

Energy Consumption Assessment for the Northgate Market Project

Corona, California

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Appendix A - Energy Consumption Modeling Output

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards Code
CAISO	California Independent System Operator
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
City	Corona
CO ₂	Carbon dioxide
County	Riverside County
CPUC	California Public Utilities Commission
EMFAC	EMission FACtor
EO	Executive Order

EV	Electric vehicle
GHG	Greenhouse Gas
IEPR	Integrated Energy Policy Report
kv	Kilovolt
kWh	Kilowatt-hours
Project	Northgate Market Project
RPS	Renewables Portfolio Standard
SB	Senate Bill
SCE	Southern California Edison

1.0 INTRODUCTION

This report documents the results of an Energy Consumption Assessment completed for the Northgate Market Project (Project), which proposes the redevelopment of a 4.88-acre lot to include a supermarket, restaurant, bank, and parking lot in the City of Corona (City), California. This report was prepared to analyze the potential direct and indirect environmental impacts associated with Project energy consumption, including the depletion of nonrenewable resources (e.g., oil, natural gas, coal) during the construction and operational phases. The impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations.

1.1 Project Location and Background

The Project Site is located at approximately 450 S. Main Street, in the City of Corona, California. The Site encompasses several lots totaling 4.88 acres, located between S. Main Street and Belle Avenue (see Figure 1. Project Location). The Proposed Project includes the demolition of the existing buildings on the site, which consists of an existing retail building currently serving as a strip mall, a drive-in bank, and three single family residences. The redevelopment of the Project Site would involve the construction and operation of a 40,000 square foot supermarket, a 3,297 square foot restaurant, 3,633 square foot bank, and 256 parking spaces. The Proposed Project Site would have one vehicular access point on S. Main Street, one access point on 6th Street, and two access points on Belle Avenue. The Proposed Project would also include 256 total parking spaces, with 51 of those spaces being electric vehicle (EV) Charging or Capable. The Project Area is located along the west side of S. Main Street and is surrounded by residential and commercial businesses. The Project Site is designated under the City of Corona General Plan as Mixed-Use Downtown.

Construction activities would involve the removal of vegetation and paved areas; grading to finished design elevations; excavation to allow construction of building foundations, utilities, roadways, parking areas, sidewalks, and landscaping. Equipment used during construction may include, but is not limited to, crawler tractors, tractors, loaders, backhoes, excavators, graders, scrapers, cranes, forklifts, generator sets, welders, pavers, paving equipment, rollers, and air compressors.



Figure 1. Project Location

2.0 ENERGY CONSUMPTION

2.1 Environmental Setting

Energy relates directly to environmental quality. Energy use can adversely affect air quality and other natural resources. The vast majority of California's air pollution is caused by burning fossil fuels. Consumption of fossil fuels is linked to changes in global climate and depletion of stratospheric ozone. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool, and public transit); vehicle speeds; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the usage of natural gas and electricity.

2.2 Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear. Southern California Edison (SCE) provides electrical services to the City of Corona through state-regulated public utility contracts. SCE, the largest subsidiary of Edison International, is the primary electricity supply company for much of Southern California. It provides 14 million people with electricity across a service territory of approximately 50,000 square miles.

The California Public Utilities Commission (CPUC) regulates SCE. The CPUC has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the California Energy Commission (CEC) maintains a power plant database that describes all of the operating power plants in the state by county.

2.2.1 Existing Transmission and Distribution Facilities

The components of transmission and distribution systems include the generating facility, switching yards and stations, primary substation, distribution substations, distribution transformers, various sized transmission lines, and the customers. The United States contains over a quarter million miles of transmission lines, most of them capable of handling voltages between 115 kilovolts (kv) and 345 kv, and a handful of systems of up to 500 kv and 765 kv capacity. Transmission lines are rated according to the amount of power they can carry, the product of the current (rate of flow), and the voltage (electrical pressure). Generally, transmission is more efficient at higher voltages. Generating facilities, hydro-electric dams, and power plants usually produce electrical energy at fairly low voltages, which is increased by transformers in substations. From there, the energy proceeds through switching facilities to the transmission lines. At various points in the system, the energy is "stepped down" to lower voltages for distribution to customers. Power lines are either high voltage (115, 230, 500, and 765 kv) transmission lines or low voltage (12, 24, and 60 kv) distribution lines. Overhead transmission lines consist of the wires carrying the electrical energy (conductors), insulators, support towers, and grounded wires to protect the lines from lightening (called shield wires). Towers must meet the structural requirements of the system in several ways. They must

