

ENERGY ASSESSMENT

SPR 23-003

Lancaster, California

For:

NorthPoint Development
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By:

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May 30, 2023

JN 194283

MEMORANDUM

To: NorthPoint Development

From: Eddie Torres, Michael Baker International
Winnie Woo, Michael Baker International

Date: May 30, 2023

Subject: SPR 23-003 – Energy Assessment

PURPOSE

The purpose of this technical memorandum is to evaluate potential short-term construction and long-term operational energy consumption impacts that would result from the construction and operation of the proposed SPR 23-003 Project (project), located in the City of Lancaster (City), California.

PROJECT LOCATION

The project site is in the County of Los Angeles (County), within the City of Lancaster; refer to [Exhibit 1, Regional Vicinity Map](#). The City is in the Antelope Valley in northern Los Angeles County, approximately 70 miles north of downtown Los Angeles. Unincorporated Los Angeles County surrounds the City on all sides. Additional surrounding jurisdictions include unincorporated Kern County further to the north and the City of Palmdale to the south.

The project site is situated approximately two miles west of State Route 14 (SR-14). Specifically, the site is bounded by William J. Barnes Avenue to the north, North 45th Street West to the east, and located approximately 600 feet north of Avenue G. Regional access to the site is available via SR-14 at the Avenue G exit, approximately 2.4 miles east of the project site; refer to [Exhibit 2, Site Vicinity Map](#). Local access to the site is provided via Avenue G and William J. Barnes Avenue.

The project site consists of one parcel (Assessor's Parcel Number [APN] 3105-001-042).

EXISTING SITE CONDITIONS

The 32.1-acre project site currently consists of vacant land. Four low-lying graded areas are in the southern portion of the site and appear to be prepared for concrete pads installation. Several detention basins are present in the central and northern portions of the site. No existing structures or paved road are present on-site.



Source: Google Earth Pro, February 2023

The project site is designated “Light Industry (LI)” with a “Specific Plan” overlay based on the *General Plan Land Use Map* in the *Lancaster General Plan 2030* (General Plan).¹ The project site is zoned “SP 95-01 Fox Field Industrial Corridor Specific Plan” based on the *City of Lancaster Zoning Map* (Zoning Map).² Based on the *Fox Field Industrial Corridor Specific Plan* (Specific Plan), the project site is located within focused area “Fox Field West” and designated “Light Industrial”, “Manufacturing/Distribution (MFG)”, and “Research & Development (R&D)”.³

Surrounding land uses include airport (General William J. Fox Airfield and associated facilities) to the north; military uses (Lancaster Armory) and vacant land uses to the east; industrial (Brothers’ Swiss Inc., Griff Industries, and Soi Aviation) and vacant land uses to the south; and light industrial/commercial (the SYGMA Network) to the west.

