

## **4.4 ENERGY**

This section discusses energy use resulting from implementation of the modified Dana Point Harbor Hotels Project (Modified Project) and evaluates whether the Modified Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

The Original Project analysis utilized the California Emissions Estimator Model (CalEEMod) version 2016.3.2 to quantify the construction and operational energy-related impacts of the Original Project. Since the analysis of the Original Project was prepared, CalEEMod version 2022.1 was approved and previous CalEEMod versions, such as 2016.3.2, are now considered outdated. CalEEMod version 2022.1 includes updated default parameters and refined underlying calculations for emissions quantification; therefore, CalEEMod version 2022.1 is appropriate for use and supersedes version 2016.3.2. As such, CalEEMod version 2022.1 was used to quantify the construction and operational energy-related impacts of the Modified Project. In addition, the Original Project and existing uses were remodeled using CalEEMod version 2022.1, which are available as Appendix D of this Revised Draft Environmental Impact Report (EIR).

### **4.4.1 Scoping Process**

#### **4.4.1.1 Original Project Scoping**

The City of Dana Point (City) received eight comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP) prepared for the Original Project. For copies of the IS/NOP comment letters, refer to Appendix B of this Revised Draft EIR. There were no specific comments related to energy received in relation to the IS/NOP prepared for the Original Project during the public review period.

#### **4.4.1.2 Modified Project Scoping**

A Supplemental Notice of Preparation (NOP) for the Modified Project was circulated for public review from July 19, 2024, through August 19, 2024.

Copies of the Supplemental NOP and comment letters received in response to the Supplemental NOP are included within Appendix A of this Revised Draft EIR. No comment letters included comments related to energy.

### **4.4.2 Existing Environmental Setting**

As the Modified Project would be located in the same geographic location as the Original Project, the following existing environmental setting is derived from that discussed in the 2021 Draft EIR. However, since the analysis of the Original Project was prepared, the California Energy Commission (CEC) has updated electricity and natural gas data, which is provided below.

#### **4.4.2.1 Electricity**

Electricity is a man-made resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling,

and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).<sup>1</sup>

In 2023, California’s Total System Electric Generation was natural gas (43.68 percent), coal (0.12 percent), oil (0.02 percent), other thermal sources (0.9 percent), and renewable sources (56.09 percent), including large hydroelectric (12.55 percent) and nuclear (8.22 percent). Total electric generation in California in 2023 was 281,140 gigawatt-hours (GWh), down 2.1 percent from the 2022 total generation of 287,220 GWh.<sup>2</sup>

The project site is within the service territory of San Diego Gas & Electric (SDG&E). SDG&E provides electricity to more than 3.6 million people in a 4,100-square-mile (sq mi) area of Southern California.<sup>3</sup> According to the CEC, total electricity consumption in the SDG&E service area in 2022, the most recent year available, is approximately 17,867 GWh of total electricity consumption, of which 9,679 GWh was used by the commercial sector.<sup>4</sup> Total electricity consumption in Orange County in 2022 was 20,244 GWh (12,414 GWh for the nonresidential sector).<sup>5</sup>

#### 4.4.2.2 Natural Gas

Natural gas is a non-renewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).<sup>6</sup>

According to the CEC, in a given year, natural gas consumed in California is typically used for electricity generation (approximately 45 percent), residential uses (21 percent), industrial uses

<sup>1</sup> United States Energy Information Administration (EIA). 2020a. Electricity Explained-. Website: <https://www.eia.gov/energyexplained/electricity/> (accessed November 20, 2020).

<sup>2</sup> California Energy Commission (CEC). 2024. 2023 Total System Electric Generation. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation#:~:text=In%202023%2C%20total%20generation%20for,percent%20in%202022.%20California's%20wide> (accessed October 2024).

<sup>3</sup> San Diego Gas & Electric (SDG&E). 2025. Our Company. Website: <https://www.sdge.com/more-information/our-company> (accessed January 2025).

<sup>4</sup> CEC. 2022a. Electricity Consumption by Entity. Website: <https://ecdms.energy.ca.gov/elecbyutil.aspx> (accessed November 2024).

<sup>5</sup> CEC. 2022b. Electricity Consumption by County. Website: <http://www.ecdms.energy.ca.gov/elecbycounty.aspx> (accessed November 2024)

<sup>6</sup> EIA. 2020b. Natural Gas Explained- Use of Natural Gas. [https://www.eia.gov/energyexplained/index.php?page=natural\\_gas\\_use](https://www.eia.gov/energyexplained/index.php?page=natural_gas_use) (accessed November 2024).