be able to support both the electrical wires, the conductors, and the shield wires under varying weather conditions, including wind and ice loading, as well as a possible unbalanced pull caused by one or two wires breaking on one side of a tower. Every mile or so, a “dead-end” tower must be able to take the strain resulting if all the wires on one side of a tower break. Every change in direction requires a special tower design. In addition, the number of towers required per mile varies depending on the electrical standards, weather conditions, and the terrain. All towers must have appropriate foundations and be available at a fairly regular spacing along a continuous route accessible for both construction and maintenance. A ROW is a fundamental requirement for all transmission lines. A ROW must be kept clear of vegetation that could obstruct the lines or towers by falling limbs or interfering with the sag or wind sway of the overhead lines. If necessary, land acquisition and maintenance requirements can be substantial. The dimension of a ROW depends on the voltage and number of circuits carried and the tower design. Typically, transmission line ROWs range from 100 to 300 feet in width. The electric power supply grid within Riverside County is part of a larger supply network operated and maintained by SCE that encompasses nearly the entire southern California region. This system ties into yet a larger grid known as the California Power Pool that connects with the San Diego Gas and Electric and Pacific Gas and Electric Companies. These companies coordinate the development and operation, as well as purchase, sale, and exchange of power throughout the State of California. Within the County, SCE owns most of the transmission and distribution facilities.

The California Independent System Operator (CAISO) manages the flow of electricity across the high-voltage, long-distance power lines (high-voltage transmissions system) that make up 80 percent of California’s and a small part of Nevada’s grid. This nonprofit public benefit corporation keeps power moving to and throughout California by operating a competitive wholesale electricity market, designed to promote a broad range of resources at lower prices, and managing the reliability of the electrical transmission grid. In managing the grid, CAISO centrally dispatches generation and coordinates the movement of wholesale electricity in California. As the only independent grid operator in the western U.S., CAISO grants equal access to 26,000 circuit miles of transmission lines and coordinates competing and diverse energy resources into the grid where it is distributed to consumers. Every five minutes, CAISO forecasts electrical demand and dispatches the lowest cost generator to meet demand while ensuring enough transmission capacity for delivery of power.

CAISO conducts an annual transmission planning process that uses engineering tools to identify any grid expansions necessary to maintain reliability, lower costs or meet future infrastructure needs based on public policies. CAISO engineers design, run and analyze complex formulas and models that simulate grid use under wide-ranging scenarios, such as high demand days coupled with wildfires. This process includes evaluating power plant proposals submitted for study into the interconnection queue to determine viability and impact to the grid. The long-term comprehensive transmission plan, completed every 15 months, maps future growth in electricity demand and the need to meet state energy and environmental goals that require the CAISO grid to connect to renewable-rich, but remote areas of the Western landscape. CAISO promotes energy efficiency through resource sharing. CAISO electricity distribution management strategy designed so that an area with surplus electricity can benefit by sharing megawatts with another region via the open market. This allows the dispatch of electricity as efficiently as possible. By maximizing megawatts as the demand for electricity increases, CAISO helps keep electricity flowing during peak periods.

2.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh), and natural gas use is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., gallons of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh. As previously stated, this impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity usage, natural gas usage, and the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations.

The electricity consumption associated with all nonresidential uses in Riverside County from 2018 to 2022 is shown in Table 2-1. As indicated, electricity consumption has increased since 2018.

Table 2-1. Non-Residential Electricity Consumption in Riverside County 2018-2022	
Year	Electricity Consumption (kilowatt hours)
2022	8,720,016,764
2021	8,389,538,460
2020	7,934,638,383
2019	8,085,191,661
2018	8,171,189,819

Source: CEC 2023

The natural gas consumption associated with all nonresidential uses in Riverside County from 2018 to 2022 is shown in Table 2-2. As indicated, natural gas consumption has increased since 2018.

Table 2-2. Non-Residential Natural Gas Consumption in Riverside County 2018-2022	
Year	Natural Gas Consumption (therms)
2022	146,917,206
2021	143,449,517
2020	134,823,268
2019	147,961,563
2018	139,190,917

Source: CEC 2023

Automotive fuel consumption in Riverside County from 2020 to 2024 is shown in Table 2-3. Fuel consumption has decreased in the County since 2020.

