and other equipment; and electrically isolating equipment.
- Asbestos abatement.
- Complete demolition of the MGS Units 1 and 2 turbine plant equipment and building (above and below grade);
- Demolition of the MGS Units 1 and 2 boiler plant equipment and structures (above and below grade);
- Demolition of the 200-foot-tall stack;
- Removal of empty hazardous-materials-contaminated equipment;
- Removal of transformers and associated electrical equipment up to the switchyard; and
- Site grading to prepare the site for the new P3.

Similar to the proposed Project, this alternative would reuse and repurpose MGS infrastructure, and would maintain the current onsite gas, water, and wastewater connections.

5.3.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 2 is provided below. Because this alternative would be on the Proposed Site, it would meet all of the same criteria as the Proposed Site.

Criterion #1: Site Control

This site is owned and operated by NRG.

Criterion #2: Site Size and Usability

For Alternative Site 2, the project would be sited on the footprint of the existing MGS Units 1 and 2 (which is approximately 3 acres in the eastern portion of the 36-acre parcel), and would comprise a portion of APN 183-0-022-025, at 393 North Harbor Boulevard in Oxnard, California. Similar to the Proposed Site, the Project could reuse and repurpose several existing MGS facilities, including the administration building, warehouse, water storage tanks, and ammonia tank that would be outside of the power block site, but within the MGS property. Additional area within the MGS could be used for construction laydown, offices, and parking. NRG has site control of the Project and laydown areas at Site 2. The topography of the site is flat.

Site access is easily afforded from Harbor Boulevard, local streets, and Highway 101.

Criterion #3: Electrical Infrastructure

Similar to the Proposed Site, the new generating unit would tie into the existing Mandalay Switchyard, owned by SCE, using one of the breaker positions that will be vacated when MGS Units 1 and 2 are removed from service. No new offsite electrical linears would be required for Site 2.

Criterion #4: Other Linears

Natural gas is supplied by Southern California Gas Company, and the project would connect to a new gas metering station within the MGS. Similar to the Proposed Site, no new offsite gas linears would be required for Site 2.

Water supply and wastewater connections for Site 2 would be similar to those for the Proposed Site.

Criterion #5: Proximity to Sensitive Receptors

Because Site 2 is south of the Proposed Site, the closest residential neighborhood would be slightly closer than the Proposed Site. For the purposes of this analysis, it is assumed that the proposed power plant would be approximately 500 feet south of its location on the Proposed Site and therefore closer to the sensitive receptors south of the Proposed Site and Site 2. Therefore, the Oxnard Shores Mobile Home Park is about 3,400 feet south of Site 2. The future North Shore at Mandalay Bay is approximately 1,960 feet south. The nearest nonresidential sensitive receptor to Site 2 is the Leite Family Child Care facility on Reef Way, approximately 5,000 feet to the southeast. These receptors are still substantially farther than the 1,500-foot receptor criteria.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

The census tracts near this site have densities of minorities similar to those of the census tracts near the Proposed Site.

Criterion #7: Land Use LORS

Site 2 has the same surrounding land uses as the Proposed Site, is within the City of Oxnard limits, and is zoned as "Heavy Industrial," which is consistent with the project's use.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental considerations for Site 2 would be generally similar to those at the Proposed Site.

5.3.2 Ability to Meet Project Objectives

Table 5 summarizes this alternative site's potential ability to meet the Project Objectives when compared to the Proposed Site. Demolishing the existing MGS Units 1 and 2 to make room for P3 would add approximately 8 months to the overall Project schedule, which would fail to meet Objective #5 with respect to bringing P3 on line. In addition, any alternative that would site P3 directly within the footprint of MGS Units 1 and 2 would foreclose the opportunity for these units to continue to provide energy and ancillary services in support of local and system reliability, and consequently may not be feasible. Therefore, this alternative would fail to meet Objective #3.

Table 5
Alternative Site 2 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 2: MGS Units 1 and 2 Footprint	Yes	Yes	No[1]	Yes	Unlikely	Yes	Yes	Yes

Notes:

[1] Site 2 is located in the Big Creek/Ventura LCR Area; however, any alternative that would site P3 directly within the footprint of MGS Units 1 and 2 would foreclose the opportunity for these units to continue to provide energy and ancillary services in support of local and system reliability, and consequently may not be feasible. Therefore, this alternative would fail to meet Objective #3.

COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.3.3 Summary

This alternative would require complete removal of MGS Units 1 and 2 infrastructure, both above- and below-ground (i.e., all piping and inlet/outlet works below the units). The proposed project does not include complete removal of the below-ground infrastructure; rather, it would be left in place, and voids would be filled. Therefore, this alternative would substantially increase Project costs.

The potential environmental impacts associated with this alternative would be similar to those associated with the Proposed Site, although the generating plant would be somewhat closer to the coastline.

Completion of demolition prior to start of construction of P3 would result in substantial schedule delays.

This alternative would be more expensive and take longer to complete than the proposed project configuration at the Proposed Site.

The significant disadvantage that renders this alternative infeasible is that continued availability of MGS Units 1 and 2 is necessary to maintain grid reliability until such time as P3 comes on line. The significant disadvantage that renders this alternative infeasible is that any alternative that would site P3 directly within the footprint of MGS Units 1 and 2 would foreclose the opportunity for these units to continue to provide energy and ancillary services in support of local and system reliability, and consequently may not be feasible.

5.4 ALTERNATIVE SITE 3: SANITATION DISTRICT FLOWER FIELD

Alternative Site 3 is an agricultural field that borders the western edge of North Victoria Avenue and south of Monarch Lane. The site is currently leased for agricultural cultivation purposes to a local flower farmer; therefore, this site is commonly referred to as the "flower field" or "flower parcel" site.

This site is immediately adjacent to the Santa Clara River, which is designated critical habitat for the southern steelhead and southwestern willow flycatcher. The river ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species. The river corridor also contains a variety of mapped wetland types, including riverine and forested/shrub wetlands.

The site is classified as prime farmland (2012, California Department of Conservation) and would require rezoning from Greenbelt to Industrial.

5.4.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Site 3 is provided below.

Criterion #1: Site Control

Applicant does not have site control. Site 3 is owned by the Ventura Regional Sanitation District (which owns the former landfill to the west) and is designated as APN 1380190155.

Because the site is publicly owned, the purchase process is public and would require California Environmental Quality Act compliance before the land can be sold. There are also two potential Save Open-Space and Agricultural Resources (SOAR) Ordinances that could apply to this site—the County's SOAR Ordinance, and the City's SOAR Ordinance. Both SOAR Ordinances were initiatives adopted by the respective electorate that essentially fixed the urban development area as it existed in the mid-1990s by establishing an urban boundary line (commonly referred to as the City Urban Restriction Boundary (CURB) line. Any modifications of the CURB line or zoning amendments to allow non-agricultural uses outside of the CURB lines require, subject to limited exceptions, a vote of the people—the entire County in the case of the County's SOAR; or the entire City in the case of the City's SOAR.

To execute the Project at this Alternative Site, the City and County would need to participate in a number of discretionary approvals, such as a general plan amendment and rezoning, and modification of the open space agreement between the City, the County, and the City of Buenaventura (Ventura). All of these activities would cause schedule delays that are incompatible with the Project schedule. Furthermore, the Applicant met with Ventura Regional Sanitation District and City representatives to discuss acquisition of this property to develop the proposed Project in 2013. The Applicant was informed in June 2013 by the Ventura Regional Sanitation District that because the procedural path and timeline for Applicant acquisition of the property were not feasible, they were not willing to pursue Applicant acquisition. Therefore, site control and availability of Alternative Site 3 for development is neither a reasonable nor a feasible alternative.

