3.14.2 Natural Gas

ENVIRONMENTAL SETTING

The Southern California Gas Company (SoCalGas) provides natural gas to the City of Malibu. The City lies within the boundaries of the South Coastal distribution division. SoCalGas serves domestic and commercial uses in Malibu. Industrial and commercial loads vary depending on the type of equipment used. The maintenance and operation of gas distribution facilities are regulated by the California Public Utilities Commission (PUC).

Natural gas is provided through underground gas mains. There are two mains that currently serve the project area: a 2-inch main located under Cross Creek Road, and a 3-inch main located under Civic Center Way.[1]

Natural gas service for new development projects must be provided in accordance with SoCalGas's policies and extension rules on file with the PUC at the time contractual agreements are made. The availability of natural gas is based upon present conditions of gas supply and regulatory policies. As a public utility, SoCalGas is under the jurisdiction of the PUC, but can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the conditions under which service is available, gas service would be provided in accordance with those revised conditions.

In 2012 the commercial sector natural gas demand was 201 billion cubic feet (bcf) or 2.01e + 23 thousand British thermal units (kBtu).[2]

REGULATORY FRAMEWORK

Federal

Please see the discussion of the Federal Energy Regulatory Commission in **Section 3.14-1, Electricity**.

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1 Southern California Gas Company, Environmental Specialist/Land Planner, James Chuang, written communication March 17, 2014

2 The California Energy Commission, Energy Almanac, Overview of Natural Gas Supply in California, Table 1, http://www.energyalmanac.ca.gov/naturalgas/overview.html, June 9, 2014

State

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. After adoption of the California Energy Security and Reliability Act of 2000 (AB 970), the California Energy Commission produced changes to the Building Energy Efficiency Standards. In November 2003, the California Energy Commission adopted these updated standards. The California Building Standards Commission adopted the 2005 changes in July 2003, and the updated standards took effect on October 1, 2005. Included in this update were requirements identified under senate Bill 5X of 2001, part of which required the California Energy Commission to adopted energy efficiency standards for outdoor lighting. The 2013 Building Energy Efficiency Standards took effect on July 1, 2014.

Mandatory measures include:

- duct sealing in all climate zones
- residential heating, ventilation, and air conditioning (HVAC) system improvements including fan power and airflow testing or return air to increase heating or cool air output by improving the return of flow air to the air handler
- require insulation on pipes 0.75 inch and larger
- require 250 square feet of a solar ready zone on single-family roofs

Prescriptive measures include:

- reducing the U-factor[3] on high performance windows, to decrease the rate of heat loss
- increase the minimum standard for duct insulation for climate zones 6,[4] 7, and 8, to reduce air leaking from ducts

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3 The rate of heat loss is indicated in terms of the U-factor (U-value) of a window assembly. The lower the U-factor, the greater a window's resistance to heat flow and the better its insulating properties.

4 A small portion located in the central eastern area of California is located within Climate Zone 6. No portions of California are located in Climate Zones 7 or 8

- adding radiant barrier[5] requirements to Climate Zones 3, and 5 through 7[6]
- requiring the installation of night ventilation[7] systems
- increasing wall insulation to R15/4 in all climate zones

California Public Utilities Commission

The California PUC regulates privately owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. Among the PUC's goals for energy regulation are: to establish service standards and safety rules, authorize utility rate changes, oversee markets to inhibit anti-competitive activity, prosecute unlawful utility marketing and billing activities, govern business relationships between utilities and their affiliates, resolve complaints by customers against utilities, implement energy efficiency and conservation programs and programs for the low-income and disabled, oversee the merger and restructure of utility corporations, and enforce the California Environmental Quality Act (CEQA) for utility construction.

Local

City of Malibu General Plan

The City's General Plan is primarily a policy document that sets goals concerning the community and gives direction to growth and development. In addition, it outlines the programs that were developed to accomplish the goals and policies of the General Plan. The Plan's Conservation Element serves as a guide for the conservation, protection, restoration, management, development, and appropriate and responsible utilization of the City's existing natural resources. The Conservation Element includes goals and policies pertaining to natural gas service such as the City shall educate the community regarding the importance of and techniques for energy conservation and encourage state-of-the art energy efficiency standards for all new construction design. The goals and objectives relevant to natural gas and the proposed project are discussed above under **Section 3.14.1, Electricity.**

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5 Radiant barriers are installed in homes, usually in attics to primarily to reduce summer heat gain and reduce cooling costs. The barriers consist of a highly reflective material that reflects radiant heat rather than absorbing it.