Table 2-3. Automotive Fuel Consumption in Riverside County 2019-2023

Year	Total Fuel Consumption
2023	679,316,975
2022	680,335,129
2021	677,840,814
2020	606,496,918
2019	689,539,959

Source: CARB 2024

2.4 Regulatory Framework

2.4.1 State

2.4.1.1 Integrated Energy Policy Report

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report (IEPR) that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code Section 25301a). Each biennial IEPR takes into account various factors such as energy supply, demand, infrastructure, environmental considerations, and economic impacts. The report aims to address key energy challenges and provide recommendations to achieve a reliable, affordable, and sustainable energy system for California.

Some of the key areas typically covered in the report include:

1. **Renewable Energy:** The IEPR focuses on promoting renewable energy sources such as solar, wind, geothermal, and biomass. It assesses the state's progress in meeting its renewable energy goals, identifies barriers, and proposes strategies to increase renewable energy generation and integration into the grid.
2. **Energy Efficiency:** The report highlights the importance of energy efficiency measures to reduce energy consumption and greenhouse gas emissions. It explores policies and initiatives to promote energy-efficient technologies and practices in buildings, transportation, and industries.
3. **Grid Modernization:** The IEPR addresses the modernization and optimization of the electrical grid infrastructure to accommodate a higher penetration of renewable energy, improve grid reliability, and support emerging technologies such as energy storage and electric vehicles.
4. **Transportation:** The report typically includes a section on transportation, focusing on reducing dependence on fossil fuels and promoting the adoption of EVs and alternative fuels. It may discuss

infrastructure development, incentives, and policies to accelerate the transition to cleaner transportation options.

5. **Climate Change Mitigation:** Given California's commitment to combating climate change, the IEPR often emphasizes strategies to reduce greenhouse gas emissions and achieve the state's climate goals. This may include discussions on carbon pricing, cap-and-trade programs, and the integration of climate considerations into energy planning.
6. **Energy Resilience:** The report may address strategies to enhance the resilience of the energy system, considering factors such as extreme weather events, natural disasters, and cybersecurity risks. It could discuss measures to ensure reliable and uninterrupted supply of energy during emergencies.
7. **Economic Impacts and Equity:** The IEPR often explores the economic implications of energy policies and initiatives, including job creation, investment opportunities, and the equitable distribution of benefits across different communities and socioeconomic groups.

The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the IEPR.

The 2023 IEPR focuses on next steps for transforming transportation energy use in California. The 2023 IEPR addresses the role of transportation in meeting state climate, air quality, and energy goals; the transportation fuel supply; the Alternative and Renewable Fuel and Vehicle Technology Program; current and potential funding mechanisms to advance transportation policy; transportation energy demand forecasts; the status of statewide plug-in electric vehicle infrastructure; challenges and opportunities for electric vehicle infrastructure.

2.4.1.2 *Executive Order B-55-18*

In September 2018 Governor Jerry Brown Signed Executive Order (EO) B-55-18, which establishes a new statewide goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Carbon neutrality refers to achieving a net zero carbon dioxide emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for greenhouse gas emission reduction. EO B-55-18 requires the California Air Resource Board (CARB) to “work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

2.4.1.3 *Senate Bill 1368*

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation by the state’s utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities, of 1,100 pounds carbon dioxide per megawatt hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of greenhouse gas.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long term while meeting the State's standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the Emissions Performance Standard (Perata, Chapter 598, Statutes of 2006).

2.4.1.4 *Senate Bill 1368 Renewable Energy Sources (Renewable Portfolio Standards)*

Established in 2002 under SB 1078 and accelerated by SB 107 (2006) and SB 2 (2011), California's Renewables Portfolio Standard (RPS) obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal; landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multi-fuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 60 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of CAISO into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the CAISO to those markets, pursuant to a specified process. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

2.4.2 *Local*

2.4.2.1 *City of Corona General Plan*

The City of Corona General Plan addresses energy resources and efficiency in several chapters of the General Plan. Namely, the Land Use Element, the Infrastructure and Utilities Element, and the Environmental Resources Element have several energy-related goals and policies aimed at the management of the City's energy resources. The goal of the policies described in this chapter is to maintain energy efficiency, integrate

sustainable building methods, and continue to provide reliable energy in the community. The following policies from the General Plan regarding energy resources are applicable to the Proposed Project.