(25 percent), and commercial uses (9 percent). California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply.<sup>7</sup>

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the project site. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000 sq mi service area throughout Central and Southern California, from Visalia to the Mexican border.<sup>8</sup> According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026.5 million therms (867.5 therms for the commercial building sector).<sup>9</sup> Total natural gas consumption in Orange County in 2022 was 572.5 million therms (220.8 million therms for the nonresidential sector).<sup>10</sup>

#### 4.4.2.3 Petroleum/Transportation Energy

Petroleum is also a non-renewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil and gasoline.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2022, the most recent year available at the time of the preparation of this Revised Draft EIR, total gasoline consumption in California was 316,425 thousand barrels (13.3 billion gallons), or 1,597.6 trillion British thermal unit (BTU). Of the total gasoline consumption, 299,304 thousand barrels (12.6 billion gallons) or 1,511.2 BTU were consumed for transportation.<sup>11</sup> Based on fuel consumption obtained from the CARB's California Emissions Factor Model (EMFAC2021), 157.1 million gallons of diesel and 1.2 billion gallons of gasoline were consumed from vehicle trips in Orange County in 2024.

#### 4.4.3 Regulatory Setting

This section includes applicable federal, State, and local regulations. As the Modified Project would be located on the same site as the Original Project and would result in the development of the same types of uses on the project site, the regulatory setting presented below is derived from that discussed in the 2021 Draft EIR.

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<sup>7</sup> CEC. 2020c. Supply and Demand of Natural Gas in California. Website: <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california#:~:text=Nearly%2045%20percent%20of%20the,90%20percent%20of%20its%20natural> (accessed October 2024).

<sup>8</sup> Southern California Gas Company (SoCalGas). 2020. About SoCalGas. Website: <https://www3.socalgas.com/about-us/company-profile> (accessed November 2024).

<sup>9</sup> CEC. 2022c. Gas Consumption by Entity. Website: <http://www.ecdms.energy.ca.gov/gasbyutil.aspx> (accessed July 16, 2024).

<sup>10</sup> CEC. 2022d. Gas Consumption by County. Website: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx> (accessed July 16, 2024).

<sup>11</sup> EIA. 2020c. California State Profile and Energy Estimates. Table F3: Motor gasoline consumption, price, and expenditure estimates, 2018. Website: [https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep\\_fuel/html/fuel\\_mg.html&sid=CA](https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_mg.html&sid=CA) (accessed November 20, 2020).

#### 4.4.3.1 Federal Regulations

**Energy Policy Act of 2005.** The Energy Policy Act of 2005 seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, under this act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products (including hybrid vehicles), building energy-efficient buildings, and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

**Corporate Average Fuel Economy Standards.** On March 31, 2022, the National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry wide fleet average of approximately 49 miles per gallon (mpg) for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gasoline between model years 2030 to 2050.

#### 4.4.3.2 State Regulations

**Assembly Bill 1575, Warren-Alquist Act.** In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575 (also known as the Warren-Alquist Act), which created the CEC. The statutory mission of the CEC is to forecast future energy needs; license power plants of 50 megawatts (MW) or larger; develop energy technologies and renewable energy resources; plan for and direct State responses to energy emergencies; and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code (PRC) Section 21100(b)(3) and *State CEQA Guidelines* Section 15126.4 to require Environmental Impact Reports (EIRs) to include, where relevant, mitigation measures proposed to minimize the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F to the *State CEQA Guidelines*. Appendix F assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the *State CEQA Guidelines* also states that the goal of conserving energy implies the wise and efficient use of energy and the means of achieving this goal, including (1) decreasing overall per capita energy consumption; (2) decreasing reliance on fossil fuels such as coal, natural gas, and oil; and (3) increasing reliance on renewable energy sources.

**Senate Bill 1389.** In 2002, the Legislature passed Senate Bill (SB) 1389 Energy: Planning and Forecasting, which required the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission (ZE) vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

In compliance with the requirements of SB 1389, the CEC adopts an Integrated Energy Policy Report every 2 years and an update every other year. The most recently adopted report includes the *2023 Integrated Energy Policy Report*.<sup>12</sup> The *Integrated Energy Policy Report* covers a broad range of topics, including decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast. The *Integrated Energy Policy Report* provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