PROJECT DESCRIPTION

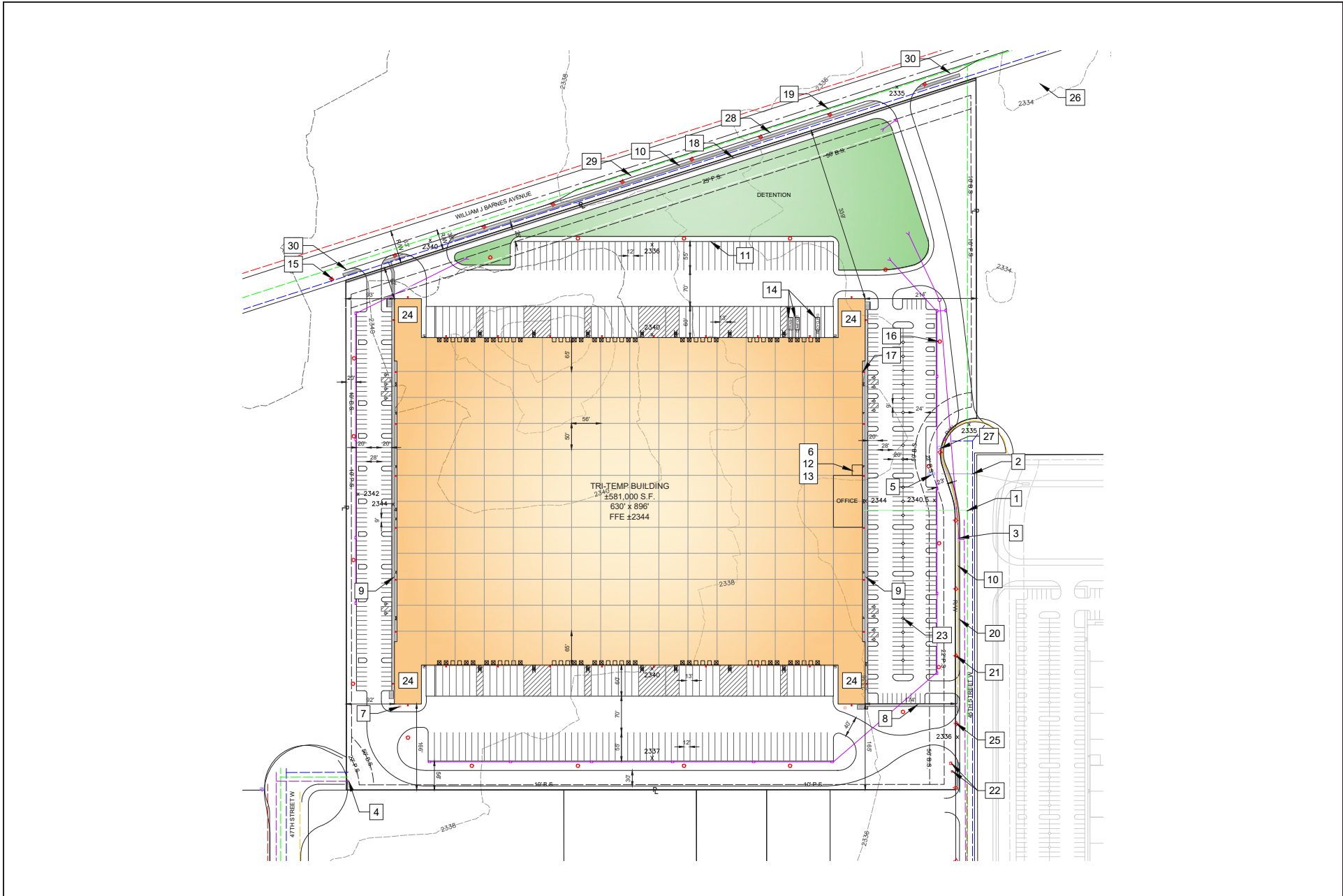
The proposed project would include the construction of a refrigerated distribution warehouse. The tilt-up concrete warehousing and distribution facility would be approximately 581,000 square feet with approximately 40,000 square feet to be used for offices; refer to Exhibit 3, Site Plan. The proposed cold storage facility is assumed to be comprised entirely of frozen storage, at -10 degrees Fahrenheit. A detention basin is proposed to the north of the building. The project would include a total of 116 trailer parking spaces and 419 passenger vehicle parking spaces. Of the 419 passenger vehicle spaces, 84 spaces would be electric vehicle (EV) parking spaces with electrical charging stations installed, and 21 spaces would be made EV charging capable. The project would also include 42 bicycle parking spaces. Approximately 28.3 percent landscaping coverage (9.1 acres) is proposed throughout the site. The proposed warehouse would be approximately 50 feet in height. Other ancillary improvements would include lighting and utility improvements, among others.

The approximately 13-month construction is anticipated to begin in September 2023 and conclude in October 2024. Construction activities would occur from 7:00 a.m. to 8:00 p.m. Monday through Saturday. Construction activities would primarily include excavation for the detention basin, grading, building construction, paving, and architectural coating. No material import or export is required.

¹ City of Lancaster, *Lancaster General Plan 2030, General Plan Land Use Map*, adopted July 14, 2009, updated September 1, 2015.

² City of Lancaster, *City of Lancaster Zoning Map*, adopted July 13, 2010, revised October 26, 2022.

³ City of Lancaster, *Fox Field Industrial Corridor Specific Plan*, May 31, 1996.



Source: NorthPoint Development, February 2023

EXISTING SETTING

Electricity/Natural Gas Services

Lancaster Choice Energy provides electrical services to the City as a Community Choice Aggregation (CCA) program, while Southern California Edison (SCE) delivers the electricity, provides billing, customer service and power line maintenance and repair. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in kilowatt-hours (kWh), megawatt-hours (MWh), or gigawatt-hours (GWh).

The Southern California Gas Company (SoCalGas) provides natural gas services to the City. Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH₄). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years as it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. Nearly 45 percent of natural gas burned in California is used for electricity generation.⁴ While the supply of natural gas in the United States and production has increased greatly, California produces little and imports 90 percent of its natural gas.⁵

Electricity and natural gas services are available to locations where land uses could be developed. The City's ongoing development review process includes an opportunity for publicly- and privately-owned utility providers to review and comment on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently for each project is evaluated during the development review process. Utility providers are bound by contract to update energy systems to meet any additional demand.

⁴ California Energy Commission, *Supply and Demand of Natural Gas in California*, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>, accessed March 30, 2023.

⁵ Ibid.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 6,922.8 trillion BTU in 2020, which equates to an average of 175.3 million BTU per capita.^{6,7} Of California's total energy usage, the breakdown by sector is 42.9 percent transportation, 26.1 percent industrial, 13.5 percent commercial, and 17.5 percent residential.⁸ Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2022, taxable gasoline sales (including aviation gasoline) in California accounted for 12,511,727,210 gallons of gasoline.⁹

Lancaster Choice Energy electricity consumption data was provided by the City. In 2022, a total of 624,061 MWh of electricity was consumed by Lancaster Choice Energy, with 192,642 MWh consumed by the commercial section, 76,427 MWh by the industrial section, and 354,992 MWh by the residential section.

The electricity consumption attributable to County of Los Angeles (County) from 2012 to 2021 is shown in Table 1, *Electricity Consumption in Los Angeles County 2012-2021*. The year 2021 is the most recent year for which data is available.