Goal LU-6: A community that promotes sustainability in the planning, design, and construction of developments to create a more livable community and achieve broader economic and environmental objectives.

Policy LU-6.1. Promote sustainable features in new construction and significant renovations, including the use of locally sourced, recycled, and sustainable-sourced building materials, energy- and water-efficient building design, integrated renewable energy and energy storage systems, and waste minimization during construction.

Policy LU-6.2. Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through:

- Building design and construction materials—energy- and water efficient fixtures, recycled building materials, insulation and wall thickness, permeable paving surfaces, and comparable techniques

Goal IU-7: Reliable and safe natural gas, electrical, and renewable energy supplies and facilities to support existing and future uses within Corona.

Policy IU-7.1. Require that new development is approved contingent upon its ability to be served with adequate natural gas, energy facilities, and other critical infrastructure.

Policy IU-7.7. Encourage the reduction of energy consumption through passive solar building orientation as well as the installation of rooftop solar energy systems and energy-efficient technologies.

Goal ER-12: Improvement in air quality within the Corona Planning Area by controlling point sources, reducing vehicle trips, implementing efficient land use planning and construction practices, and energy conservation.

Policy ER-12.14. Reduce energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects.

Goal ER-13: Reduce greenhouse gas (GHG) emissions from City operations and community-wide sources 15% below 2008 levels by 2020, 49% below 2008 levels by 2030, and 66% below 2008 levels by 2040.

Policy ER-13.2. Encourage the maximum feasible energy efficiency in site design, building orientation, landscaping, and utilities/infrastructure for all development and redevelopment projects (residential, commercial, industrial, and public agency) to support GHG emissions reductions.

2.5 Energy Consumption Impact Assessment

2.5.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to energy if it would do any of the following:

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

The impact analysis focuses on the four sources of energy that are relevant to the Proposed Project: electricity usage, natural gas usage, the equipment fuel necessary for Project construction and the automotive fuel necessary for Project operations. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. For the purposes of this analysis, the amount of electricity and natural gas estimated to be consumed by the Project is quantified and compared to that consumed by all nonresidential land uses in Riverside County. Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Riverside County.

2.5.2 Methodology

The levels of construction and operational related energy consumption estimated to be consumed by the Project include the number of kWh of electricity and gallons of gasoline. The amount of total construction-related fuel used is estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1. Electricity consumption estimates are calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1, (see Air Quality and Greenhouse Gas Emissions Assessment: Northgate Markets Project [ECORP 2024]). CalEEMod is a statewide land use computer model designed to quantify resources associated with both construction and operations from a variety of land use projects. Operational automotive fuel consumption is calculated with Emission FACTor (EMFAC) 2021. EMFAC 2021 is a mathematical model that was developed to calculate emission rates and rates of gasoline consumption from motor vehicles that operate on highways, freeways, and local roads in California. It is noted that a trip generation rate has been identified by the Traffic Impact Analysis Report prepared by Linscott, Law, and Greenspan Engineers (2024). Per the Traffic Impact Analysis Report, the Project is expected to generate approximately 3,377 daily vehicle trips (Linscott, Law, and Greenspan Engineers 2024).

2.5.3 Impact Analysis

2.5.3.1 ***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?***

The Project proposes the construction and operation of a 40,000 square foot supermarket, a 3,297 square foot restaurant, 3,633 square foot bank, and 256 parking spaces. It is noted that the existing Project Site currently accommodates an existing retail building currently serving as a strip mall, a drive-in bank, and three single family residences that would be demolished as a part of the Project.

For the purpose of this analysis, the amount of operational electricity and natural gas to be consumed by the Project is quantified and compared to the relative amount consumed by all nonresidential land uses in Riverside County. The amount of fuel necessary for Project construction is calculated and compared to that consumed in Riverside County. Similarly, the amount of fuel necessary for Project operations is calculated and compared to that consumed in Riverside County. Energy consumption associated with the Proposed Project is summarized in Table 2-4.