**Renewables Portfolio Standard.** The California Renewables Portfolio Standard (RPS) program was established in 2002 by SB 1078. SB 1078 initially required that 20 percent of electricity retail sales be served by renewable resources by 2017; however, this standard has become more stringent over time. In 2006, SB 107 accelerated the standard by requiring that the 20 percent mandate be met by 2010. In April 2011, SB 2 required that 33 percent of electricity retail sales be served by renewable resources by 2020. In 2015, SB 350 established tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. In 2018, SB 100 increased the requirement to 60 percent by 2030 and required all the State's electricity to come from carbon-free resources by 2045. SB 100 took effect on January 1, 2019.<sup>13</sup>

**California Code.** Energy consumption by new buildings in California is regulated by the Building Energy Efficiency Standards, in Part 6 of Title 24 of the California Code of Regulations (CCR), known as the Energy Code. The CEC first adopted the Building Energy Efficiency Standards for Residential and Non-Residential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the State. The Energy Code is updated every 3 years, with the most recent update consisting of the 2022 Energy Code that became effective January 1, 2023. Mid-cycle supplements to the 2022 Energy Code will become effective on July 1, 2024. The efficiency standards apply to both new construction and rehabilitation of both residential and nonresidential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided these standards meet or exceed those provided in the Energy Code.

**California Green Building Standards Code (CALGreen Code).** In 2010, the California Building Standards Commission (CBSC) adopted Part 11 of the Title 24 Building Energy Efficiency Standards, referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code took effect on January 1, 2011. The CALGreen Code is updated on a regular basis, with the most recent update consisting of the 2022 CALGreen Code standards that became effective January 1, 2023. The CALGreen Code established mandatory measures for residential and nonresidential building construction and encouraged sustainable construction practices in the following five

<sup>12</sup> CEC. 2023. *2023 Integrated Energy Policy Report*. California Energy Commission. Docket Number: 23-IEPR-01.

<sup>13</sup> California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: [cpuc.ca.gov/rps](http://cpuc.ca.gov/rps) (accessed November 2024).

categories: (1) planning and design, (2) energy efficiency, (3) water efficiency and conservation, (4) material conservation and resource efficiency, and (5) indoor environmental quality. Although the CALGreen Code was adopted as part of the State's efforts to reduce GHG emissions, the CALGreen Code standards have co-benefits of reducing energy consumption from residential and nonresidential buildings subject to the CALGreen Code standards.

**California Energy Efficiency Strategic Plan.** On September 18, 2008, the California Public Utilities Commission (CPUC) adopted California's first Long-Term Energy Efficiency Strategic Plan, presenting a roadmap for energy efficiency in California. The Strategic Plan was updated in 2011. The plan articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term, and long-term strategies to assist in achieving those goals. The plan also reiterates the following four specific programmatic goals known as the "Big Bold Energy Efficiency Strategies" that were established by the CPUC in Decisions D.07-10-032 and D.07-12-051:

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030.
- 50 percent of commercial buildings will be retrofitted to ZNE by 2030.
- 50 percent of new major renovations of State buildings will be ZNE by 2025.

#### 4.4.3.3 Regional Regulations

There are no regional energy regulations that apply to the Modified Project.

#### 4.4.3.4 Local Regulations

**Dana Point Energy Efficiency and Conservation Plan.** The Dana Point Energy Efficiency and Conservation Plan was adopted in December 2011. This plan outlines seven goals for the City to use as pathways to future energy reduction and outlines GHG reduction goals. The plan goals cover both measures that City operations can undertake and measures the citizens of Dana Point can accomplish within the community and they include: Energy Consumption, Sustainable Land Use and Development, Sustainable Construction, Effective Transportation, Water Efficiency and Conservation, Waste Reduction, and Public Education and Outreach. The goal's broader objectives can be briefly summarized as follows:

- Reduce energy use, and hence reduce greenhouse gas emissions.
- Promote sustainable land use and redevelopment.
- Encourage sustainable construction.
- Promote efficient transportation.
- Continue current efforts to conserve and efficiently use water.
- Reduce waste produced citywide and divert at minimum 50 percent of waste from landfills.

- Encourage public education and outreach in the community concerning energy reduction and sustainable behaviors.

Energy conservation is another strategy for improving air quality. The City promotes energy conservation by implementing State Title 24 energy performance requirements through building codes. In addition, the relationship between project design and future energy requirements will be considered when reviewing proposals for new development. Energy will be conserved in public buildings and the provision of electric vehicle (EV) charging areas will be encouraged in new public and private developments.

#### 4.4.4 Methodology

Annual natural gas and electricity usage for operation of the Modified Project were obtained from the CalEEMod results in Appendix D of this Revised Draft EIR. It should be noted that because the analysis presented in the 2021 EIR relied upon a version of CalEEMod that is now outdated, CalEEMod version 2022.1 was used to quantify the construction and operational energy-related impacts of the Modified Project.