Criterion #2: Site Size and Usability

The site is approximately 26 acres and meets the site sizing criteria. The topography of the site is relatively flat.

This Alternative Site is easily accessible from Highway 101 and North Victoria Avenue.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The nearest 220-kV electrical interconnection is approximately 180 feet from this site. Therefore, the impacts of the transmission interconnection for this Alternative Site present greater engineering, cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

Connection to the nearest natural-gas trunk line of sufficient capacity would require an approximately 2,050-foot linear. Compared to the Proposed Site's onsite natural-gas connection, this Alternative Site would introduce substantial engineering, capital costs, land mitigation, and other environmental impacts.

Recycled water needs could be served by the City via a new supply line that is estimated to be approximately 3,100 feet long from this site to the assumed point of connection at Ventura Road and Stone Creek Drive. Connection to the nearest wastewater sewer line would be to the existing sewer system at Arcadian Shores Trail and Fairway Court (residential area to the southeast); the estimated length of the new sewer line is approximately 2,300 feet. These new underground pipeline linears would increase the engineering, capital costs, and construction impacts beyond the Proposed Site's linears, given that water, wastewater, and sewer connections already exist at the Proposed Site.

Criterion #5: Proximity to Sensitive Receptors

The nearest sensitive receptors to Alternative Site 3 are the residences approximately 900 feet to the south. This distance does not meet the Applicant's minimum 1,500-foot receptor distance criteria. In addition, numerous residences to the south and southeast have substantial views of this area, and the Project could create a significant visual impact that is difficult to mitigate due to the generally flat site and surrounding topography. The Santa Clara River Trail, a public pedestrian and bicycle path that follows the Santa Clara River, is north of the site off of Monarch Lane and is accessible from the site.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

The census tracts near this site have densities of minorities and low-income populations similar to those of the census tracts near the Proposed Site.

Criterion #7: Land Use LORS

Alternative Site 3 is identified as prime agricultural land and is zoned as being a part of the Ventura-Oxnard Greenbelt, which was adopted in 2002 to preserve open space and agricultural land in the area. The River Ridge Golf Club is to the east, and the former Bailard Landfill is to the west.

As described under Criterion #1, to develop the Project at this Alternative Site, the City and County would need to participate in a number of discretionary approvals, such as a general plan amendment and rezoning, and modification of the open space agreement between the City, the County, and the City of Buenaventura.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are air quality, biological resources, hazardous materials, land use, noise, public health, soils, traffic and transportation, visual resources, and water resources.

With respect to biological resources, the site is under active agricultural production, and does not contain natural habitats. However, the site is immediately adjacent to the Santa Clara River, which is designated critical habitat for the southern steelhead and southwestern willow flycatcher. The river ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species. The river corridor also contains a variety of mapped wetland types, including riverine and forested/ shrub wetlands. Overall, biological constraint on site is low, but is elevated due to river proximity.

Land use is addressed under Criterion #7, Land Use LORS. Development at this site would require rezoning from greenbelt to industrial. Air quality, hazardous materials, noise, public health, and visual resources are addressed under Criterion #5, Proximity to Sensitive Receptors, because these concerns are

related to the site's distance to sensitive receptors. This site is closer to sensitive receptors than the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears.

The site is currently used as farmland; therefore, site preparation and grading may be more substantial than at the Proposed Site. Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears. The additional costs associated with the installation of the linears could make the connections infeasible.

5.4.2 Ability to Meet Project Objectives

Table 6 summarizes this site's potential ability to meet the Project's objectives when compared to the Proposed Site.

Table 6
Alternative Site 3 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 3: Sanitation District Flower Field	No	Yes	Yes	Yes	Unlikely	No	No	Maybe, but more costly

Notes:
COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.4.3 Summary

Alternative Site 3 has no apparent advantages over the Proposed Site, and would not reduce any significant impacts associated with development on the Proposed Site. Given the site's proximity to the nearest sensitive receptors, existing land use, major delays in Project approval if this site was now considered over the Proposed Site, and the substantially longer linears required, Alternative Site 3 is not considered feasible or desirable in terms of environmental impacts during construction, engineering and design, and capital costs. In addition, development of this site would result in the loss of prime agricultural land and would not be consistent with the Ventura County Greenbelt Program. Development of this site could result in greater visual impacts because there are no structures of similar size in the area, and this would change the visual character of the site. Most importantly, it was determined, based on discussions with the City and the site owner, that this property was not available for the Applicant's acquisition and development of the proposed Project.

5.5 ALTERNATIVE SITE 4: BEEDY STREET

The City indicated two options in the vicinity of Beedy Street and Vineyard Road that should be evaluated as the second Alternative Site (TN #206301 dated October 8, 2015), referred to as the "Beedy Street Site." Slide 7 included in the City's document highlights:

- Option A : Beedy Street Properties, LLC about 8 acres (red box); and
- Option B: Ventura County, about 20 acres (white box).

Based on information available from the Ventura County Assessor's website, Option A consists of two parcels and Option B consists of numerous small parcels.

The analysis of both options would be similar. For the purposes of this analysis, Site 4 refers to Option B, which comprises two parcels designated as APN 1330190110 and APN 1330190100. The parcels are vacant and appear to be generally flat and previously disturbed. Option A is just south of the County-owned parcels and would encompass several small properties along Beedy Street.

Site 4 is located between the Santa Clara River and Vineyard Avenue, adjacent to the Ventura County Juvenile Justice Complex. The Santa Clara River contains numerous mapped wetland types. The river is a highly sensitive habitat, supporting many threatened and endangered species, and is designated critical habitat for the southwestern willow flycatcher and southern steelhead. The nearby manmade basin identified on the City's Slide 7 as "Recycled water from Riverpark" is used by the United Water Conservation District (UWCD) for groundwater recharge and is mapped as a lake in the National Wetlands Inventory.

5.5.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 4 is provided below.

Criterion #1: Site Control

Alternative Site 4 is owned by Ventura County. As discussed below under Criterion #2, other nearby parcels that could potentially be acquired are privately owned. NRG does not have site control for this alternative.

Criterion #2: Site Size and Usability

The "20-acre" County-owned site shown on the City's Slide 7 comprises two parcels. The parcel designated as APN 1330190110 is approximately 6 acres. The adjacent parcel designated as APN 1330190100 is approximately 13 acres; however, approximately one-third of this parcel is being used by the juvenile justice center. Both parcels appear to have been previously cleared and graded, and appear to contain only sparse, probably ruderal vegetation. As a variation of this site, the City proposed Option A, located just south of the County-owned parcels, which would encompass several small properties along Beedy Street. Each of these parcels is approximately 0.16 to 0.54 acre; therefore, approximately 35 separate parcels that are privately owned would need to be acquired and merged into one parcel to create a site of approximately 10 acres. For Alternative Site 4 to meet the site sizing criteria, at least two (for the City's Option B)—and potentially many more (for the City's Option A)—parcels would need to be acquired and merged into one parcel. This would require discretionary action on the part of the City pursuant to the California Subdivision Map Act, which would present significant schedule delays and capital costs to the Project.

This site is accessible from Highway 101, Vineyard Avenue, and Beedy Street.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The existing transmission line that runs adjacent to the site is only 66 kV. In accordance with SCE Request for Offer (RFO) requirements, the electrical capacity of the Project would require an interconnection to the SCE 220-kV transmission

system. To interconnect the Project from this site location would require a new 220-kV transmission line approximately 2.2 miles long to tie into the nearest existing 220-kV transmission line. Therefore, the transmission interconnection requirements for this alternative project site present greater engineering, capital cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

The nearest natural-gas trunk line assumed to be of sufficient capacity and reserve is about 1 mile from this site. Compared to the Proposed Site's onsite natural-gas connection, this Alternative Site would introduce greater engineering, capital costs, and environmental impacts.

