

3.5 ENERGY AND MINERAL RESOURCES

This EIR section analyzes the potential for adverse impacts on existing energy resources of the City of Huntington Beach and mineral resources located within the project site resulting from implementation of the proposed project. The Initial Study (Appendix A) identified the potential for impacts associated with energy resources, including electricity and natural gas, as well as the loss of availability of a mineral resource. Specifically, the loss of oil is an issue of concern since this resource is prevalent throughout the project site as the site was formally used as an oil field, and this resource could be of value to the region, residents of the state, or delineated as locally-important on a local general or other land use plan. The Initial Study prepared for the proposed project concluded that no effects on other mineral resources would occur, as no other mineral resources have been identified within the project site. Data used to prepare this section was obtained from electrical and natural gas providers regarding available supply, service levels, and current or anticipated constraints; the City's General Plan Environmental Resources/Conservation, Utilities, and Coastal Elements; the Downtown Specific Plan; the Environmental Site Assessment for the Huntington Shores Motel; and the Phase II Investigation Report/Remediation Plan; the Remediation Plan prepared for the site; and the Preliminary Geotechnical Investigation prepared by Zeiser Kling Consultants, Inc., for the site (Appendix J). Full bibliographic entries for all reference materials are provided in Chapter 7 (References) of this document. Potential hazards associated with oil operations on site and in the area are discussed in Section 3.7 (Hazards and Hazardous Materials).

3.5.1 Existing Conditions

Electrical Service

The primary electricity provider for the City of Huntington Beach is Southern California Edison (SCE). Facilities and infrastructure providing service to the project area include transmission, distribution, and communication lines. SCE has approximately 280 miles of electrical lines in the City ranging from household connections to generating station distribution lines. Six SCE substations and a generating station operated by the AES Corporation are also located within the City. The AES generating station is located at 21730 Newland Avenue. The six SCE substation names and locations are as follows:

1. Bolsa—15971 Graham Street
2. Ocean View—8081 Warner Avenue
3. Slater—1875 Edwards Street
4. Wave—730 Lake Street

5. Hamilton—21202 Brookhurst Avenue
6. Ellis—19118 Ward Street

The project site is located within the service territory of SCE, which currently maintains aerial transmission lines along the First Street property boundary and regional 66-kV transmission facilities along the Atlanta Avenue site boundary. Currently, no electrical infrastructure exists on the site. SCE has indicated that the current electricity supply for the City is adequate, and that there are no immediate plans to expand or upgrade the existing electricity infrastructure (Lee Dickerhoof 2003, March).

Energy Supply

Southern California consumers have recently experienced rising energy costs and uncertainties regarding the supply of electricity. The causes of these conditions are under investigation and are the subject of debate. Some of the factors that may have led to the energy shortages experienced in late 2000 and early 2001 in California include a lack of new major power plants, drought conditions, lack of emphasis on energy conservation, and deregulation. While the population in California has increased by an average of 600,000 people per year over the past decade, no new major power plants have been built. In addition, surrounding states that formerly provided up to 20 percent of California's energy have also experienced significant growth, thereby limiting their electricity exports to California. The drought conditions experienced in the Pacific Northwest in 2000 and 2001 also resulted in the reduction of the volume of water available for hydroelectric power generation, which otherwise could have been exported to California as it has in previous years. Further, the increase in energy supplies during the 1980s caused the cost of electricity to decrease, which resulted in less emphasis being placed on energy conservation and efficiency programs. Another factor leading to the recent California Energy Crisis may be the lack of cost controls as a result of deregulation. The law for deregulation went into effect in 1998 with the goal of enhancing competition and consumer choice in electricity generators. Under the law, the transmission and distribution of electricity would remain a regulated monopoly, but the generation of electricity would be opened up to competition. Utilities were encouraged to sell their power plants and were required to purchase all their electricity needs from the wholesale market. However, an electricity supply/demand mismatch occurred as existing utilities sold their power plants but were not responsible for building new ones. The fact that new power plants would take at least a few years to be permitted and constructed, coupled with the economic and population growth in California, resulted in an energy shortage.

The California Energy Commission (CEC) is currently considering applications for the development of new power-generating facilities in Southern California and elsewhere in the State. These facilities could supply additional energy to the power supply grid within the next few years. In addition, efforts are being taken to

modify existing plants and re-power existing sites to improve generation capacity. A broad-ranging effort has also been undertaken by the State to reduce peak electricity demand in California, including actions to encourage voluntary load reduction by customers and to promote incentive programs for demand reducing technologies, energy efficient construction techniques, and the installation of energy-efficient equipment.