Estimates of fuel consumption (diesel fuel and gasoline) from construction trucks and construction worker vehicles was based on trip estimates from CalEEMod in the Air Quality and Greenhouse Gas Assessment and fuel efficiencies from EMFAC2021. Fuel consumption (diesel fuel and gasoline) from vehicle trips during operation estimates for the opening year (2028) of the Modified Project were also based on trip estimates from CalEEMod in the Air Quality and Greenhouse Gas Assessment and fuel efficiencies from EMFAC2021.

#### 4.4.5 Thresholds of Significance

The thresholds for energy impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines*. The Modified Project may be deemed to have a significant impact with respect to energy if it would:

- Threshold 4.4.1:** Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- Threshold 4.4.2:** Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

#### 4.4.6 Project Impacts

- Threshold 4.4.1:** **Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

#### **Less Than Significant Impact.**

**Construction.** Construction of the Modified Project is anticipated to have a duration of approximately 32 months. The Modified Project would require demolition of existing structures, site

preparation, excavation and grading, building construction, paving, and architectural coatings (painting) activities during construction.

Construction of the Modified Project would require energy for the manufacture and transportation of construction materials, preparation of the site for grading and building activities, and construction of the building. All or most of this energy would be derived from nonrenewable resources. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. However, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy (i.e., fuel) usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Construction of the Modified Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and construction-related energy consumption would be less than significant. No mitigation is required.

Construction of the Modified Project would not involve the consumption of natural gas. The construction-related equipment would not be powered by natural gas and no natural gas demand is anticipated during construction.

Transportation energy represents the largest energy use during construction and would occur from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction worker vehicles that would use petroleum fuels (e.g., diesel fuel and/or gasoline). Therefore, the analysis of energy use during construction focuses on fuel consumption. The use of energy resources would fluctuate according to the phase of construction. The majority of construction equipment during grading would be gasoline-powered or diesel-powered, and the later construction phases would be electricity-powered. Construction trucks and vendor trucks hauling materials to and from the project site would be anticipated to use diesel fuel, whereas construction workers traveling to and from the project site would be anticipated to use gasoline-powered vehicles. Fuel consumption from transportation uses depends on the type and number of trips, vehicles miles traveled, fuel efficiency of vehicles, and travel modes.

The following tables represent elements of energy use during construction-related activities and equipment of the Modified Project. Table 4.4.A lists the equipment used during each phase of construction for the estimated duration in days and total equipment usage in hours. Table 4.4.B provides the horsepower ratings and load factors used to estimate the fuel consumption of construction equipment.

Based on fuel consumption obtained from EMFAC2021, approximately 157 million gallons of diesel and approximately 1.2 billion gallons of gasoline will be consumed from vehicle trips in Orange County in 2024. Compared to the annual fuel consumption from vehicle trips in Orange County, the estimated diesel fuel consumption of 177,867 gallons from off-road construction equipment during construction would be a small fraction of the annual diesel fuel consumption in Orange County.



**Table 4.4.A: Construction Off-Road Equipment**

Phase	Off-Road Equipment Type	Amount	Usage Hour/Day	Total Usage Days	Total Usage Hours/Equipment
Demolition	Rubber Tired Dozers	2	8	70	1,120
	Excavators	3	8	70	1,680
	Off-Highway Trucks	2	8	70	1,120
	Rubber Tired Loaders	1	8	70	560
Site Preparation	Rubber Tired Dozers	3	8	25	600
	Tractors/Loaders/Backhoes	4	8	25	800
Grading	Graders	1	8	40	320
	Excavators	2	8	40	640
	Tractors/Loaders/Backhoes	2	8	40	640
	Scrapers	2	8	40	640
	Rubber-tired Dozers	1	8	40	320
	Plate Compactors	1	8	40	320
	Off-Highway Trucks	2	8	40	640
	Skid Street Loaders	1	8	40	320
	Bore/Drill Rigs	2	8	40	640
	Generator Sets	1	8	40	320
	Air Compressors	1	8	40	320
Building Construction	Forklifts	3	8	350	8,400
	Generator Sets	1	8	350	2,800
	Cranes	1	7	350	2,450
	Welders	1	8	350	2,800
	Tractors/Loaders/Backhoes	3	7	350	7,350
	Pumps	2	8	350	5,600
	Off-Highway Trucks	4	8	350	11,200
	Dumpers/Tenders	1	8	350	2,800
	Skid Street Loaders	2	8	350	5,600
Paving	Pavers	2	8	350	11,200
	Paving Equipment	2	8	45	720
	Rollers	2	8	45	720
Architectural Coating	Air Compressors	4	8	45	720