Table 1
Electricity Consumption in Los Angeles County 2012-2021

Year	Electricity Consumption (in millions of kilowatt hours)
2012	69,248
2013	68,342
2014	69,924
2015	69,503
2016	69,390
2017	68,632
2018	67,887
2019	66,805
2020	65,650
2021	65,375

Source: California Energy Commission, *Electricity Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed March 30, 2023.

Natural gas consumption data is not available at the City level. Therefore, County data is presented here. The natural gas consumption in Los Angeles County from 2012 to 2021 is shown in Table 2, *Natural Gas*

⁶ U.S. Energy Information Administration, *State Energy Consumption Estimates, 1960 Through 2020, Table C1. Energy Consumption Overview: Estimates by Energy Source and End-Use Sector, 2020*, June 24, 2022, https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf, accessed March 30, 2023.

⁷ U.S. Energy Information Administration, *State Energy Consumption Estimates, 1960 Through 2020 Table C14. Total Energy Consumption Estimates per Capita by End-Use Sector, Ranked by State, 2020*, June 24, 2022, https://www.eia.gov/state/seds/sep_use/notes/use_print.pdf, accessed March 30, 2023.

⁸ U.S. Energy Information Administration, *California Energy Consumption by End-Use Section, 2020*, available at: <https://www.eia.gov/beta/states/states/ca/overview>, accessed March 29, 2023.

⁹ California Department of Tax and Fee Administration, *Net Taxable Gasoline Gallons*, available at: <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>, accessed March 29, 2023.

Consumption in Los Angeles County 2012-2021. The year 2021 is the most recent year for which data is available.

Table 2
Natural Gas Consumption in Los Angeles County 2012-2021

Year	Natural Gas Consumption (in millions of therms)
2012	2,985
2013	3,065
2014	2,794
2015	2,761
2016	2,878
2017	2,956
2018	2,922
2019	3,048
2020	2,937
2021	2,881

Source: California Energy Commission, *Natural Gas Consumption by County*, <http://www.ecdms.energy.ca.gov/>, accessed March 30, 2023.

Automotive fuel consumption in Los Angeles County from 2012 to 2022 is shown in Table 3, Automotive Fuel Consumption in Los Angeles County 2012-2022 (projections for the year 2022 are also shown).

Table 3
Automotive Fuel Consumption in Los Angeles County 2012-2022

Year	On-Road Automotive Fuel Consumption (gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Construction Equipment) (gallons)
2012	4,145,221,612	32,222,770
2013	4,173,407,883	33,240,503
2014	4,211,469,581	34,199,540
2015	4,326,848,476	35,135,804
2016	4,480,187,933	36,026,490
2017	4,468,352,951	36,890,912
2018	4,409,152,566	37,712,716
2019	4,337,453,104	38,507,112
2020	3,873,168,111	39,265,869
2021	4,323,377,195	40,404,654
2022 (projected)	4,291,007,510	41,526,254

Source: California Air Resources Board, *EMFAC2021 v1.0.2.*, <https://arb.ca.gov/emfac/emissions-inventory/>, accessed March 29, 2023.

REGULATORY SETTING

State

Senate Bill 100

Senate Bill (SB) 100 (Chapter 312, Statutes of 2018) requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours (kWh) of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; 60 percent by December 31, 2030; and 100 percent by December 31, 2045. SB 100 requires the California Public Utilities Commission (CPUC), California Energy Commission (CEC), State board, and all other State agencies incorporate this policy into all relevant planning. In addition, SB 100 requires the CPUC, CEC, and State board to utilize programs authorized under existing statutes to achieve such renewable energy goals.

California Building Energy Efficiency Standards (Title 24)

The 2022 California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as “Title 24,” became effective on January 1, 2023. In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2022 Title 24 standards encourage efficient electric heat pumps, establish electric-ready requirements for new homes, expand solar photovoltaic and battery storage standards, strengthen ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Title 24 standards.

California Green Building Standards (CALGreen)

The 2022 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as CALGreen, went into effect on January 1, 2023. The California Green Building Standards (CALGreen) is the first-in-the-nation mandatory green buildings standards code. The California Building Standards Commission developed the green building standards in an effort to meet the goals of California’s landmark initiative Assembly Bill (AB) 32, which established a comprehensive program of cost-effective reductions of greenhouse gases (GHGs) to 1990 levels by 2020. CALGreen was developed to (1) reduce GHGs from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the environmental directives of the administration. CALGreen requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, heating/ventilation and air conditioning [HVAC], and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicles charging infrastructure. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.¹⁰

¹⁰ U.S. Green Building Council, *Green Building Costs and Savings*, <https://www.usgbc.org/articles/green-building-costs-and-savings>, accessed March 29, 2023.