Water needs would require a new water service connection. The City of Oxnard suggested that the Project could obtain recycled water from the UWCD-operated groundwater recharge basin to the north. UWCD diverts water from the Santa Clara River at its Freeman Diversion Dam and conveys it to the recharge basins (Milner-Villa Consulting, 2011). In 2014, UWCD and other parties (i.e., Pleasant Valley County Water District, Houweling Nurseries, Southland Sod, and Reiter Affiliated Companies) signed the Full Advanced Treatment Recycled Water Management and Use Agreement with the City of Oxnard (Agreement No. A-765l). This agreement stipulates that the City of Oxnard will deliver up to 5,500 acre-feet per year of recycled water from the City's AWPF to UWCD and the other parties (Rydberg, 2014). Although the pipeline that delivers recycled water to the basins would be relatively close to Alternative Site 4, the actual amount of water allocated to UWCD for groundwater recharge purposes and the amount that would be available for other users that are not a party to the agreement is uncertain.

Assuming that a project developed at this site could connect to the existing recycled water pipeline at North Ventura Road and Town Center Drive; this new pipeline would be approximately 2 miles from this alternative project site. The nearest wastewater sewer line is estimated to be approximately 1 mile away, assuming a connection at North Ventura Road and Albion Drive. Compared to the Proposed Site's onsite connections, Alternative Site 4 would introduce greater engineering, capital costs, and other environmental impacts.

Criterion #5: Proximity to Sensitive Receptors

The nearest sensitive receptors to Alternative Site 4 are the Juvenile Justice Complex less than 100 feet south of the site, and the residences about 190 feet southeast of the site. These distances do not meet the Applicant's minimum 1,500-foot receptor distance criteria.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

This site is adjacent to census tracts with the highest density of minorities in the City of Oxnard. Therefore, if this site were selected, the Project could have an increased impact on an existing socioeconomically disadvantaged community in comparison to the Proposed Site.

Criterion #7: Land Use LORS

This site is zoned "Industrial," which is consistent with the Project. This site is bordered by a UWCD groundwater recharge basin to the north; open land to the northeast; industrial and commercial property (e.g., body works, recreational vehicle repair and storage, automobile/truck part suppliers) to the south and southeast; and the Juvenile Justice Complex to the southwest.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are air quality, biological resources, hazardous materials, land use, noise, public health, socioeconomics – environmental justice, soils, traffic and transportation, visual resources, and water resources.

With respect to biological resources, this site appears to have been previously cleared and graded, and to contain only sparse, probably ruderal vegetation. Accordingly, habitat value is presumed to be low. The site is adjacent to a manmade basin used by UWCD for groundwater recharge, which is mapped as a lake in the National Wetlands Inventory. The Santa Clara River, containing numerous mapped wetland types, is situated approximately 0.25 mile northwest of the site. The river is a highly sensitive habitat, supporting many threatened and endangered species, and is designated critical habitat for the southwestern willow flycatcher and southern steelhead. Overall, onsite biological constraint is low, but is elevated due to river proximity.

Air quality, hazardous materials, noise, public health, and visual resources are addressed under Criterion #5, Proximity to Sensitive Receptors, because these concerns are related to the site's distance to sensitive receptors (there would be no new offsite transmission lines required for this site). This site is closer to sensitive receptors than the Proposed Site.

Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears. The additional costs associated with the installation of the linears could make the connections infeasible. As discussed under Criterion #6, this site is adjacent to census tracts with a higher density of minorities than the Proposed Site.

5.5.2 Ability to Meet Project Objectives

Table 7 summarizes this site's potential ability to meet the project's objectives when compared to the Proposed Site.

Table 7
Alternative Site 4 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 4: Beedy Street	No	Yes	Yes	Yes	Unlikely	No	Yes	Maybe, but more costly

Notes:
COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.5.3 Summary

Alternative Site 4 would require time-consuming and expensive acquisition and merging of multiple parcels to comprise a potentially feasible land size. This site does not meet the minimum receptor distance criteria; and introduces additional environmental, cost, and engineering impacts compared to the Proposed Site. It has no apparent advantages over the Proposed Site, and would not reduce any impacts associated with development on the Proposed Site. Given these increased impacts and nearby sensitive receptors, Alternative Site 4 is not considered to be as feasible as the Proposed Site in terms of minimizing environmental impacts, engineering and design costs, and overall capital costs. Furthermore, the Applicant does not have site control.

5.6 ALTERNATIVE SITE 5: POWER MACHINERY/CAMINO REAL BUSINESS PARK

Alternative Site 5 is located east of North Del Norte Boulevard and south of Camino Avenue and Highway 101. It is designated as APN 2160030120. This site appears to be in active agricultural production, and does not contain natural habitat. An agricultural drainage along the site's eastern border is mapped in the NWI as a riverine wetland. No designated critical habitat occurs in the site or vicinity.

5.6.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 5 is provided below.

Criterion #1 Site Control

Alternative Site 5 is privately owned. NRG does not have site control for this alternative.

Criterion #2: Site Size and Usability

This site is approximately 40 acres and meets the site size criterion. The topography of the site is flat.

This site is accessible from Highway 101, North Del Norte Boulevard, and Camino Avenue.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The existing transmission line that runs through the site is only 66 kV. In accordance with SCE RFO requirements, the electrical capacity of the Project would require an interconnection to the SCE 220-kV transmission system. To interconnect the Project from this site location would require a new 220-kV transmission line approximately 4 miles long to tie into the nearest existing 220-kV transmission line. Therefore, the transmission interconnection requirements for this alternative project site present greater engineering, cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

The nearest natural-gas trunk line is about 1 mile west of this site. Compared to the Proposed Site's onsite connection, the 1-mile natural-gas linear for this Alternative Site would introduce greater engineering, capital cost, and environmental impacts.

Connection to the existing City of Oxnard main line for recycled water would require a new pipeline to be constructed from the site along Gonzales Road to the main recycled water line at Ventura Road, estimated to be more than 4 miles long.

Connection to the nearest wastewater sewer line would require an approximately 700-foot linear along N. Del Norte Boulevard to the assumed point of connection near Camino Avenue. These new underground pipeline linears would increase the engineering, capital cost, and construction impacts beyond the Proposed Site's linears, given that the Proposed Site water and sewer connections already exist at the site.

Criterion #5: Proximity to Sensitive Receptors

The nearest residence is approximately 1,450 feet to the northeast. The nearest receptor to Alternative Site 5 is the Gold Coast Christian Church, about 300 feet north of the site. This distance does not meet the Applicant's minimum 1,500-foot receptor distance criteria.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

This site is adjacent to census tracts with the highest density of minorities in the City of Oxnard. Therefore, if this site were selected, the Project could have an increased impact on an existing socioeconomically disadvantaged community in comparison to the Proposed Site.

Criterion #7: Land Use LORS

This site is currently used for agriculture, but is zoned for light industrial uses. This site is south of the Gold Coast Christian Church and is surrounded by farmland on the west, south, and east.

This site and all the surrounding land is zoned "Industrial," which is consistent with the Project. Alternative Site 5 is, however, also identified as farmland of statewide importance.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are air quality, hazardous materials, noise, public health, socioeconomics – environmental justice, soils, traffic and transportation, visual resources, and water resources.

Air quality, hazardous materials, noise, public health, and visual resources are addressed under Criterion #5, Proximity to Sensitive Receptors, because these concerns are related to the site's distance to sensitive receptors (there would be no new offsite transmission lines required for this site). This site is closer to sensitive receptors than the Proposed Site.