Source: CalEEMod. Compiled by LSA (February 2025).  
CalEEMod = California Emissions Estimator Model

**Table 4.4.B: Off-Road Construction Equipment Diesel Fuel Usage**

Phase	Off-road Equipment Type	Horsepower <sup>1</sup>	Load Factor <sup>1</sup>	Total Usage Hours/ Equipment	Horsepower-Hour <sup>2</sup>	Fuel Usage (gallons) <sup>3</sup>
Demolition	Rubber Tired Dozers	367	0.4	1,120	164,416	8,418.10
	Excavators	36	0.38	1,680	22,982	1,176.70
	Off-Highway Trucks	33	0.73	1,120	26,980.8	1,381.42
	Rubber Tired Loaders	150	0.36	560	30,240.0	1,548.29
<b>Total Fuel Use: Demolition (gallons)</b>						<b>12,524.5</b>
Site Preparation	Rubber Tired Loaders	367	0.4	600	88,080.0	4,509.70
	Rubber Tired Dozers	84	0.37	800	24,864.0	1,273.04
<b>Total Fuel Use: Site Preparation (gallons)</b>						<b>5,782.73</b>
Grading	Graders	148	0.41	320	19,417.6	994.18
	Excavators	36	0.38	640	8,755.2	448.27
	Tractors/Loaders/ Backhoes	84	0.37	640	19,891.2	1,018.43
	Scrapers	423	0.48	640	129,945.6	6,653.21
	Rubber-tired Dozers	367	0.4	320	46,976.0	2,405.17
	Plate Compactors	8	0.43	320	1,100.8	56.36
	Off-Highway Trucks	376	0.38	640	91,443.2	4,681.89
	Skid Street Loaders	71	0.36	320	8,179.2	418.78
	Bore/Drill Rigs	83	0.5	640	26,560.0	1,359.87
	Generator Sets	14	0.74	320	3,315.2	169.74
Air Compressors	37	0.48	320	5,683.2	290.98	
<b>Total Fuel Use: Grading (gallons)</b>						<b>18,496.88</b>
Building Construction	Forklifts	82	0.2	8,400	137,760.0	7,053.31
	Generator Sets	14	0.74	2,800	29,008.0	1,485.21
	Cranes	367	0.29	2,450	260,753.5	13,350.58
	Welders	46	0.45	2,800	57,960.0	2,967.55
	Tractors/Loaders/ Backhoes	84	0.37	7,350	228,438.0	11,696.03
	Pumps	11	0.74	5,600	45,584.0	2,333.90
	Off-Highway Trucks	376	0.38	11,200	1,600,256.0	81,933.11
	Dumpers/Tenders	16	0.38	2,800	17,024.0	871.63
	Skid Street Loaders	71	0.37	5,600	147,112.0	7,532.13
	Excavators	36	0.38	11,200	153,216.0	7,844.66
<b>Total Fuel Use: Building Construction (gallons)</b>						<b>137,068.11</b>
Paving	Pavers	81	0.42	720	24,494.4	1,254.11
	Paving Equipment	89	0.36	720	23,068.8	1,181.12
	Rollers	36	0.38	720	9,849.6	504.30
<b>Total Fuel Use: Paving (gallons)</b>						<b>2,939.54</b>
Architectural Coating	Air Compressors	37	0.48	1,160	20,601.6	1,054.80
<b>Total Fuel Use: Architectural Coating (gallons)</b>						<b>1,054.80</b>
<b>Total Fuel Usage (gallons)</b>						<b>177,867</b>

Sources: CalEEMod; compiled by LSA (February 2025).

<sup>1</sup> Load factor and horsepower are CalEEMod defaults for the equipment type.

<sup>2</sup> Horsepower-Hour is the basis for the fuel calculation. HP-Hour is calculated using the following formula: HP-Hour = Total Hours × LF × HP.

<sup>3</sup> Off-road mobile source fuel usage is calculated using a fuel usage rate of 0.0512 gallon of diesel per horsepower (HP)-hour. This is calculated based on diesel.

CalEEMod = California Emissions Estimator Model

Fuel use from construction trucks and construction worker vehicles traveling to the project site was based on the estimated number of trips that project construction would generate and the average trip distance using the default CalEEMod assumptions. Table 4.4.C shows construction on-road vehicle gasoline fuel consumption for construction worker vehicles traveling to-and-from the project site daily.