Natural Gas Service

Southern California Gas Company (SCGC) is the primary provider of natural gas for the City of Huntington Beach. The availability of natural gas service is based upon present conditions of gas supply and regulatory policies. As a public utility, the SCGC is under the jurisdiction of the California Public Utilities Commission.

SCGC receives its supply of natural gas from several locations, including Southern California, Northern California, and out-of-state suppliers, with the largest source from El Paso, Texas. The natural gas from Texas enters California through transmission lines ranging from 500 to 1,000 pounds per square inch (psi) of pressure. These lines connect to transmission compressor stations, which decrease the pressure and clean the natural gas. From the compressor stations, the natural gas is transmitted through supply lines with gases ranging from 150 to 500 psi of pressure. The supply lines terminate at the distribution stations, where the natural gas pressure is further reduced to approximately 44 psi and then provided to consumers.

No natural gas lines currently serve the project site: lines that served the project site in the past have been abandoned. However, existing transmission lines are located within the project area, and natural gas could be provided to the site via extensions from these mains. Specifically, a six-inch gas main runs along Huntington Street, an eight-inch gas main runs along Atlanta Avenue, a 12-inch high-pressure gas main runs along First Street, and a 12-inch high-pressure gas main runs along PCH. SCGC has no immediate plans to update the existing infrastructure or to implement new technologies other than normal maintenance checks and replacements of deteriorating supply lines. Currently, SCGC meets existing natural gas supply demands in the area (James Bevans 2003, February).

Oil Well Inventory

For the purposes of this report, an oil well is defined as a hole drilled from the surface into the earth for prospecting for or production of oil, natural gas, or other hydrocarbon substances. This definition also encompasses a well or a hole used for the subsurface injection into the earth of oil field waste, gases, water, or liquid substances, including any well or hole that has not been abandoned and is now in existence.

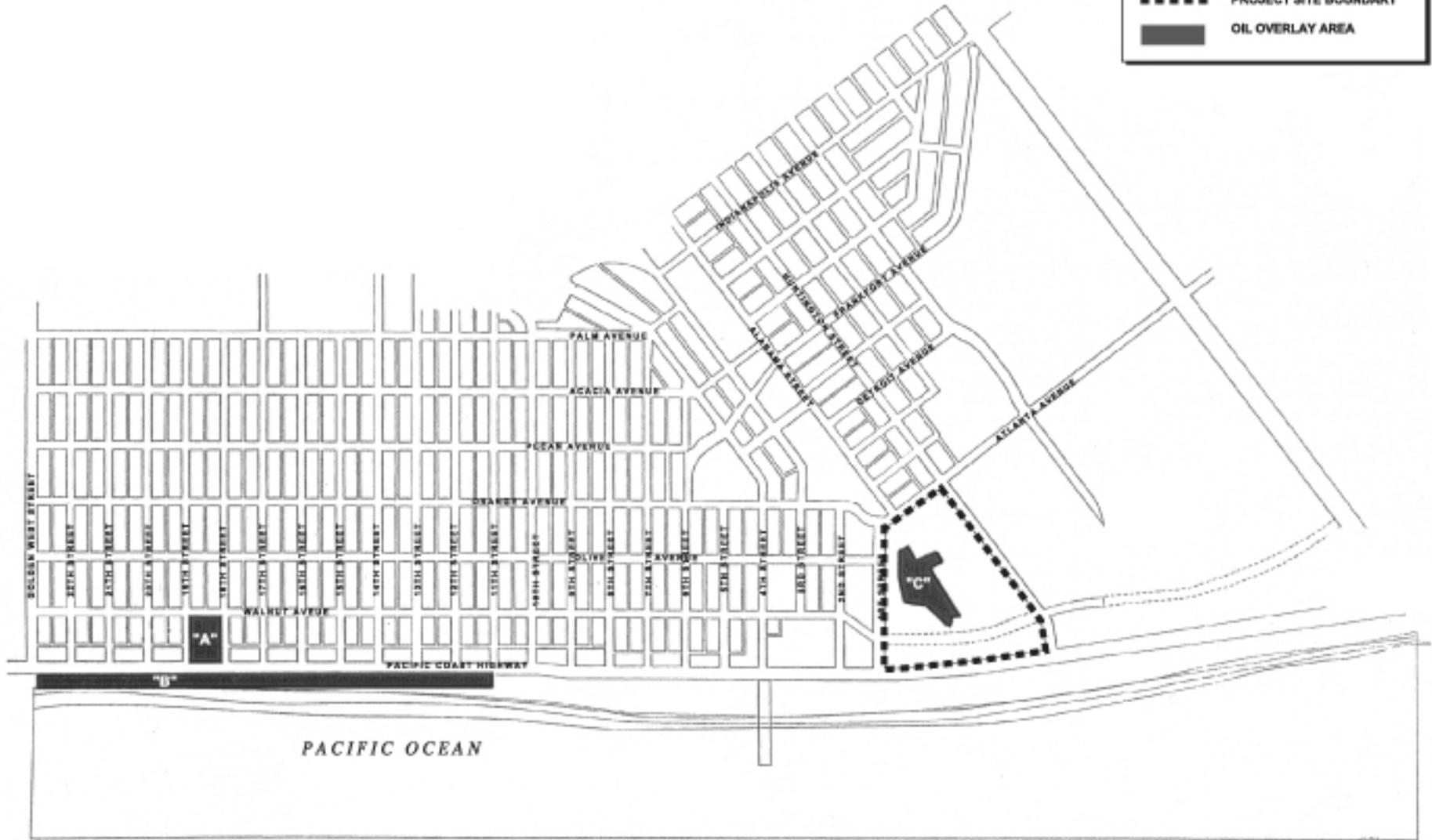
California is the fourth largest oil producer in the United States, behind Alaska, Texas, and Louisiana, respectively, making the oil industry not only an integral part of the State's economy, but also a major contributor to the nation's economic health (California Department of Conservation, Division of Mines and Geology, 1999).