Potential visual impacts also would be more than for the Proposed Site due to the new offsite transmission lines and development of a power-generating facility, with its associated infrastructure, on a site that is generally surrounded by low commercial and industrial structures and farmland.

The site is currently used as farmland; therefore, site preparation and grading may be more substantial than at the Proposed Site. Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears. This site is also less than 2 miles from the Camarillo Airport; development at this site would require Federal Aviation Administration (FAA) notification and review.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears. The additional costs associated with the installation of the linears could make the connections

infeasible. This site is in the FEMA-designated 500-year floodplain; therefore, potential flooding risk is greater than for the Proposed Site.

As discussed under Criterion #6, this site is adjacent to census tracts with a higher density of minorities than the Proposed Site.

5.6.2 Ability to Meet Project Objectives

Table 8 summarizes this site's potential ability to meet the project's objectives when compared to the Proposed Site.

Table 8
Alternative Site 5 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 5: Power Machinery/ Camino Real Business Park	No	Yes	Yes	Yes	Unlikely	No	Yes	Maybe, but more costly

Notes:
COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.6.3 Summary

Alternative Site 5 offers potentially feasible land size, zoning, and comparable overall environmental impacts. However, this site does not meet the minimum receptor distance criteria, and introduces additional environmental, costs, and engineering impacts, compared to the Proposed Site. Given these increased impacts and nearby sensitive receptors, Alternative Site 5 is not considered to be as feasible as the Proposed Site in terms of minimizing environmental impacts, engineering and design costs, and overall capital costs. In addition, developing the Project at this site could have an increased impact on an existing socioeconomically disadvantaged community.

5.7 ALTERNATIVE SITE 6: DEL NORTE/E. 5TH STREET INDUSTRIAL PARK

Alternative Site 6 is on the eastern side of South Del Norte Boulevard and just north of East 5th Street. It is designated as APN 2160160295. This site appears to be occupied by existing industrial land uses (i.e., a concrete batch plant). However, linear patches of dense vegetation in the center of the site and near the eastern boundary may contain native—and possibly riparian—vegetation. A roadside ditch on the site's southern boundary is mapped in the NWI as a riverine wetland, and a mapped freshwater emergent wetland occurs within 0.25 mile to the west. No critical habitat is present on the site or in the vicinity.

5.7.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 6 is provided below.

Criterion #1: Site Control

Alternative Site 6 is privately owned. NRG does not have site control for this alternative.

Criterion #2: Site Size and Usability

This site is approximately 25 acres and meets the site sizing criteria. The topography of the site is flat.

This site is accessible from Highway 101 and Del Norte Boulevard.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The nearest transmission line is approximately 1,000 feet north of the site; it is a 66-kV transmission line. In accordance with SCE RFO requirements, the electrical capacity of the project would require an interconnection to the SCE 220-kV transmission system. To interconnect the project from this site location would require a new 220-kV transmission line approximately 3 miles long to tie into the nearest existing 220-kV transmission line. Therefore, the transmission interconnection requirements for this alternative project site present greater engineering, cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

The nearest natural-gas trunk line is about 1 mile west of this site. Compared to the Proposed Site's onsite connection, the 1-mile natural-gas linear for this Alternative Site would introduce greater engineering, capital cost, and environmental impacts.

Water needs would require a new water service connection. The nearest recycled water pipeline is estimated to be approximately 4 miles from this alternative project site to the City's recycled water main at Ventura Road and 5th Street. A wastewater sewer line runs adjacent to the site along South Del Norte Boulevard. Compared to the Proposed Site's onsite water connection, this site alternative would introduce greater engineering, capital cost, and environmental impacts.

Criterion #5: Proximity to Sensitive Receptors

The nearest sensitive receptors to Alternative Site 6 are the residences along Sturgis Road, about 980 feet northeast of the site. Depending on the placement of the facility within the parcel, this site could meet the Applicant's minimum 1,500-foot receptor distance criteria; however, the nearest residential receptors would be much closer than at the Proposed Site.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

This site is adjacent to census tracts with the highest density of minorities in the City of Oxnard. Therefore, if this site were selected, the Project could have an increased impact on an existing socioeconomically disadvantaged community in comparison to the Proposed Site.

Criterion #7: Land Use LORS

This site and all the surrounding land is zoned "Industrial," which is consistent with the Project. Surrounding land use includes the Oxnard Regional Materials Recovery Facility to the northwest, an open lot to the west (to be used as a bio-generation facility for farm and city organics), an oil refinery to the south of East 5th Street, and farmland to the north and east.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are air quality, hazardous materials, noise, public health, socioeconomics – environmental justice, soils, and traffic and transportation, visual resources, and water resources.

Air quality, hazardous materials, noise, public health, and visual resources are addressed under Criterion #5, Proximity to Sensitive Receptors, because these concerns are related to the site's distance to sensitive receptors. This site is closer to sensitive receptors than the Proposed Site.

Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears. This site is also less than 2 miles from the Camarillo Airport; development at this site would require FAA notification and review.

Potential visual impacts also would be more than for the Proposed Site due to the new offsite transmission lines and development of a power-generating facility, with its associated infrastructure, on a site that is generally surrounded by low commercial and industrial structures and farmland.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears.

As discussed under Criterion #6, this site is adjacent to census tracts with a higher density of minorities than the Proposed Site.

5.7.2 Ability to Meet Project Objectives

Table 9 summarizes this site's potential ability to meet the project's objectives when compared to the Proposed Site.

Table 9
Alternative Site 6 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 6: Del Norte/E. 5th Street, Oxnard, CA	No	Yes	Yes	Yes	Unlikely	No	Yes	Maybe, but more costly

Notes:

COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.7.3 Summary

Alternative Site 6 offers potentially feasible land size, zoning, and potentially feasible receptor distance. However, given the electrical upgrades and considerably longer recycled water linears of this site, Alternative Site 6 is not considered to be as feasible as the Proposed Site in terms of minimizing environmental impacts, engineering and design costs, and overall capital costs. In addition, developing the Project at this site would have increased impacts on an existing socioeconomically disadvantaged community.

5.8 ALTERNATIVE SITE 7: MISSION ROCK ENERGY CENTER

Alternative Site 7 is an industrial property in Ventura County between the community of Saticoy and the City of Santa Paula. This site is designated as APN 0900190165. This site appears to be completely developed with existing uses, and does not appear to contain natural habitat. A drainage channel adjacent to the site's southern boundary contains mapped forested/shrub wetlands and freshwater pond features. This site is situated within approximately 0.25 mile of the Santa Clara River, which is designated critical habitat for the southern steelhead and southwestern willow flycatcher. The river ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species (70 Federal Register 52488; 78 Federal Register 344; The Nature Conservancy, 2008).

5.8.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Alternative Site 7 is provided below.

Criterion #1: Site Control

Alternative Site 7 is owned by Mission Rock Energy Center, LLC, a subsidiary of Calpine. It is likely that this site was acquired by Calpine for project development. We understand that Calpine intends to submit an AFC to the CEC for licensing consideration; the AFC will include substantially more detail than provided in this analysis. Based on Calpine's proposed plans for this site, it is unlikely to be available for acquisition.

Criterion #2: Site Size and Usability

This site is 9.79 acres, and therefore does not meet the 10-acre site sizing criteria. The entire site is paved, and its topography is flat.

This site is accessible from State Route 126 and Mission Rock Road.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The nearest transmission line is approximately 3,000 feet west of the site; it is a 66 kV transmission line. In accordance with SCE RFO requirements, the electrical capacity of the Project would require an interconnection to the SCE 220-kV transmission system. To interconnect the Project from this site location would require a new 220-kV transmission line approximately 3 miles long to tie into the nearest existing 220-kV transmission line. Therefore, the transmission interconnection requirements for this alternative project site location present greater engineering, cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

Connection to the nearest natural-gas trunk line would require an approximately 3,700-foot linear. Compared to the Proposed Site's onsite natural-gas connection, this Alternative Site would introduce greater engineering, capital cost, and environmental impacts.