California Public Utilities Commission Energy Efficiency Strategic Plan

The CPUC prepared an *Energy Efficiency Strategic Plan* (Strategic Plan) in September 2008 with the goal of promoting energy efficiency and GHG reductions. In January 2011, a lighting chapter was adopted and added to the Strategic Plan. The Strategic Plan is California's single roadmap to achieving maximum energy savings in the State from 2009 to 2020 and beyond. The Strategic Plan contains the practical strategies and actions to attain significant Statewide energy savings, because of a year-long collaboration by energy experts, utilities, businesses, consumer groups, and governmental organizations in California, throughout the West, nationally and internationally. The plan includes the following four strategies:

1. All new residential construction in California will be zero net energy by 2020;
2. All new commercial construction in California will be zero net energy by 2030;
3. HVAC will be transformed to ensure that its energy performance is optimal for California's climate; and
4. All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

California Public Utilities Commission Community Choice Aggregation

Community Choice Aggregation (CCA) was enacted by Assembly Bill 117 (AB 117) in 2002. Under AB 117, "all electrical corporations must cooperate fully with community choice aggregators investigating, pursuing, or implementing community choice aggregator programs."

The investor-owned utility (IOU) continues to provide transmission and distribution, metering, billing, collection, and customer service to retail customers participating in CCAs. AB 117 also provided guidance on how communities may create a CCA program. AB 117 requires that the city or county pass an ordinance to implement a CCA program within its jurisdiction. Two or more cities or counties may participate in a CCA program as a group through a Joint Powers agency. Potential customers within a community's service area are automatically enrolled in a CCA program unless they opt out, provided that they are notified in writing of their right to opt out. In the event that a customer opts out of CCA service, the IOU will continue to serve them as bundled customers.

CCAs are responsible to meet regulatory compliance requirements established in Resource Adequacy (RA), Integrated Resource Planning (IRP), and Renewable Portfolio Standards (RPS). CCAs are responsible for tracking and compliance with CPUC regulations.

California Energy Commission Integrated Energy Policy Report

In 2002, the California State legislature adopted Senate Bill (SB) 1389, which requires the CEC to develop an Integrated Energy Policy Report (IEPR) every two years. SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, and use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety. As part of the IEPR process, the CEC develops and adopts 10-year forecasts of end-user electricity demand every two years, in odd-numbered years, and provides an update to the IEPR forecast in even-numbered years.

The CEC adopted the *2021 Integrated Energy Policy Report (2021 IEPR) Volume I, Volume II, and Volume IV* on February 1, 2022 and Volume III on February 24, 2022. The 2021 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system for all Californian.¹¹ Volume I of the 2021 IEPR addresses actions needed to reduce the GHG emissions related to the buildings in which California live and work, with an emphasis on energy efficiency; Volume II examines actions needed to increase the reliability and resiliency of California’s energy system; Volume III looks at the evolving role of gas in California’ energy system; and Volume IV reports on California’s energy demand outlook, including a forecast to 2035 and long-term energy demand scenarios of 2050.

The 2021 IEPR builds on the goals and work in response to AB 758 (Energy: energy audit), SB 350 (Clean Energy and Pollution Reduction Act), AB 3232 (Zero-emissions buildings and sources of heat energy), and the 2019 IEPR to further a comprehensive approach toward decarbonizing buildings in a cost-effective and equitable manner. For the 2021 IEPR, the CEC extends the forecast timeframe to 15 years to coincide with several state goals that are planned for 2035 and improves methodologies to better quantify and predict the likelihood, severity, and duration of future extreme heat events.

Executive Order N-79-20

Executive Order N-79-20, issued September 23, 2020, directs the State to require all new cars and passenger trucks sold in the State to be zero-emission vehicles by 2035. Executive Order N-79-20 further states that all medium- and heavy-duty vehicles sold in the State will be zero-emission by 2045.

Local

City of Lancaster Climate Action Plan

The City of Lancaster adopted the *City of Lancaster Climate Action Plan (CAP)* in March 2017. The CAP documents the City’s GHG emissions inventories and the progress the City has made through its alternative energy and sustainability programs. The CAP also identifies projects that would enhance the City’s ability to further reduce GHG emissions. A focused working group made up of City staff worked to develop projects which would enhance the community, improve government operations, and ultimately reduce GHG emissions. A total of 61 projects across eight sectors were identified: traffic, energy, municipal operations, water, waste, built environment, community, and land use. Based on project descriptions, action items and indicators, potential reductions were quantified for each of the measures for each of the forecast years.

The CAP including the following measures that may be applicable to the project:

Energy Measures

- 4.2.1a: Renewable Energy Purchase Plan. Increase Lancaster Choice Energy’s renewable energy and carbon free energy purchase.
- 4.2.1e: Community Solar Gardens. Increase the amount of renewable energy provided to LCE customers through locally built solar.

¹¹ California Energy Commission, *Final 2021 Integrated Energy Policy Report, Volume I Building Decarbonization*, February 22, 2022.

- 4.2.2c: Lancaster Choice Energy Programs. Develop energy efficiency programs that will provide opportunities for residential and commercial buildings to become more energy efficient, reduce usage, and save money.

Land Use Measures

- 4.8.1c: Commercial Better Built Building. Develop a better built building program to incentivize the construction or rehabilitation of buildings to be “green”
- 4.8.1d Infill Development Incentives. Provide incentives to encourage developers to build on infill sites.