6 California is comprised of the following Climate Zones: 2, 3, 4, (marine and non-marine), 5 and 6.

7 Night ventilation systems keep windows and other passive ventilation openings closed during the day, but open at night to flush warm air out of the building and cool thermal mass for the next day.

City of Malibu Municipal Code

Section 15.24.010 – "Adoption of Green Building Standards Code" is the City's formal adoption of CALGreen. In the event of any conflict between provisions of the California Green Building Standards Code, 2013 Edition, Title 31 of the Los Angeles County Code, or any amendment to the Green Building Standards Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

PROJECT DESIGN FEATURES

Several sustainable design features are included in the proposed project's design to decrease the project's natural gas consumption. High efficiency systems including heating equipment would be installed, as well as tankless water heaters, pre-plumbing for solar water heating, and ENERGY STAR windows and appliances.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds for determining the significance of impacts related to natural gas are based on the guidance provided in Appendix F of the most recent update of the *CEQA Statutes and Guidelines*. Impacts related to natural gas are considered significant if the proposed project would:

- result in activities which use large amounts of natural gas or which use natural gas in a wasteful manner
- result in an increased demand for natural gas which exceeds either the existing supply or capacity of the existing infrastructure (or financially feasible infrastructure that could be developed) required to service additional demand and/or equipment (natural gas lines, etc.)

Impact Analysis

Threshold 3.14.2-1 Result in activities which use large amounts of natural gas or which use natural gas in a wasteful manner

As the project site is vacant, no uses currently exist that consume natural gas. Natural gas consumption associated with the proposed project was calculated using generation factors based on the proposed land use. As shown in **Table 3.14.2-1**, **Natural Gas Consumption by the Proposed Project**, the proposed project is anticipated to consume approximately 545.68 (kBtu) per year (approximately 1.49 kBtu per day)

of natural gas. As discussed above underground gas mains exist near the project site along Civic Center Way and Cross Creek Road and would service the project site.

Table 3.14.2-1
Natural Gas Consumption by the Proposed Project

Building	Building Size	Consumption Rate (kBtu/1,000 sf)	Yearly Consumption (kBtu)
Whole Foods	24,549 sf	21.07	517.24
Commercial/Retail [1]	13,876 sf	2.05	28.44
Parking Lot	43,225 sf	0	0
		Total Natural Gas Consumption	545.68

Source: SCAQMD, California Emissions Estimator Model Guide (CalEEMod), Appendix D, Table 8.1
Notes: The City of Malibu is located in climate zone 8
It should be noted that the Title 24 standards were updated in 2013. The 2013 standards will take effect July 1, 2014. The consumption values taken from CalEEMod do not reflect the 2013 standards.
[1] Includes Building 1, 2, and 3
Strip Mall natural gas consumption was used as a proxy for Commercial/Retail
sf = square feet, kBtu= Kilo British Thermal Unit.

The uses associated with the proposed project would increase natural gas consumption on the project site, as the site is currently vacant. However, with incorporation of project design features, the proposed project would not result in the consumption of large amounts of natural gas or the use of natural gas in a wasteful manner. According to the California Energy Commission Energy Almanac, the commercial sector natural gas demand in 2012 for the State was 2.01e + 23 kBtu. Thus, the 545.68 kBtu consumed by the proposed project would be nominal when compared to the State consumption. Further, as discussed above, the proposed project includes sustainability features which would reduce the proposed project's natural gas consumption level, including high efficiency heating systems and pre-plumbing for solar heating. Therefore, impacts on natural gas would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Threshold 3.14.2-2 **Result in an increased demand for natural gas which exceeds either the existing supply or capacity of the existing infrastructure (or financially feasible infrastructure that could be developed) required to service additional demand and/or equipment (natural gas lines, etc.)**

Construction activities associated with the proposed project would not require the use of natural gas as construction tools are generally powered by gasoline or electricity. However, during the construction phase, it is anticipated that the installation of gas lines would be necessary as the project site is currently vacant and no natural gas lines currently exist to serve the project site. Additionally, upgrades to existing natural gas lines located along Civic Center Way and Cross Creek Road could be necessary. Therefore, minimal amounts of natural gas could be released during upgrades of existing infrastructure and/or the installation of new lines. SoCalGas currently does not track the amount of natural gas released during the installation of new lines and/or upgrades to existing lines.[8] As the amount would be minimal, impacts from construction activities would be less than significant.