According to the Environmental Resources/Conservation Element of the City's General Plan, Huntington Beach has been the site of oil extraction since the 1920s, and large scale oil and gas production continues to the present time. Oil wells in Huntington Beach are scattered throughout much of the City, with most of them concentrated along the coastal areas and mesas. Several oil producing areas underlying the City include the Talbert, Sunset Beach, West Newport, and Huntington Beach oil fields. Recent oil production has decreased due to the expenses incurred in oil extraction, although an estimated 67.5 million barrels remain in reserve.

The project site is located within the Huntington Beach Oil Field, which was formerly operated by Chevron. In addition, the portion of the project site designated as District No. 8A by the Downtown Specific Plan is also identified as an Oil Overlay "C" District, with the purpose of the overlay to allow for existing and/or expanded oil production on the property. The Oil Overlay specifications identify conditions that must be met in order for this to occur, and include the minimization of noise, odor, and visual impacts on nearby residences and safe access to the site. Since the Downtown Specific Plan area overlies long-productive oil pools, the City designates zoning for oil production in connection with the underlying base zones, such as commercial or residential districts. Due to the extent of the remaining reserves in the area, the plan allows oil production to continue in parts of the area. Figure 3.5-1 shows the location of Oil Overlay "C" District on the project site.

A review of historical aerial photographs and Munger maps, and a site visit by Harding Lawson Associates for the Phase II Investigation Report/Remediation Plan in 1996, identified 10 aboveground storage tank (AST) settings, former locations of approximately 4,000 feet of pipelines, 20 abandoned oil wells, and one abandoned water well on the project site. Oil well abandonment at the project site occurred over a number of years, beginning in 1976 and occurring through 1999. The majority of on-site wells were initially abandoned in 1988 and subsequently re-abandoned in 1998. All of the abandoned oil well sites have also been remediated; the plugging and abandonment of these oil wells have been conducted in accordance with, and have been determined to meet all of, the requirements of the Resources Agency of California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), as indicated in the report of well plugging and abandonment provided for each well (DOGGR, 1998 and 1999).

LEGEND	
-----	PROJECT SITE BOUNDARY
■	OIL OVERLAY AREA



Not to Scale

SOURCE: City of Huntington Beach 2002a.



EIP
ASSOCIATES

FIGURE 3.5-1
Oil Overlay Districts

City of Huntington Beach • Pacific City EIR

3.5.2 Regulatory Framework

No federal or State regulations related to energy and mineral resources apply to the proposed project.