The water and sewer infrastructure in the area of this Alternative Site has not been fully evaluated, but for the purposes of this comparative screening analysis, these linears are assumed to connect to the City of Santa Paula, about 2 miles to the northeast.

Criterion #5: Proximity to Sensitive Receptors

The nearest sensitive receptors to this site are the residence on Mission Rock Road, approximately 1,000 feet to the east, and the Ventura County Prison, approximately 800 feet to the west. This site does not meet the Applicant's minimum 1,500-foot receptor distance criteria.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

The census tracts near this site have densities of minorities and low-income populations similar to those of the census tracts near the Proposed Site.

Criterion #7: Land Use LORS

This site is zoned "Industrial," which is consistent with the Project. This site is heavy industrial property; it is bordered by other heavy industrial property to the east, and by agricultural property to the north, south, and west. With the exception of the Ventura County Prison approximately 800 feet to the west, surrounding land use is primarily open space and agricultural.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are air quality, biological resources, hazardous materials, noise, public health, soils, traffic and transportation, visual resources, and water resources.

With respect to biological resources, this site appears to be completely developed with existing uses, and does not appear to contain natural habitat. A drainage channel adjacent to the site's southern boundary contains mapped forested/shrub wetlands and freshwater pond features. This site is situated within approximately 0.25 mile of the Santa Clara River, which is designated critical habitat for the southern steelhead and southwestern willow flycatcher. The river ecosystem is one of the most biologically significant in Southern California, supporting numerous threatened and endangered species. Overall, onsite biological constraint is low, but is elevated due to river proximity.

Air quality, hazardous materials, noise, public health, and visual resources are addressed under Criterion #5, Proximity to Sensitive Receptors, because these concerns are related to the site's distance to sensitive receptors (there would be no new offsite transmission lines required for this site). This site is closer to sensitive receptors than the Proposed Site.

Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears.

Potential visual impacts also would be more than for the Proposed Site due to the new offsite transmission lines and development of a power-generating facility, with its associated infrastructure, on a site that is generally surrounded by low commercial and industrial structures and farmland.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears. The additional costs associated with the installation of the linears could make the connections infeasible. This site is in the FEMA-designated 100-year floodplain; therefore, potential flooding risk is greater than for the Proposed Site.

5.8.2 Ability to Meet Project Objectives

Table 10 summarizes this site's potential ability to meet the project's objectives when compared to the Proposed Site.

Table 10
Alternative Site 7 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 7: Mission Rock Energy Center	No	Yes	Yes	Yes	Unlikely	No	Yes	Maybe, but more costly

Notes:

COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.8.3 Summary

This property is owned by a subsidiary of Calpine, which is a competitor of Applicant, and would not likely be available for purchase by the Applicant at a reasonable price. In addition, given the extent of linear features that would need to be constructed, environmental impacts, engineering and design costs, and overall capital costs would be considerably greater at this site.

5.9 ALTERNATIVE SITE 8: ORMOND BEACH PARCELS (VARIOUS LOCATIONS NEAR EDISON DRIVE/HUENEME ROAD)

The City indicated a number of sites in the Ormond Beach area that should be evaluated as the sixth Alternative Site (TN #206301, dated October 8, 2015), referred to as the "Ormond Beach area along SCE line." Slide 11 included in the City's document highlights twelve potential parcels in the vicinity of Edison Drive and Hueneme Road. Based on information available from the Ventura County Assessor's website, these parcels range in size from approximately 0.74 to 84 acres. Three of the twelve sites are owned by SCE, one site is owned by Ports and Harbors, and the remaining eight are privately owned; therefore, the Applicant does not have site control of any of these sites.

The analysis of all of the identified parcels would be similar. For the purposes of this analysis, Site 8 refers to the parcels designated as APNs 2310093155 and 2310093135. These two privately owned parcels comprise a site that is a vacant lot bordering the northern side of East McWane Boulevard and the eastern side of Arcturus Avenue. Five of the six remaining privately owned sites suggested by the City are currently being used for agriculture; the remaining site at 1001 McWane Boulevard is being used for major manufacturing. The three SCE sites also appear to be currently used for agriculture.

5.9.1 Site Screening Criteria

A discussion of the site screening criteria as they apply to Site 8 is provided below. As described above, the discussion relates to the two parcels near McWane Boulevard and Arcturas Avenue. The other ten parcels suggested by the City are expected to have generally similar attributes, because they are all in the same general area. Some sites may be closer to sensitive receptors (e.g., the parcels north of Hueneme Road are close to a large residential area), have longer or shorter linear distances, and may have additional biological constraints.

Criterion #1: Site Control

This site is privately owned. In July of 2013, NRG offered a reasonable, market-based offer to the owner of Alternative Site 8. The owner declined NRG's offer. Therefore, Alternative Site 8 is not available for Applicant control and development.

Criterion #2: Site Size and Usability

This site is approximately 7.5 acres, and is designated as APN 2310093155. There is an adjacent parcel (APN 2310093135, 6.15 acres) that has the same owner and potentially could be merged into one parcel, for a total of approximately 13 acres. The site is approximately 0.5 mile from NRG's OBGS, so construction laydown and parking could be provided at OBGS. Therefore, this site could meet the site sizing criteria. The topography of the site is flat. Similar to the Proposed Site, this site has been historically cleared and graded.

This site is accessible from State Route 1, Hueneme Road, Edison Drive, and East McWane Boulevard.

Criterion #3: Electrical Infrastructure

A new offsite electrical linear would be required for this site. The nearest 220-kV electrical interconnection is approximately 1,000 feet from this site. A new, 220-kV transmission line approximately 1,000 feet in length would be required to interconnect the Project to the nearest existing SCE 220-kV transmission line. Therefore, the impacts of the transmission interconnection for this alternative site would present greater engineering, cost, and environmental impacts than the Proposed Site.

Criterion #4: Other Linears

New offsite linears would be required for this site.

Connection to the nearest natural-gas trunk line of sufficient capacity would require an approximately 2,100-foot linear. Compared to the Proposed Site's onsite natural-gas connection, this site alternative would introduce greater engineering, capital cost, and environmental impacts.

A wastewater sewer line runs adjacent to the site, along Arcturus Avenue. Connection with the City's recycled water supply would require an approximately 4,200-foot linear to the AWPF at West Hueneme Road and South J Street. This new underground pipeline linear would increase the engineering, capital

cost, and construction impacts beyond the Proposed Site's water linear, given that the Proposed Site water connection already exists at the site.

Criterion #5: Proximity to Sensitive Receptors

The nearest sensitive receptor to Alternative Site 8 is the residential neighborhood along E. Hueneme Road, about 2,300 feet to the northwest; this is somewhat closer than the distance between the Proposed Site and its nearest residential receptor.

Criterion #6: Proximity to Socioeconomically Disadvantaged Communities

This site is adjacent to census tracts with the highest density of minorities in the City of Oxnard. Therefore, if this site were selected, the Project could have an increased impact on an existing socioeconomically disadvantaged community in comparison to the Proposed Site.

Criterion #7: Land Use LORS

This site and all the surrounding land is zoned "Industrial," which is consistent with the Project. The site is surrounded by industrial and commercial properties to the north, east, and west; and by agricultural land to the south. A former rail spur runs through the site from northeast to west.

Criterion #8: Environmental Considerations

As shown in Table 2, the environmental areas where impacts would most likely be different from those at the Proposed Site are socioeconomics – environmental justice, soils, traffic and transportation, visual resources, and water resources.