**Table 4.4.C: Construction Worker Vehicle Fuel Use**

Phase	Total One-Way Trips/Day	Total Days	Trip Length (miles)	Total Vehicle Miles Traveled (VMT)	Gasoline Fuel Efficiency (miles/gallon)	Fuel Usage (gallons/year)
<b>Diesel Fuel Use</b>						
Demolition	14.0	70	20.0	560.0	6.1	91.8
Grading	2.0	40	20.0	80.0	6.1	13.1
Building Construction	36.0	350	10.2	734.4	7.5	97.9
<b>Total Diesel Fuel Use</b>						<b>202.7</b>
<b>Gasoline Fuel Use</b>						
Demolition	20	70	18.5	51,800.0	28	1,850.0
Site Preparation	18.0	25	18.5	16,650.0	28	594.6
Grading	40.0	40	18.5	59,200.0	28	2,114.3
Building Construction	92.0	350	18.5	1,191,400.0	28	42,550.0
Paving	15.0	45	18.5	24,975.0	28	892.0
Architectural Coating	18.0	145	18.5	96,570.0	28	3,448.9
<b>Total Gasoline Fuel Usage</b>						<b>51,449.8</b>

Sources: CalEEMod and EMFAC2021 (CARB 2019).  
CalEEMod = California Emissions Estimator Model  
CARB = California Air Resources Board  
EMFAC2021 = California Emissions Factor Model  
VMT = vehicle miles traveled

As shown in Table 4.4.C, the construction worker trips would consume an estimated 51,449.8 gallons of gasoline and an estimated 202.8 gallons of diesel fuel during construction of the Modified Project. This would represent approximately 0.0004 percent<sup>14</sup> of the annual gasoline consumption in Orange County. Impacts related to energy use during construction would be temporary and would be relatively small in comparison to Orange County’s overall usage and the State’s available energy sources. The Modified Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, impacts of the Modified Project would be less than significant, and no mitigation is required.

**Operation.** Energy use consumed during operation of the Modified Project would be associated with electricity consumption and gasoline to fuel project-related vehicle trips. Electricity and natural gas use was estimated for the Modified Project using default energy intensities by land use type in

<sup>14</sup> Calculation: 51,449.8 gallons (Modified Project consumption) / 13,300,000,000 gallons (annual gasoline consumption in Orange County) = 0.00000387 \* 100 = approximately 0.0004 percent

CalEEMod. In addition, the proposed buildings would be constructed to current CALGreen standards, which were included in the CalEEMod inputs. Table 4.4.D shows the estimated potential increased electricity, natural gas, and fuel demand associated with the Modified Project.

**Table 4.4.D: Existing and Estimated Annual Energy Use**

Land Use	Electricity Use (kWh/year)	Natural Gas Use (therms/year)	Residents, Employees, and Visitors Vehicles Gasoline Consumption (gallons/year)	Residents, Employees, and Visitors Vehicles Diesel Consumption (gallons/year)
<b>Existing Energy Usage</b>				
Dana Point Marina Inn	2,319,968	87,447	216,121	23,490
<b>Total Existing</b>	<b>2,319,968</b>	<b>87,447</b>	<b>216,121</b>	<b>23,490</b>
<b>Modified Project Energy Usage</b>				
Dana House Hotel	1,744,628	65,761	-	-
Surf Lodge	841,063	31,702	-	-
Parking Lot	66,396	0	0	0
<b>Total Modified Project</b>	<b>2,652,087</b>	<b>97,463</b>	<b>378,473<sup>1</sup></b>	<b>50,872<sup>1</sup></b>
<b>Net Energy Usage</b>	<b>332,119</b>	<b>10,016</b>	<b>162,352</b>	<b>27,382</b>

Sources: CalEEMod; compiled by LSA (February 2025).

<sup>1</sup> Total fuel estimates for gasoline and diesel are based on the total VMT data calculated in CalEEMod for the Modified Project and therefore are not split up by hotel.

CalEEMod = California Emissions Estimator Model

kWh = kilowatt hours

VMT = vehicle miles traveled

As shown in Table 4.4.D, the Modified Project would consume a total of 2,652,087 kilowatt-hours (kWh) of electricity per year, a net increase of 332,119 kWh over the existing uses on the project site. Additionally, the Modified Project would consume a total of 97,463 therms of natural gas, a net increase of 10,016 therms from existing conditions, an overall increase to natural gas consumption in Orange County. Total natural gas consumption in Orange County in 2022 was 572,454,744 therms;<sup>15</sup> therefore, operation of the Modified Project would negligibly increase the annual natural gas consumption in Orange County by approximately less than 0.01 percent.