The proposed project's land uses would require the extension of the existing underground natural gas line(s) as no natural gas lines exist on the project site which would result in an increase demand for natural gas [9] As discussed above, construction of necessary natural gas lines or expansion of existing lines (if necessary) would be minimal and the amount of natural gas released during construction of the new lines would not be substantial. Design and sizing of all natural gas infrastructure would meet all applicable engineering requirements to the satisfaction of the SoCalGas and the City of Malibu. Serving new areas and upgrading the size of existing gas mains is routine for the SoCalGas and existing facilities would be able to provide natural gas for proposed project.[10] The applicant would be responsible for all costs associated with the upgrade of existing infrastructure or installation of new infrastructure.

SoCalGas's long-term infrastructure planning takes local and regional general plans into account so that new developments are planned for. Therefore serving new areas and upgrading the size of existing gas mains is routine for the SoCalGas. Extending the natural gas infrastructure to the project site would not result in system capacity problems, or require the construction of new natural gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Impacts would be less than significant.

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8 Southern California Gas Company, Environmental Specialists/Land Planner, James Chuang, written communication March 17, 2014

9 Southern California Gas Company, Environmental Specialist/Land Planner, James Chuang, written communication March 17, 2014

10 Proposed Project Utility Service Summary

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Cumulative Impacts

Implementation of the proposed project in conjunction with the related projects would further increase the demand for natural gas. As shown in **Table 3.14.2-2, Natural Gas Consumption by Proposed Project and Related Projects**, implementation of the related projects plus the proposed project would result in the consumption of approximately 17,136,902 kBtu of natural gas per year (approximately 46,951.9 kBtu per day). Cumulative impacts from the related projects could result in the installation of additional natural gas distribution facilities and underground lines, and affect service availability. The proposed project's contribution to the cumulative demand would be 1.49 kBtu per day which would amount to approximately 0.00003 percent of the daily cumulative demand. Therefore, the proposed project's contribution to this potential cumulative effect would not be considerable.

In addition, all new development occurring as a result of related projects would be subject to the City's Municipal Code, Title 15, Chapter 15.24.010, the adoption of the Green Building Standards Code. Further, all proposed projects which could have potential impacts on natural gas services would be required to undergo an environmental review process. Therefore, cumulative impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Table 3.14.2-2
Natural Gas Consumption by Proposed Project and Related Projects

Land Use	Building Size (Units/ Sf)	Consumption Rate (kBtu/1,000 sf or kBtu/du)	Yearly Consumption (kBtu/year)
Residential			
Single-Family	57 units	28,883.50	1,646,359.5
Condominium/Townhome	40 units	15,825.17	633,006.8
Restaurant	13,004 sf	263.41	3,425,383.6
Hotel	274,936 sf	35.77	9,834,460.7
Commercial/Office	68,639 sf	9.59	658,248.01
Commercial/Retail[1]	81,627 sf	2.05	167,335.35
Regional Shopping Center	129,423	2.05	265,317.15
Educational Facilities			
High School	35,315 sf	12.41	438,259.15
Satellite Junior College Campus	25,000 sf	15.86	39,650
Public Facilities			
Fire Station[2]	1 unit (6,033 sf)	28,883.50	28,883.50
		Subtotal	**17,136,902**
		Proposed Project	**545.68**
		Total	**17,137,447**

Source: SCAQMD, California Emissions Estimator Model Guide (CalEEMod), Appendix D, Table 8.1
Notes:
The City of Malibu is located in climate zone 8
It should be noted that the Title 24 standards were updated in 2013. The 2013 standards will take effect July 1, 2014. The consumption values taken from CalEEMod do not reflect the 2013 standards.
sf = square feet.
[1] *Strip Mall electricity consumption was used as a proxy for Commercial/Retail*
[2] *Single-Family electricity consumption was used as a proxy for the Fire Station*