Construction associated with new offsite linears would increase the amount of soil disturbance in comparison to the Proposed Site. Construction phase traffic impacts would also increase, due to the installation of offsite linears.

Potential visual impacts would be more than for the Proposed Site due to the new offsite transmission lines and development of a power-generating facility, with its associated infrastructure, on a site that is generally surrounded by low commercial and industrial structures and farmland.

Water resources are addressed under Criterion #4, Other Linears, because this comparative analysis assesses the need for offsite linears for water supply and wastewater; and the relative distances of those offsite linears would be substantially greater than for the Proposed Site, which does not have offsite linears. The additional costs associated with the installation of the linears could make the connections infeasible.

As discussed under Criterion #6, this site is adjacent to census tracts with a higher density of minorities than the Proposed Site.

5.9.2 Ability to Meet Project Objectives

Table 11 summarizes this site's potential ability to meet the Project's objectives when compared to the Proposed Site.

Table 11
Alternative Site 8 Potential Ability to Meet Objectives

	Objective Number							
	1	2	3	4	5	6	7	8
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Site 8: Ormond Beach	No	Yes	Yes	Yes	Unlikely	No	Yes	Maybe, but more costly

Notes:

COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

5.9.3 Summary

Alternative Site 8 offers potentially feasible land size, receptor distance, and zoning. However, the Applicant is not able to purchase this site at a reasonable price. Given the cost-prohibitive land acquisition and the considerably longer gas and recycled water linears of this site, Alternative Site 8 is not considered to be as feasible as the Proposed Site in terms of environmental impacts, engineering and design costs, and overall capital costs. The other variations of Alternative Site 8 (i.e., development on one or more of the other parcels identified by the City) would be closer to sensitive receptors and would therefore have substantially greater impacts related to air quality, hazardous materials, noise, public health, and visual resources.

6.0 COMPARISON OF ALTERNATIVES SITES

Table 12 (on the following page) provides a ranking summary of the sites' ability to satisfy the Project objectives. A comparative analysis and ranking of the Alternative Sites based on the screening criteria is summarized in Table 13. For each of the criteria described in Section 2, a relative ranking from 0 to 2 was developed.

Table 12
Alternative Sites Objectives Ranking

	Objective Number								
	1	2	3	4	5	6	7	8	
	Develop 262 MW at MGS	Natural Gas CT	Big Creek/ Ventura LCR Area	Renewable Integration	COD by June 2020	Brownfield and Infra-structure Reuse	Industrial Zoning	No Significant Environ-mental Impacts	Number of Objectives Met
	Was Objective Met?								
Proposed Site	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	8
Site 1: Ormond Beach Gener-ating Station	No	Yes	Yes	Yes	Unlikely	Yes	Yes	Maybe, but more costly	6
Site 2: MGS Units 1 and 2 Footprint	Yes	Yes	No	Yes	Unlikely	Yes	Yes	Yes	6
Site 3: Sanita-tion District Flower Field	No	Yes	Yes*	Yes	Unlikely	No	No	Maybe, but more costly	4
Site 4: Beedy Street	No	Yes	Yes*	Yes	Unlikely	No	Yes	Maybe, but more costly	5
Site 5: Power Machinery/ Camino Real Business Park	No	Yes	Yes*	Yes	Unlikely	No	Yes	Maybe, but more costly	5
Site 6: Del Norte/E. 5th Street, Oxnard, CA	No	Yes	Yes*	Yes	Unlikely	No	Yes	Maybe, but more costly	5
Site 7: Mission Rock Energy Center	No	Yes	Yes*	Yes	Unlikely	No	Yes	Maybe, but more costly	5
Site 8: Ormond Beach	No	Yes	Yes*	Yes	Unlikely	No	Yes	Maybe, but more costly	5

Notes:

* Would require significant transmission upgrades.

COD = commercial online date
CT = combustion turbine
LCR = Local Capacity Reliability
MGS = Mandalay Generating Station
MW = megawatts

Table 13
Puente Power Project
Comparison of Alternative Sites

	Criteria	Relative Rating	Proposed Site		Site 1: OBGS		Site 2: MGS Units 1 and 2 Footprint		Site 3: Sanitation District "Flower Site"		Site 4: Beedy Street		Site 5: Camino Avenue		Site 6: Del Norte and 5th Street		Site 7: Mission Rock		Site 8: Ormond Beach	
			Value	Value	Rating	Value	Rating	Value	Rating	Value	Value	Rating	Rating	Value	Rating	Rating	Value	Rating	Value	Rating
1	Site Control	0: have site control 1: could get control 2: unlikely to get site control	own	0	own	0	own	0	unlikely	2	unlikely	2	possibly	1	possibly	1	unlikely	2	unlikely	2
2	Site Size	0: adequate single parcel size 1: requires acquisition of more than one parcel to create 10-acre site 2: < 10 acres		0		0		0		0		1		0		0	9.79	2		1
3	Connection to 220 kV	0: < 0.5 mile 1: 0.5 mile - 2.5 miles 2: > 2.5 miles	0	0	0	0	0	0	0	0	2.2	2	4	2	3	2	3	2	0.2	0
4a	Distance to Gas Line	0: < 0.25 mile 1: 0.25 mile - 0.75 mile 2: > 0.75 mile	onsite	0	onsite	0	onsite	0	0.5	1	1	2	1	2	1	2	0.7	1	0.4	1
4b	Water Supply	0: < 0.25 mile 1: 0.25 mile - 0.75 mile 2: > 0.75 mile	Onsite or 3.5 miles	0	onsite or 1.2 mi	0	Onsite or 3.5 miles	0	0.6	1	2	2	4	2	4	2	2	2	0.8	2
4c	Wastewater	0: < 0.25 mile 1: 0.25 mile - 0.75 mile 2: > 0.75 mile	Onsite or 1 mile	0	onsite or 1.2 mi	0	Onsite or 1 mile	0	0.5	1	1	2	0.1	0	0	0	2	2	0	0
5	Distance to Nearest Sensitive Receptor	0: > 2,000 feet 1: 1,500 feet to 2,000 feet 2: < 1,500 feet	2460	0	6,500	0	1,960	0	900	2	100	2	300	2	980	2	1,000	2	2,300	0
6	Proximity to Socioeconomically Disadvantaged Communities	0: adjacent to census tracts with minority densities similar to Proposed Site 2: adjacent to census tracts with minority densities greater than near Proposed Site		0		2		0		0		2		2		2		0		2
7	Zoning	0: site zoned Industrial 2: not industrial	Industrial	0	Industrial	0	Industrial	0	Greenbelt	2	Industrial	0	Industrial	0	Industrial	0	Industrial	0	Industrial	0
	Overall Rating			**0**		**2**		**0**		**9**		**15**		**11**		**11**		**13**		**8**

7.0 SUSCEPTIBILITY TO NATURAL HAZARDS ASSOCIATED WITH CLIMATE CHANGE AND SEA-LEVEL RISE

The City has cited concerns regarding the susceptibility of the Proposed Site to natural hazards associated with climate change and sea-level rise as a primary justification for analysis of alternative sites. Applicant has therefore analyzed the relative susceptibility of the Proposed Site and the Alternative Sites to such hazards.

Applicant has analyzed extensively the susceptibility of the Proposed Site to natural hazards, including tsunami, flooding, wave runup, and erosion. The results of that analysis are set forth in the AFC and in the responses to data requests. In summary, the Proposed Site's approximate elevation is 14 feet. The top of the beach dune that borders the western portion of the site ranges from approximately 20 to 35 feet and provides protection from predicted sea-level rise over the expected 30-year project life. The likelihood of tsunamis affecting the Ventura Coast is extremely remote, and the Proposed Site is unlikely to be in the inundation zone. Over the more than 60 years that the MGS has been in operation, there have been no impacts or damage to the dunes between the MGS facility and the ocean from tsunamis.