Local

General Plan Utilities Element

The City of Huntington Beach General Plan Utilities Element includes strategies that address energy consumption within the City. Table 3.5-1 identifies goals and objectives presented in the Utilities Element of the General Plan related to energy that are potentially relevant to the proposed project. This section also includes an assessment of the proposed project’s consistency with the policies adopted in support of these goals and objectives.

Table 3.5-1 General Plan Utilities Element—Policies Applicable to Energy and Mineral Resources

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Goal U5. Maintain and expand service provisions to City of Huntington Beach residences and businesses.	Conformance with implementing policies, as discussed below, results in conformance with this goal.
Objective U.5.1. Ensure that adequate natural gas, telecommunication and electrical systems are provided.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy U.5.1.4. Require the review of new and or expansions of existing industrial and utility facilities to ensure that such facilities will not visually impair the City’s coastal corridors and entry nodes.	Proposed project plans would be subject to review by City Planning and Public Works staff. Further, electrical and natural gas transmission line extensions onto the project site would be located underground.

General Plan Environmental Resources/Conservation Element

The City of Huntington Beach General Plan Environmental Resources/Conservation Element includes goals and policies that address mineral resources extraction. Table 3.5-2 identifies goals and objectives presented in the Environmental Resources/Conservation Element of the General Plan related to energy that are potentially relevant to the proposed project. This section also includes an assessment of the proposed project’s consistency with the policies adopted in support of these goals and objectives.

Table 3.5-2 General Plan Environmental Resources/Conservation Element—Policies Applicable to Energy and Mineral Resources

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Objective ERC 3.2. Ensure mineral/oil resource extraction areas are properly reclaimed after resource extraction has been terminated.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy ERC 3.2.1. Review all mineral/oil reclamation projects under the policies and procedures of the California Environmental Quality Act and the Surface Mining and Reclamation Act.	Reclamation of all oil wells on the project site has already occurred, and has been conducted in accordance with the applicable requirements of the DOGGR and the City of Huntington Beach. Preparation of this EIR to evaluate impacts associated with the proposed project has occurred in accordance with all applicable provisions of CEQA and the State CEQA Guidelines.
Policy ERC 3.2.2. Require that permits for mineral/oil reclamation projects specify compliance with State, Federal and local standards and attainment programs with respect to air quality, protection of rare, threatened or endangered species, conservation of water quality, watersheds and basins, and erosion protection.	Reclamation of all oil wells on the project site has already occurred, and has been conducted in accordance with the applicable requirements of the DOGGR and the City of Huntington Beach. Preparation of this EIR to evaluate impacts associated with the proposed project has occurred in accordance with all applicable provisions of CEQA and the State CEQA Guidelines.

General Plan Coastal Element

The City of Huntington Beach Coastal Element identifies policies that allow for the continuation, and in some cases expansion of, energy-related facilities while ensuring the community's public health and safety, environmental protection, and minimization of negative aesthetic impacts to the maximum extent feasible. Table 3.5-3 identifies goals and objectives presented in the Coastal Element of the General Plan related to energy that are potentially relevant to the proposed project. This table also includes an assessment of the proposed project's consistency with the policies adopted in support of these goals and objectives.

Table 3.5-3 General Plan Coastal Element—Policies Applicable to Energy and Mineral Resources

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Goal C 8. Accommodate energy facilities with the intent to promote beneficial effects while mitigating any potential adverse impacts.	Conformance with implementing policies, as discussed below, results in conformance with this goal.
Objective C 8.1. Continue to pursue and promote interdepartmental coordination between the City, other levels of government and outside agencies regarding energy related issues affecting the City.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy C 8.1.9. Through the development permit process, ensure that new development provides for the retention of access to underground oil reserves where needed.	As described below in Section 3.5.3 (Project Impacts), development of the proposed project would still allow extraction of oil reserves under the project site by slant drilling.

Table 3.5-3 General Plan Coastal Element—Policies Applicable to Energy and Mineral Resources