Lancaster General Plan 2030

The *Lancaster General Plan 2030* (General Plan) was adopted on July 14, 2009, and the horizon year for the adopted General Plan is 2030. The General Plan contains the vision, goals, objectives, policies, and specific actions for the City. The General Plan includes the following elements or plans: natural environment, public health and safety, active living, physical mobility, municipal services and facilities, economic development and vitality and physical development. The following objective and policies related to energy resources in the Plan for the Natural Environment Chapter of the General Plan would be applicable to the project:

Plan for the Natural Environment

- Objective 3.3: Preserve acceptable air quality by striving to attain and maintain national, State and local air quality standards.
 - Policy 3.3.1: Minimize the amount of vehicular miles traveled.
 - Policy 3.3.2: Facilitate the development and use of public transportation and travel modes such as bicycle riding and walking.
- Objective 3.6: Encourage efficient use of energy resources through the promotion of efficient land use patterns and the incorporation of energy conservation practices into new and existing development, and appropriate use of alternative energy.
 - Policy 3.6.1: Reduce energy consumption by establishing land use patterns which would decrease automobile travel and increase the use of energy efficient modes of transportation.
 - Policy 3.6.2: Encourage innovative building, site design, and orientation techniques which minimize energy use.
 - Policy 3.6.3: Encourage the incorporation of energy conservation measures in existing and new structures.
 - Policy 3.6.4: Support State and Federal legislation that would eliminate wasteful energy consumption in an appropriate manner.
 - Policy 3.6.6: Consider and promote the use of alternative energy such as wind energy and solar energy.

Lancaster Choice Energy

With a lofty goal of becoming the nation’s first net-zero city, the City of Lancaster created Lancaster Choice Energy, an all-new, locally run, not-for-profit Community Choice Aggregation (CCA) program. Lancaster

Choice Energy offers an opportunity for those who work and live in the City to choose their electric provider and the source of their electricity. The utility provider gets its electricity from suppliers that have gone through a qualification and selection process. These suppliers, much like Southern California Edison (SCE), get their electricity from a variety of generation sources. At a minimum, 35% of the Clear Choice option comes from renewable sources such as wind. The Smart Choice option provides electricity from 100% renewable sources. To verify the amount of renewable energy procured, Lancaster Choice Energy is required to report to the CPUC and CEC on an annual basis similar to other California utilities, such as SCE, for verification purposes. This program is available exclusively to those who work and live within Lancaster unless they opt out. Lancaster Choice Energy was formed in 2014 and launched on May 1st, 2015 for all municipal accounts. Following this initial phase, Lancaster Choice Energy rolled out to all energy customers citywide on October 1st, 2015. SCE provides the billing and distribution services for Lancaster Choice Energy.

CALIFORNIA ENVIRONMENTAL QUALITY ACT THRESHOLDS

In accordance with the *California Environmental Quality Act Guidelines* (CEQA Guidelines), project impacts are evaluated to determine whether significant adverse environmental impacts would occur. This analysis will focus on the project's potential impacts and provide mitigation measures, if required, to reduce or avoid any potentially significant impacts that are identified. According to Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to energy if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (refer to Impact Statement EN-1); and/or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency (refer to Impact Statement EN-2).

Appendix F of the CEQA Guidelines

Appendix F of the CEQA Guidelines is an advisory document that assists environmental document preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. The analysis in Impact Statement EN-1 relies upon Appendix F of the CEQA Guidelines, which includes the following criteria to determine whether this threshold of significance is met:

- **Criterion 1:** The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- **Criterion 2:** The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- **Criterion 3:** The effects of the project on peak and base period demands for electricity and other forms of energy.
- **Criterion 4:** The degree to which the project complies with existing energy standards.
- **Criterion 5:** The effects of the project on energy resources.

- **Criterion 6:** The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Quantification of the project’s energy usage is presented and addresses **Criterion 1**. The discussion on construction-related energy use focuses on **Criteria 2, 4, and 5**. The discussion on operational energy use is divided into transportation energy demand and building energy demand. The transportation energy demand analysis discusses **Criteria 2, 4, and 6**, and the building energy demand analysis discusses **Criteria 2, 3, 4, and 5**.

IMPACT ANALYSIS

EN-1 **WOULD THE PROJECT RESULT IN POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES, DURING PROJECT CONSTRUCTION OR OPERATION?**

Level of Significance: Less Than Significant Impact.

The California Emissions Estimator Model (CalEEMod) version 2022.1 was utilized to calculate the project’s construction and operational energy consumption. The project would be constructed in a single phase/duration in an approximately 13-month construction schedule according to the project Applicant. It should be noted that according to the *SPR 23-003 – Air Quality Assessment*, prepared by Michael Baker International and dated May 30, 2023, the project would be required to implement Mitigation Measure AQ-1 and extend the architectural coating phase of construction from one month (22 days) as originally proposed to 1.5 months (33 days). Construction activities would primarily include grading (including excavation for the detention basin), building construction, paving, and architectural coating. No material imports and/or exports is anticipated.

The project’s estimated energy consumption is summarized in Table 4, *Project and Countywide Energy Consumption*.