Each Alternative Site was reviewed for its potential susceptibility to hazards (see Table 3). By definition, Alternative Sites located further inland are less susceptible to coastal-related hazards (although some of the extreme scenarios suggested by the City would result in impacts well inland from the coast). However, some of the inland sites are in proximity to the Santa Clara River and could be susceptible to flooding in the future due to climate change. For example, Site 4 is within 200 feet of the Santa Clara River. The FEMA-estimated baseline flood elevation (i.e., 100-year flood elevation) for the Santa Clara River north of the levee and next to the site is approximately 97 to 98 feet NAVD 88. Based on limited information, the elevation of the top of the levee appears to be at approximately 97 to 98 feet, suggesting that there may be little to no freeboard; therefore, the site could be susceptible to flooding in the future. Similarly, Site 7 is within 1,500 feet of the Santa Clara River and has an approximate elevation of 182 feet. Part of the site is in the 1 percent annual chance flood hazard zone (i.e., 100-year floodplain), and part of the site is in the 0.2 percent annual chance flood hazard zone (i.e., 500-year floodplain). The FEMA-estimated baseline flood elevation (i.e., 100-year flood elevation) for the Santa Clara River next to the site is approximately 181 to 184 feet NAVD 88.

Two of the Alternative Sites, Alternative Site 1 and Alternative Site 8, are likely more susceptible to coastal hazards than the Site. Alternative Site 8 is not in the coastal zone; however, it could be susceptible to sea-level rise and tsunami impacts due to its proximity to the coast, less extensive dunes relative to the Proposed Site, and its relatively low elevation. Similarly, Alternative Site 1, which is in the coastal zone, is likely more susceptible to sea-level rise and tsunami impacts than the Proposed Site, due to its proximity to the coast, less extensive dunes, and its relatively low elevation. The tops of the dunes along the beach in the southern portion of Oxnard, near and adjacent to Alternative Site 1 and Alternative Site 8, are much lower than the dunes fronting the Proposed Site; therefore, these sites would be expected to be more susceptible to sea-level rise and tsunami-related impacts than the Proposed Site.

8.0 CONCLUSION

Analysis shows that all Alternative Sites identified are either infeasible or are not superior to the Proposed Site. The Proposed Site was selected based on the ability to meet Project objectives; the availability of sufficient land under Applicant's site control; access to existing infrastructure; and the ability to develop the Project economically with no significant environmental impacts, in compliance with applicable LORS and in accordance with the executed SCE contract, which was competitively procured and is before the California Public Utilities Commission pending approval.

With respect to Project objectives, only Alternative Site 1 and Alternative Site 2 come close to meeting as many Project objectives (six of eight) as the Proposed Site. The other Alternative Sites meet five or fewer of the Project Objectives. Notably, due to the additional time necessary to design and evaluate a proposed project at an Alternative Site, none of the alternatives, including Alternative Site 1 and Alternative Site 2, satisfy the critical Project objective 5, which includes bringing the Project on line in time to meet the commitments in Applicant's agreement with SCE.

With respect to meeting the site screening criteria, all of the Alternative Sites—with the exceptions of Alternative Site 1 and Alternative Site 2—fall far short relative to the Proposed Site. Alternative Site 1 and Alternative Site 2 meet all of the site screening criteria. However, as explained above, these alternatives fail to meet critical Project objectives. Furthermore, Alternative Site 1 has greater potential environmental impacts in the areas of biology and socioeconomics – environmental justice relative to the Proposed Site. Finally, Alternative Site 1 is more susceptible to coastal related natural hazards than the Proposed Site, which is the primary basis upon which the City has pressed for analysis of alternative sites in the first place.

Alternative Site 2 comes closest to the Proposed Site in terms of Project Objectives, site screening criteria, and environmental impacts. The major issue is that development requires complete above- and below-grade demolition of existing MGS Units 1 and 2 prior to construction of the proposed project. This will result in project delays to account for the demolition schedule, and in local reliability impacts due to the loss of Units 1 and 2 ahead of the commercial online date of P3. For these reasons, Alternative 2 may not be feasible.

With respect to potential environmental impacts and susceptibility to natural hazards, there is no Alternative Site that is clearly superior to the Proposed Site. It is acknowledged that some Alternative Sites have qualitatively lower specific environmental impacts in one resource area or another relative to the Proposed Site (e.g., Alternative Site 7 is farther from sensitive receptors and would have lesser impacts related to air quality, noise, hazardous materials, and public health; and Alternative Sites 5 and 6 have lesser biological constraints); however, those same Alternative Sites have greater environmental impacts in other resource areas that clearly do not outweigh the benefits (e.g., Alternative Sites 3, 4, 5, 6, 7, and 8 are all closer to sensitive receptors and therefore would have greater impacts related to air quality, hazardous material, noise, public health, and visual resources). Regardless, these Alternative Sites, on balance, do not meet the Project objectives and site screening criteria, and are therefore infeasible or not environmentally superior to the Proposed Site. The foregoing analysis confirms that the Proposed Site is superior to all identified Alternative Sites as the site for the contracted P3 development.

9.0 REFERENCES

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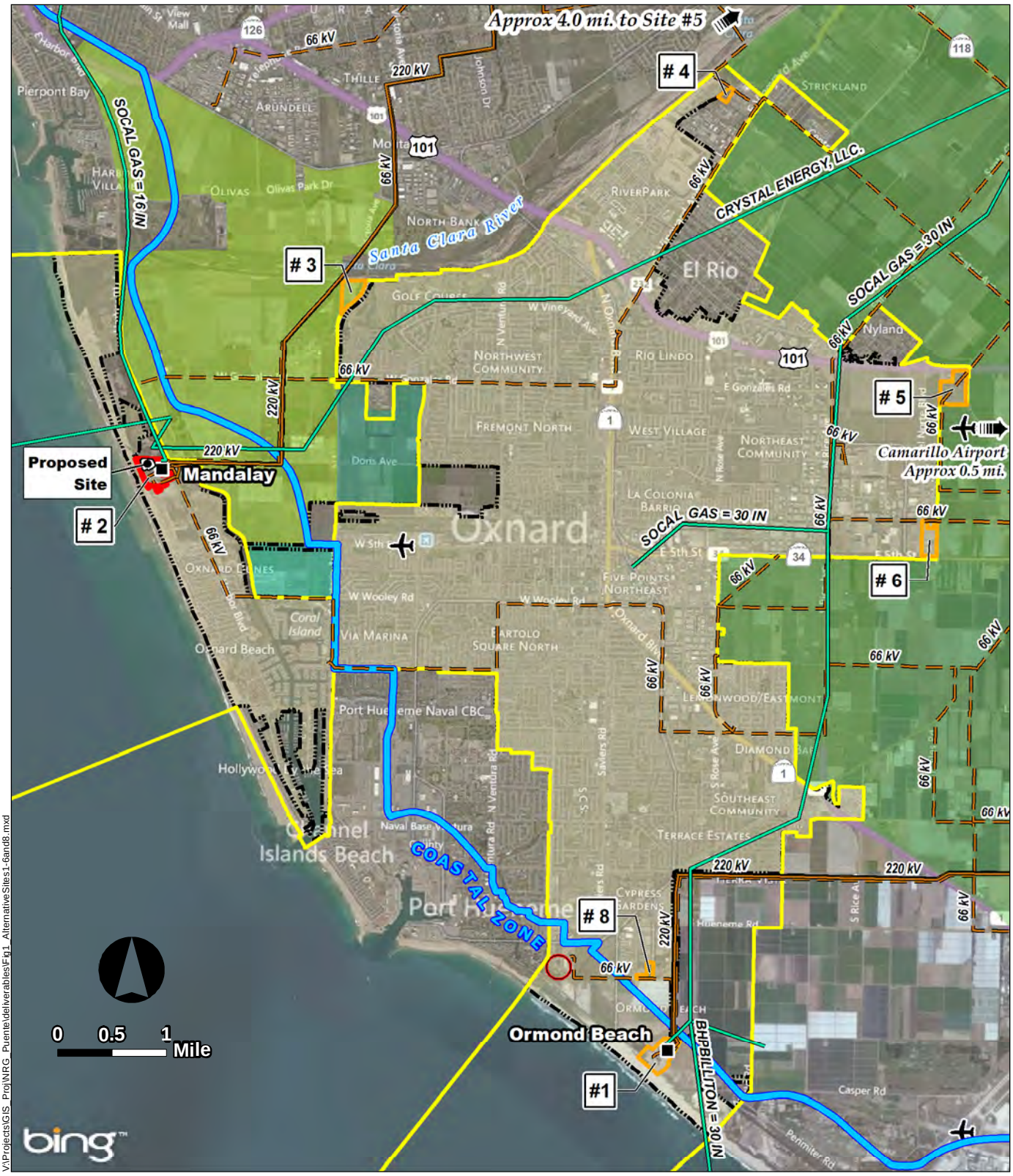
FIGURES