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Objective C 8.3. Accommodate new energy production facilities while requiring maximum efficiency and mitigation of adverse impacts.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
<p>Policy C 8.3.3. Encourage development of new methods to conserve energy such as the following:</p> <ol style="list-style-type: none"> 1. Solar water heating requirements for new developments; 2. Solar access and orientation 3. The limited use of conventional fuels for heating swimming pools 4. Requirements for “weatherization” and other minimum conservation measures, and 5. Energy audits of buildings at time of deed transfer. 	The proposed project recommends the implementation of an energy conservation plan that would reduce the overall demand on electricity and natural gas. The energy conservation plan could include, but would not be limited to, measures such as the installation of energy efficient lighting, and heating, ventilation, and air conditioning (HVAC) controls to reduce energy consumption. With implementation of this plan, the proposed project would be consistent with this policy.
Objective C 8.4. Minimize the safety and aesthetic impacts of resource production facilities on nonresource production land uses.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy C 8.4.3. Encourage comprehensive planning for new uses on large oil parcels.	The City’s General Plan Land Use Map shows that although the project is located within an oil extraction area, the uses planned for the site by the City after cessation of oil extraction activities are visitor-serving commercial uses and high-density residential uses. Additionally, the project site is located within the Downtown Specific Plan area, for which comprehensive development standards have been established, taking into account compatibility with surrounding uses and synergy of uses among the different Specific Plan districts. The proposed project has been developed according to this comprehensive planning scheme and the developed standards.

3.5.3 Thresholds of Significance

Project impacts would be considered significant if any of the following would occur:

Electricity and Natural Gas

- Substantially increase demands beyond available supply
- Result in the upgrading of existing systems that will result in attracting more or higher density development to an area

Mineral Resource

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan

3.5.4 Project Impacts

For the purposes of this analysis, energy impacts resulting from a substantial increase in demand beyond available supply consider whether and when the needed infrastructure was anticipated by adopted plans. The analysis considers if the project requires or results in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact EM-1 Implementation of the proposed project would not substantially increase electricity demands beyond available supply or result in attracting additional or higher density development to the project area.

The projected electricity consumption rates for the proposed project are shown in Table 3.5-4.

<i>Type of Use</i>	<i>Generation Rate*</i>	<i>Square Feet**</i>	<i>Units</i>	<i>Demand per Year</i>
Hotel	4.8 volt amps/square feet/day	370,000	N/A	648,240 Kilovolt amps (KVA)
Retail	7.5 volt amps/square feet/day	240,000	N/A	657,000 Kilovolt amps (KVA)
Residential	4.0 kilowatts/unit/day	N/A	516	753,360 Kilowatts (KW)

* The generation rate represents the estimated peak demand for the type of use
 ** Values represent the maximum amount of square footage that could be used for the proposed project.

SOURCE: SCE 2003

Based upon the rate information, the maximum total electricity demand of the proposed project would be approximately 1,305,240 kilovolt amps per year for the commercial component, and approximately 753,360 kilowatts for the residential component. SCE has indicated that although the proposed project, given the magnitude of its development, could result in a substantial increase in electricity demand, an adequate supply of electricity would be available since the electrical loads of the project are within SCE's parameters of projected load growth in the area. Therefore, the project would not increase energy demands beyond available supply. It is likely, however, that new circuits and lines would need to be erected to provide the electricity supply required to support the proposed project without impairing the level of service to the surrounding area (Lee Dickerhoof 2003). SCE anticipates that its ability to serve all customers' loads in accordance with their rules and tariffs would be adequate during the decade of the 2000's. The project-generated demand for electricity would be negligible in the context of overall demand within Huntington Beach and the State, and thus would not require the upgrading or expansion of existing electricity generating systems. Since additional circuits and lines would be erected to meet the electricity demand of the project site only, this would not induce more or higher density development in the area. Therefore, impacts would be less than significant.

Impact EM-2 Implementation of the proposed project would not substantially increase natural gas demands beyond available supply or result in attracting additional or higher density development to the project area.

The natural gas demand rates in cubic feet for the proposed project are shown in Table 3.5-5.

<i>Type of Use</i>	<i>Generation Rate</i>	<i>Square Feet*</i>	<i>Units</i>	<i>Cubic Feet Generated per Year</i>
Hotel	4.8 cubic feet/square feet/month	370,000	N/A	21,312,000
Retail	2.9 cubic feet/square feet/month	240,000	N/A	8,352,000
Residential	4,011.5 cubic feet/unit/month	N/A	516	24,839,208
Total		610,000	516	54,503,208

* Values represent the maximum amount of square footage that could be used for the proposed project.