In addition, the Modified Project would consume energy through combustion of gasoline and diesel fuel through project-related trips. Based on the traffic analysis presented in Section 4.12, Transportation, the Modified Project would result in 2,155 average daily trips (ADT), a net increase of 1,104 ADT over existing conditions. Updated CalEEMod analysis estimates that the Modified Project would have an annual VMT of 11,189,215, a net increase of 5,732,233 VMT over the existing uses on the project site. Using the 2022 fuel economy estimate of 22.8 mpg, the Modified Project would result in the consumption of approximately 4,378,473 gallons of gasoline and approximately

<sup>15</sup> California Public Utilities Commission (CPUC). 2019. Renewables Portfolio Standard Program. Website: [cpuc.ca.gov/rps](http://cpuc.ca.gov/rps) (accessed November 2024).

50,872 gallons of diesel fuel per year, a net increase of approximately 162,352 gallons of gasoline and 27,382 gallons of diesel fuel per year over the existing uses on the project site.<sup>16</sup> Based on fuel consumption obtained from EMFAC2021, approximately 157 million gallons of diesel and approximately 1.2 billion gallons of gasoline will be consumed from vehicle trips in Orange County in 2024. Therefore, although the Modified Project would result in a net increase in gasoline and diesel fuel per year, vehicle trips associated with the proposed project would increase the annual fuel use in Orange County by less than 0.01 percent for both gasoline and diesel fuel, which would not be considered wasteful, inefficient, or unnecessary consumption.

Electricity is provided in the State through a complex grid of power plants and transmission lines. In 2023, California's in-state electricity generation totaled 215,623 GWh, while the State's total system electricity generation totaled 281,140 GWh.<sup>17</sup>

Population growth is the primary source of increased energy consumption in the State; due to population projections, annual electricity usage is anticipated to increase by approximately 1 percent per year through 2027.<sup>18</sup> The Modified Project's net increase in electricity usage would amount to approximately 0.0017 percent<sup>19</sup> of the total electricity consumption in the SDG&E service area in 2022. This increase would not represent a substantial demand on available electricity resources. In addition, the Modified Project would be constructed using energy-efficient modern building materials and construction practices, and the Modified Project also would use new modern appliances and equipment, in accordance with the Appliance Efficiency Regulations (CCR Title 20, Sections 1601 through 1608). The expected energy consumption during construction and operation of the Modified Project would be consistent with typical usage rates for hotel uses; however, energy consumption is largely a function of personal choice and the physical structure and layout of buildings. As such, the proposed project would not result in a potential significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

New automobiles purchased by employees and visitors driving to and from the project site would be subject to fuel economy and efficiency standards applied throughout the State. As such, the fuel efficiency of vehicles associated with the project site would increase throughout the life of the project. The Modified Project would also provide alternative transportation on site by providing hotel guests with a complimentary shuttle service to nearby trolley and transit stops. The Modified Project would also be conditioned to fully subsidize employees who take public transit to work resulting in reduced VMT. In addition, the Modified Project would include both EV charging stations

<sup>16</sup>  $4,776,504 \text{ VMT per year} \div 22.0 \text{ mpg} = 217,114 \text{ gallons of gasoline per year.}$

<sup>17</sup> CEC. 2024. 2023 Total System Electric Generation. Website: [https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation#:~:text=California%20has%20approximately%2087%2C750%20MW,percent\)%20of%20the%20state%20total](https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation#:~:text=California%20has%20approximately%2087%2C750%20MW,percent)%20of%20the%20state%20total) (accessed October 2024).

<sup>18</sup> CEC. 2018. California Energy Demand 2018-2030 Revised Forecast. January. Website: <https://www.energy.ca.gov/publications/2018/california-energy-demand-2018-2030-revised-forecast> (accessed January 24, 2025).

<sup>19</sup> Calculation:  $0.31 \text{ GWh (Modified Project)} \div 17,867 \text{ GWh (total consumption in SDG\&E service area in 2022)} = 0.0017 \text{ percent}$

and EV capable spaces. Further, in order to encourage bicycling to and from the project site, the Modified Project design would also include bicycle parking areas, including chargers for electric bicycles and scooters. Therefore, implementation of the Modified Project would not result in a substantial increase in transportation-related energy uses. As such, fuel consumption associated with the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel related to transportation. Therefore, implementation of the Modified Project would not result in a substantial increase in transportation-related energy uses.

Operation of the Modified Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Consumption of energy resources as a result of implementation of the Modified Project would be comparable to other similar uses in the City. Therefore, similar to the Original Project, the Modified Project's impacts would be less than significant, and no mitigation is required.