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- Airport
- 220 kV substations
- Wastewater Treatment Plant
- 220 kV Electrical transmission lines
- 66 kV Electrical transmission lines
- Gas Pipelines
- City Limit Not Coincident with SOI
- Oxnard Sphere of Influence (SOI)
- California Coastal Zone
- Oxnard-Camarillo Greenbelt
- Ventura-Oxnard Greenbelt
- Ventura-Oxnard, Eastern Greenbelt
- Ventura-Oxnard, Southern Greenbelt
- Ventura-Santa Paula Greenbelt
- Alternative Site

Note: Except for the pipelines operated by Crystal Energy, Llc and BHP Billiton, all gas lines shown are classified as intrastate pipelines.

Image Source: Bing Maps aerial imagery with labels web mapping service (Image date range: 5-15 Jan 2015), http://www.bing.com/maps .

Source: [1] City Limits & City SOI Ventura County Geographical Information system (GIS), http://www.ventura.org/gis-mapping/gis-data-downloads-political accessed 7 Oct 2015; [2] Greenbelts: Ventura County Geographical Information System (GIS), June 2013; [3] Platts POWERmap for power infrastructure.

ALTERNATIVE SITES

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Oxnard, California

December 2015

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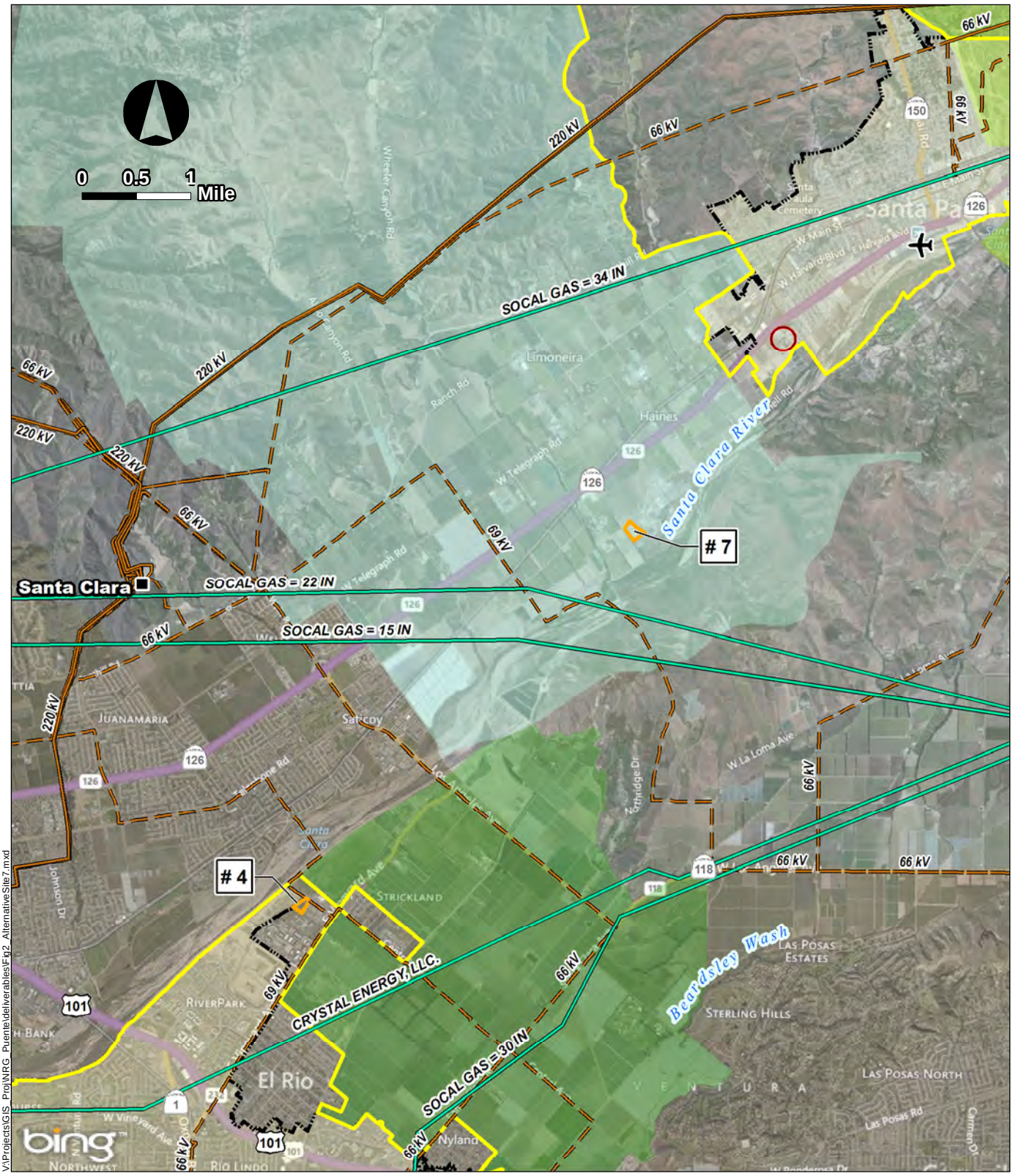
FIGURE 1



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- Airport
- 220 kV substations
- Public Utility
- 220 kV Electrical transmission lines
- 66 kV Electrical transmission lines
- Gas Pipelines
- City Limit Not Coincident with SOI
- Santa Paula or Oxnard Sphere of Influence (SOI)
- Oxnard-Camarillo Greenbelt
- Santa Paula-Fillmore Greenbelt
- Ventura-Santa Paula Greenbelt
- Alternative Site

Note: Except for the pipelines operated by Crystal Energy, Llc, all gas lines shown are classified as intrastate pipelines.

Image Source: Bing Maps aerial imagery with labels web mapping service (Image date range: 5-15 Jan 2015), http://www.bing.com/maps .

Source: [1] City Limits & City SOI Ventura County Geographical Information system (GIS), http://www.ventura.org/gis-mapping/gis-data-downloads-political accessed 7 Oct 2015; [2] Greenbelts: Ventura County Geographical Information System (GIS), June 2013; [3] Platts POWERmap for power infrastructure.

ALTERNATIVE SITES

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FIGURE 2