**Table 4
Project and Countywide Energy Consumption**

Energy Type	Project Annual Energy Consumption ¹	Los Angeles County Annual Energy Consumption ²	Percentage Increase Countywide
Electricity Consumption ³	22,871 MWh	65,374,721 MWh	0.0350%
Natural Gas Consumption ⁴	145,681 therms	2,880,994,891 therms	0.0051%
Fuel Consumption			
Construction Off-Road Fuel Consumption	25,286 gallons	40,835,655 gallons	0.0619%
Construction On-Road Fuel Consumption	79,787 gallons	4,530,411,359 gallons	0.0018%
Operational Automotive Fuel Consumption	233,640 gallons	4,448,480,145 gallons	0.0053%
Notes:			
1. Project electricity and natural gas consumptions as modeled in California Emissions Estimator Model Version 2022.1 (CalEEMod) computer model. Project fuel consumption calculated based on CalEEMod results. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.			
2. The project increases in electricity and natural gas consumptions are compared to the total consumption in Los Angeles County in 2021. The project increases in construction off-road and on-road fuel consumption are compared with the projected Los Angeles Countywide off-road fuel consumption and Los Angeles Countywide on-road fuel consumption in 2023, respectively. The project increases in operational automotive fuel consumption is compared with the projected Countywide on-road fuel consumption in 2024.			
3. Los Angeles County electricity consumption data source: California Energy Commission, <i>Electricity Consumption by County</i> , http://www.ecdms.energy.ca.gov/elecbycounty.aspx , accessed March 30, 2023.			
4. Los Angeles County natural gas consumption data source: California Energy Commission, <i>Gas Consumption by County</i> , http://www.ecdms.energy.ca.gov/elecbycounty.aspx , accessed March 30, 2023.			
Source: Refer to <u>Appendix A, Energy Data</u> for CalEEMod outputs and assumptions used in this analysis.			

As shown in Table 4, the project’s energy usage would constitute an approximate 0.035 percent increase over County’s typical annual electricity consumption and an approximate 0.0051 percent increase over County’s typical annual natural gas consumption. The project’s off-road construction equipment diesel fuel consumption, on-road construction fuel consumption, and operational vehicle fuel consumption would increase Los Angeles County’s consumption by 0.0619 percent, 0.0018 percent, and 0.0053 percent, respectively (**Criterion 1**).

Construction Energy Consumption

During construction, the project would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels for construction vehicles and other energy-consuming equipment would be used during grading, building construction, paving, and architectural coating. As indicated in Table 4, the project’s off-road fuel consumption and on-road fuel consumption from construction would be approximately 25,286 gallons and 79,787 gallons, respectively. The project’s off-road fuel consumption and on-road fuel consumption from construction would increase off-road construction equipment diesel fuel use in the County by approximately 0.0619 percent, and on-road vehicle fuel consumption in the County by approximately 0.0018 percent, respectively. As such, project construction would have a minimal effect on the local and regional energy supplies and would not require additional capacity (**Criterion 2**).

Some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off (i.e., Title 13, California Code of Regulations Section 2485). Project construction equipment would also be required to comply with the latest U.S. Environmental Protection Agency (EPA) and CARB engine emissions standards. These

emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. In addition, because the cost of fuel and transportation is a significant aspect of construction budgets, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction (**Criterion 4**).

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than nonrecycled materials.¹² It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest of minimizing the cost of doing business. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment, or building materials, or methods that would be less energy efficient than at comparable construction sites in the region or State. Therefore, fuel energy and construction materials consumed during construction would not represent a significant demand on energy resources (**Criterion 5**) and a less than significant impact would occur in this regard.

Operational Energy Consumption

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. According to the *Lancaster Fox Field Commerce Center – West Local Traffic Analysis Scoping Assessment*, prepared by Fehr & Peers, dated February 28, 2023, the proposed distribution warehouse would generate approximately 813 total daily trips. The operational analysis utilizes the total daily trips, which does not account for pass-by trips, to provide a worst-case scenario. In addition, since the proposed project would include warehouse uses, it is expected to attract heavy-duty vehicle traffic, mainly in the form of large multi-axle trucks. CalEEMod default fleet mix was adjusted to account for the heavy-duty truck traffic that would be generated by the project. As indicated in Table 4, project operations are estimated to increase approximately 233,640 gallons of fuel consumption per year, which would increase Countywide automotive fuel consumption by 0.0053 percent. As such, the project does not propose any unusual features that would result in excessive long-term operational fuel consumption (**Criterion 2**).

The key drivers of transportation-related fuel consumption for the proposed project are heavy-duty trucks traveling to and from the project site. Additionally, passenger vehicle and light- and medium-duty trucks trips also account for a portion of the transportation-related fuel consumption. At the time of this analysis, it has not been determined if the ultimate tenant would operate its own fleet and most warehouse operators have no control over the trucks entering and exiting their facilities. Consequently, it is infeasible

¹² California Department of Resources Recycling and Recovery, *Green Building Materials*, <https://www.calrecycle.ca.gov/greenbuilding/materials>, accessed March 29, 2023.

to require trucks with particular emission profiles (e.g., zero-emission [ZE], near-zero-emission [NZE], or 2010 or beyond model year trucks) to visit the project site.