SOURCE: SCAQMD 1993

Based upon the rate information, the total project demand for natural gas would be approximately 53,495,208 cubic feet per year. According to SCGC, the proposed project would likely be served by new natural gas lines that connect to either the gas mains located on Atlanta Avenue or Huntington Street (Kevin Stonesifer, February 2003). SCGC has indicated that an adequate supply of natural gas is currently available to serve the proposed project, and that the natural gas level of service provided to the surrounding area would not be impaired by the proposed project. Depending on the amount of natural gas required by the proposed project, proper-sized natural gas lines would be constructed to provide the necessary loads to the site (James Bevans, February 2003). The service would be in accordance with the company’s policies and extension rules on file with the California Public Utilities Commission at the time contractual agreements are made. Since new gas lines would be constructed to serve only the proposed project, this upgrade would not attract more or higher density development to the area. Therefore, natural gas demand associated with the proposed project would be less than significant.

Impact EM-3 Implementation of the proposed project would not result in the loss of availability of a known mineral resource or the loss of availability of a locally important mineral resource recovery site.

As discussed in Section 3.5.1 (Existing Conditions), the portion of the project site underlain by mineral resources is identified as an Oil Overlay “C” District by the Downtown Specific Plan. The overlay allows for existing and/or expanded oil production on the property if proposed, although the project does not propose this use.

The proposed project would result in development of residential uses on a portion of the site underlain by mineral resources. A loss of direct access to mineral resources would result. The HBFD has indicated that slant drilling would be feasible on the project site based on consultation with its petro-consultant. The feasibility of slant drilling is determined by the depth of the resource and distance of the drilling operations from the project site. Resources beneath the project site are located at a depth that it is possible for slant drilling to occur at available off-site locations in order to extract mineral resources from the site (Mel Wright 2003, March). Therefore, existing mineral resources located on the project site would remain accessible despite on-site development. In addition, the City's General Plan EIR addressed buildout of the city, which would have the potential to affect oil reserves in a number of locations in the City. That document did not identify any issues related to the long-term loss of mineral resources. Impacts from the proposed project would therefore not result in the loss of availability of mineral resources.

3.5.5 Cumulative Impacts

This cumulative impact analysis considers development of the proposed project, in conjunction with other development within the vicinity of the project in the City of Huntington Beach. Infrastructure capacity for energy is a regional problem due to recent and projected population increases in the Southern California area. This population increase creates additional demand for utility services, which may already be at or near capacity. It has been determined that all project-specific impacts to utility services stemming from the proposed project would not be cumulatively considerable, as discussed in the following sections.

Electrical Service

Related development would increase demands on electricity. SCE is constantly analyzing the capacity of its systems and projecting and planning for new load growth based on commercial, industrial, and residential customer demand. Southern California consumers have recently experienced rising energy costs and uncertainties regarding the supply of electricity. However, based on current supply and demand assessments, the California Energy Commission has indicated that the supply of energy has improved for the near-term, and during this time long-term policy decisions would be made to address energy demands throughout the state (California Energy Commission 2002). This would ensure cumulative impacts would be less than significant. In the context of statewide demands, cumulative development in and of itself would not be anticipated to substantially increase demands beyond available supply. Therefore, the project would have a less than significant contribution to cumulative impacts.

Natural Gas Service

The proposed project would create an ongoing demand for increased natural gas during operations. The service provider anticipates that gas supply and infrastructure are adequate to meet projected demands and that no foreseeable short or long-term cumulative impacts to natural gas are anticipated as a result of the proposed project in combination with regional development. Therefore, the project would have a less than significant contribution to cumulative impacts.

Mineral Resources

The proposed project would be developed over an area with identified mineral resources. Additional development in the Downtown Specific Plan Area would incrementally contribute to loss of mineral resources. However, it has been determined that slant drilling would be feasible from areas adjacent to the project site. As such, the City of Huntington Beach would not experience a loss of an available mineral resource due to the proposed project. Therefore, the project would have a less than significant contribution to cumulative impacts.

3.5.6 Mitigation Measures and Residual Impacts

The following mitigation measure (MM) would be recommended to further reduce less-than-significant impacts associated with energy demand as discussed in Impacts EM-1 and EM-2. This measure is in keeping with practices that would reduce energy demands from new development projects.

MM EM-1 The proposed project shall implement an energy conservation plan that could include, but would not be limited to, measures such as energy efficient lighting, and heating, ventilation, and air conditioning systems (HVAC) controls to reduce the demand of electricity and natural gas. The energy conservation plan shall be subject to review and approval by the City Building and Safety and Planning Departments prior to issuance of building permits.

Implementation of MM EM-1 would further reduce less-than-significant impacts identified in Impacts EM-1 and EM-2.