**Threshold 4.4.2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

**Less Than Significant Impact.** Energy usage on the project site during construction of the Modified Project would be temporary in nature. In addition, energy usage associated with operation of the Modified Project would be relatively small in comparison to the State's available energy sources, and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because total impacts to regional energy supplies would be minor, the Modified Project would not conflict with or obstruct California's energy conservation plans as described in the CEC's 2023 Integrated Energy Policy Report.

The Modified Project would be required to comply with the California Building Code (CBC) and the CALGreen Code pertaining to energy and water conservation standards in effect at the time of construction plan check submittal to the County of Orange and ultimately construction of Modified Project. Therefore, similar to the Original Project, the Modified Project would be consistent with applicable plans related to renewable energy and energy efficiency. Impacts would be less than significant, and no mitigation is required.

#### **4.4.7 Level of Significance Prior to Mitigation**

Energy impacts related to the inefficient, wasteful, and unnecessary consumption of energy are considered less than significant under the Modified Project, and no mitigation is required.

#### **4.4.8 Standard Conditions and Mitigation Measures**

No standard conditions are applicable to the Modified Project, and no mitigation is required.

#### **4.4.9 Level of Significance after Mitigation**

Construction and operational impacts related to energy use would be less than significant under the Modified Project. No mitigation is required.

#### 4.4.10 Cumulative Impacts

The geographic area for electricity is that of the SDG&E boundaries, while the geographic area for natural gas service is that of the SoCalGas boundaries. The Modified Project would result in an increased demand for electricity and natural gas service, as well as transportation energy.

Although the Modified Project would result in a net increase in electricity consumption, this increase would not require SDG&E to expand or construct infrastructure that could cause substantial environmental impacts. As discussed previously, the total annual electricity consumption in the SDG&E service area in 2022 was 17,867 GWh. By 2030, consumption is anticipated to increase by approximately 3,000 GWh for the low-demand scenario and by 5,500 GWh for the high-demand scenario.<sup>20</sup> While this forecast represents a large increase in electricity consumption, the Modified Project's percent of cumulative consumption would be negligible. The Modified Project, in combination with cumulative development, is well within SDG&E's system-wide net annual increase in electricity supplies over the 2018 to 2030 period, and there are sufficient planned electricity supplies in the region for estimated net increases in energy demands.

Similarly, the Modified Project would result in an increase in natural gas consumption; however, additional infrastructure is not anticipated due to the Modified Project or cumulative development in the project vicinity. Between 2018 and 2030, total natural gas consumption in the SoCalGas service area is forecast to remain steady for the low- and mid-demand scenarios and to increase by approximately 650 million therms in the high-demand scenario due to intense energy efficiency efforts.<sup>21</sup> The Modified Project's percent of cumulative consumption of natural gas in the SoCalGas service area would be negligible. It is anticipated that SoCalGas would be able to meet the natural gas demand of the Modified Project and the related projects that are included within the CEC's natural gas demand scenario for the SoCalGas service area without additional facilities. In addition, both SDG&E and SoCalGas demand forecasts include the growth contemplated by the Modified Project, and the related projects that are within the service area of each utility. Increased energy efficiency to comply with building energy efficiency standards will reduce energy consumption on a per-square-foot basis. In addition, utility companies are required to increase their renewable energy sources to meet the Renewable Portfolio Standards mandate of 60 percent renewable supplies by 2030. SDG&E and SoCalGas plan to continue to provide reliable service to its customers and upgrade their distribution systems as necessary to meet future demand.

Transportation energy use would also increase; however, this transportation energy use would not represent a major amount of energy use when compared to the amount of existing development and to the total number of vehicle trips and VMT throughout Orange County and the region. The Modified Project and each of the related projects are required to comply with various federal and State government implemented legislation to improve energy efficiency in buildings, equipment, and appliances, and reduce VMT.

<sup>20</sup> California Energy Commission (CEC). 2018. California Energy Demand 2018-2030 Revised Forecast. January. Website: <https://www.energy.ca.gov/publications/2018/california-energy-demand-2018-2030-revised-forecast> (accessed January 24, 2025).

<sup>21</sup> CEC. 2018. California Energy Demand 2018-2030 Revised Forecast. January. Website: <https://www.energy.ca.gov/publications/2018/california-energy-demand-2018-2030-revised-forecast> (accessed January 24, 2025).

For the reasons stated above, similar to the Original Project, the Modified Project's contribution to impacts related to the inefficient, wasteful, and unnecessary consumption of energy would not be cumulatively considerable, and no mitigation is required.