The project would also consume fuel in the form of employees driving to and from the project site. However, employee commuting factors are outside of the scope of the design of the proposed project. Notwithstanding, as described under “Project Description” above, the project would include approximately 84 electric vehicle (EV) parking spaces with electrical charging station installed with an additional 21 parking spaces made EV charging capable; the project would also include 42 bicycle parking spaces, all of which would be in compliance with CALGreen standards. This requirement would encourage and support alternative modes of travel and thus reduce the petroleum fuel consumption (**Criterion 4** and **Criterion 6**). Therefore, fuel consumption associated with vehicle trips generated by the project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. A less than significant impact would occur in this regard.

Building Energy Demand

The CEC developed 2020 to 2035 forecasts for energy consumption and peak demand in support of the 2021 IEPR for each of the major electricity and natural gas planning areas and the State based on the economic and demographic growth projections.¹³ CEC forecasts that the Statewide annual average growth rates of energy demand between 2021 and 2035 would be 1.3 percent to 2.3 percent for electricity and less than 0.1 percent to 0.8 percent increase for natural gas.¹⁴

As shown in Table 4, operational energy consumption of the project would represent approximately 0.0350 percent increase over the current Countywide electricity usage and approximately 0.0051 percent increase over the current Countywide natural gas usage, which would be significantly below CEC’s forecasts. Therefore, the project would be consistent with the CEC’s energy consumption forecasts and would not require additional energy capacity or supplies (**Criterion 2**). Additionally, the project would consume energy during the same time periods as commercial and light industrial developments and would consume energy evenly throughout the day. As a result, the project would not result in unique or more intensive peak or base period electricity demand (**Criterion 3**).

The proposed cold storage facility is assumed to be comprised entirely of frozen storage, at -10 degrees Fahrenheit; according to the project Applicant, refrigeration of the warehouse would be fully powered by electricity and no natural gas would be used in this regard. As such, electricity consumption to maintain a primarily frozen storage warehouse has been accounted for in the CalEEMod modeling. Specifically, additional electricity consumption to maintain a freezer has been computed to accommodate a 40 degrees temperature reduction from temperature of a refrigerator (CalEEMod’s default for refrigerated warehouse), which is approximately 38 degrees Fahrenheit, assuming a 25 percent increase in electricity usage per 10 degrees of temperature decrease¹⁵.

¹³ California Energy Commission, *Final 2021 Integrated Energy Policy Report, Volume IV California Energy Demand Forecast*, February 17, 2022. Annual average growth rates of electricity demand and natural gas per capita demand are shown in Figure 10 and Figure 14, respectively.

¹⁴ Ibid.

¹⁵ Edison International, *9 Ways to Make Your Refrigerator More Efficient*, <https://energized.edison.com/stories/9-ways-to-make-your-refrigerator-more-efficient#:~:text=Take%20Its%20Temperature&text=Set%20them%20to%20whichever%20setting,to%2025%20percent%20more%20energy>, accessed May 26, 2023.

The proposed project would be required to comply with the most current Title 24 (i.e., 2022 Title 24), which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Specifically, the project would install energy efficient appliances, utilize water-efficiency irrigation, and install drought-tolerant landscape. According to the project Applicant, the project would be part of a nation-wide Leadership in Energy and Environmental Design (LEED)¹⁶ volume program which ensures all newly constructed buildings (by the project Applicant) are LEED-certified. Implementation of the most current Title 24 standards significantly reduces energy usage. Title 24 Building Energy Efficiency Standards are updated every 3-year and become more stringent between each update, as such complying with the most current Title 24 standards would make the proposed project more energy efficient than existing buildings built under the earlier versions of the Title 24 standards (**Criterion 4**).

The electricity provider for the City, Lancaster Choice Energy, is subject to California's Renewables Portfolio Standard (RPS) reflected in SB 100. The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by the end of 2020, 44 percent by the end of 2024, 52 percent by the end of 2027, 60 percent of total procurement by 2030, and 100 percent of total procurement by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures that new development projects will not result in the waste of the finite energy resources (**Criterion 5**).

The project would not cause wasteful, inefficient, and unnecessary consumption of building energy during project operation, or preempt future energy development or future energy conservation. A less than significant impact would occur.

Mitigation Measures: No mitigation is required.

EN-2 WOULD THE PROJECT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY?

Level of Significance: Less Than Significant Impact.

This analysis would be focused on project consistency with applicable objectives, policies, and measures within the City's General Plan and CAP.

Consistency With the City's General Plan

The project would comply with all applicable goals and policies identified in the City's General Plan, as listed in Table 5, *Consistency with the Lancaster General Plan 2030*.

¹⁶ LEED (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world. Developed by the non-profit U.S. Green Building Council (USGBC), it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighborhoods, which aims to help building owners and operators be environmentally responsible and use resources efficiently.

**Table 5
Consistency with the Lancaster General Plan 2030**

General Objectives and Policies	Project Consistency
Objective 3.3: Preserve acceptable air quality by striving to attain and maintain national, State and local air quality standards.	
<p><u>Policy 3.3.1</u>: Minimize the amount of vehicular miles traveled.</p> <p><u>Policy 3.3.2</u>: Facilitate the development and use of public transportation and travel modes such as bicycle riding and walking.</p>	<p>Consistent. The project would provide bicycle parking spaces and EV parking spaces, which would promote alternative mode of transportation to reduce VMT. As such, the project would be consistent with this objective and associated policies.</p>
Objective 3.6: Encourage efficient use of energy resources through the promotion of efficient land use patterns and the incorporation of energy conservation practices into new and existing development, and appropriate use of alternative energy.	
<p><u>Policy 3.6.1</u>: Reduce energy consumption by establishing land use patterns which would decrease automobile travel and increase the use of energy efficient modes of transportation.</p> <p><u>Policy 3.6.2</u>: Encourage innovative building, site design, and orientation techniques which minimize energy use.</p> <p><u>Policy 3.6.3</u>: Encourage the incorporation of energy conservation measures in existing and new structures.</p> <p><u>Policy 3.6.4</u>: Support State and Federal legislation that would eliminate wasteful energy consumption in an appropriate manner.</p> <p><u>Policy 3.6.6</u>: Consider and promote the use of alternative energy such as wind energy and solar energy.</p>	<p>Consistent. The project would install energy efficient appliances, utilize water-efficiency irrigation, and install drought-tolerant landscape. According to the project Applicant, the project would be part of a nation-wide Leadership in Energy and Environmental Design (LEED) volume program which ensures all newly constructed buildings (by the project Applicant) are LEED-certified. LEED is the most widely used green building rating system in the world. Developed by the non-profit U.S. Green Building Council (USGBC), it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighborhoods, which aims to help building owners and operators be environmentally responsible and use resources efficiently. As such, the project would be consistent with this objective and associated policies.</p>
Source: City of Lancaster, <i>Lancaster General Plan 2030</i> , July 14, 2009.	

Consistency With the City’s CAP

Project consistency with the applicable CAP measures is analyzed in Table 6, Consistency with the Climate Action Plan. As depicted in Table 6, the proposed project would be consistent with the City’s CAP.

**Table 6
Consistency with the Climate Action Plan**

Measure Code	Measure	Project Consistency Analysis
Energy Measures		
4.2.1a:	<u>Renewable Energy Purchase Plan.</u> Increase Lancaster Choice Energy's renewable energy and carbon free energy purchase.	Not applicable. This measure is not applicable as the project is not a project involving electricity production. However, Lancaster Choice Energy (the electricity provider for the project) is subject to California's Renewables Portfolio Standard (RPS) reflected in SB 100. The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by the end of 2020, 44 percent by the end of 2024, 52 percent by the end of 2027, 60 percent of total procurement by 2030, and 100 percent of total procurement by 2045.
4.2.1e	<u>Community Solar Gardens.</u> Increase the amount of renewable energy provided to LCE customers through locally built solar.	Not applicable. This measure is not applicable as the project is not a project involving electricity production.
4.2.2c	<u>Lancaster Choice Energy Programs.</u> Develop energy efficiency programs that will provide opportunities for residential and commercial buildings to become more energy efficient, reduce usage, and save money.	Consistent. Refer to response to Measure 4.2.1a. The proposed project would be required to comply with the most current Title 24 (i.e., 2022 Title 24), which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Specifically, the project would install energy efficient appliances, utilize water-efficient irrigation, and install drought-tolerant landscape. According to the project Applicant, the project would be part of a nation-wide Leadership in Energy and Environmental Design (LEED) volume program which ensures all newly constructed buildings (by the project Applicant) are LEED-certified. LEED is the most widely used green building rating system in the world. Developed by the non-profit U.S. Green Building Council (USGBC), it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighborhoods, which aims to help building owners and operators be environmentally responsible and use resources efficiently.

Source: City of Lancaster, *City of Lancaster Climate Action Plan*, March 2017.

Conclusion

As discussed above, operational energy consumption of the project would represent approximately 0.0350 percent increase in electricity consumption over the current Countywide usage and approximately 0.0051 percent increase over the current Countywide natural gas usage, which would be significantly below CEC's forecasts in the 2021 IEPR (i.e., Statewide annual average growth rates of energy demand between 2021 and 2030 would be 1.3 percent to 2.3 percent for electricity and less than 0.1 percent to 0.8 percent increase for natural gas); refer to Table 4. Therefore, the project would be consistent with the

CEC's 2021 IEPR. Further, the proposed project would be required to comply with the most current Title 24 (2022 Title 24), which provide minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. The project would also comply with the CALGreen standards which requires that new buildings employ water efficiency and conservation, increase building system efficiencies (e.g., lighting, HVAC, and plumbing fixtures), divert construction waste from landfills, and incorporate electric vehicles charging infrastructure. Specifically, the project would install energy efficient appliances, utilize water-efficiency irrigation, and install drought-tolerant landscape. According to the project Applicant, the project would be LEED-certified. Implementation of the most current Title 24 standards significantly reduces energy usage. Additionally, per the RPS, the project would utilize electricity that would achieve 60 percent of total procurement by 2030, and 100 percent renewable energy by 2045. As such, the project would comply State energy plans including the 2021 IEPR, the most current Title 24 as well as CalGreen standards.

As shown in [Table 5](#) and [Table 6](#), the project would comply with all applicable City's objectives, policies, and measures within the City's General Plan and CAP for reducing energy usage and implementing energy efficiency. Therefore, the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency and impacts would be less than significant.

Mitigation Measures: No mitigation is required.

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Appendix A
Energy Data