Table 2-4. Proposed Project Energy and Fuel Consumption		
Energy Type	Annual Energy Consumption	Percentage Increase Countywide
Building Energy Consumption		
Electricity Consumption ¹	1,578,730 kilowatt-hours	0.018 percent
Natural Gas Consumption ¹	12,035 therms	0.008 percent
Automotive Fuel Consumption		
Project Construction Calendar Year One ²	37,833 gallons	0.006 percent
Project Construction Calendar Year Two ²	18,818 gallons	0.003 percent
Project Operations ³	476,722 gallons	0.070 percent

Source: ¹CalEEMod; ²Climate Registry 2016; ³EMFAC2021 (CARB 2022)

Notes: The Project increases in electricity consumption and natural gas consumption are compared with all nonresidential uses in Riverside County in 2022, the latest data available. The Project increases in construction and operational fuel consumption are compared with the anticipated countywide fuel consumption in 2023, the most recent full year of data.

Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project Site. The fuel expenditure necessary for construction activities would be temporary, lasting only as long as Project construction. As indicated in Table 2-4, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 37,833 gallons during the first calendar year of construction and 18,818 during the second year of construction. This would increase the annual countywide gasoline fuel use in the county by 0.006 percent and 0.003 percent, respectively. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction

equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction.

Operations of the Proposed Project would include electricity and natural gas consumption. As shown in Table 2-4, the annual electricity consumption due to operations would be 1,578,730 kilowatt-hours resulting in a negligible increase of approximately 0.018 percent in the typical annual electricity consumption attributable to all nonresidential uses in Riverside County. However, this is potentially a conservative estimate. In September 2018 Governor Jerry Brown Signed EO B-55-18, which established a new statewide goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Carbon neutrality refers to achieving net zero carbon dioxide (CO₂) emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for greenhouse gas emission reduction. Governor’s Executive Order B-55-18 requires CARB to “work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. Natural gas consumption due to operations would be 12,035 therms resulting in an imperceptible increase (0.008 percent) in the typical annual natural gas consumption attributable to all nonresidential uses in Riverside County.

Project is estimated to generate approximately 3,377 daily vehicle trips (Linscott, Law, and Greenspan Engineers 2024). As indicated in Table 2-4, this would equate to a consumption of approximately 476,722 gallons of automotive fuel per year, which would lead to a Countywide percentage increase in fuels consumption of approximately 0.07 percent. As previously mentioned, this represents a conservative estimate due to the fact that the existing Project Site currently accommodates retail, single family, and bank land uses, which contribute to currently countywide automotive fuel consumption. Therefore, the actual increase of automotive fuel consumption over existing conditions would actually be less than what is stated above. Nevertheless, the Proposed Project’s fuel consumption associated with the vehicle trips generated by the Project during operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

2.5.3.2 Would the Project Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency?

The IEPR provides policy recommendations to be implemented by energy providers in California. Electricity would be provided to the Project by SCE. SCE has various programs to support cleaner and more sustainable power. For instance, SCE has expanded in developing their portfolio of solar, wind, and hydropower technology. Furthermore, SCE had developed its own Climate Adaptation Community Engagement Plan, along with several other plans to address climate change vulnerabilities, clean power initiatives, long-term upgrades to the grid, and reducing greenhouse gases from electricity generation. Therefore, SCE is

consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2023 IEPR. Thus, because the SCE is consistent with the 2023 IEPR, the Proposed Project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2023 IEPR.

The Project would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The City's General Plan has several goals and policies that ensure that new development shall be energy efficient and generally uphold all local and state energy efficiency standards. Additionally, the General Plan contains several energy consumption-reducing policy provisions specific to new land use development projects such as Policy LU-6.2, which requires that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources by the requirement to install energy- and water efficient fixtures, recycled building materials, insulation and wall thickness, and permeable paving surfaces. City General Plan Policy IU-7.1. requires that new development is approved contingent upon its ability to be served with adequate natural gas, energy facilities, and other critical infrastructure and Policy ER-12.14 mandates the reduction of energy consumed by commercial and residential uses by requiring the use and installation of energy conservation features in all new construction projects and wherever feasible, retrofitting existing and redevelopment projects. The Proposed Project would be subject to implementation of these General Plan policy provisions. All development in the City, including the Project, is required to adhere to all applicable City-adopted policy provisions, including those contained in the City General Plan. The City ensures all applicable provisions of the General Plan are incorporated into projects and their permits through development review and applications of conditions of approval as applicable.

The Project will be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2019 Title 24 updates went into effect on January 1, 2020. The 2022 standards went into effect became effective January 1, 2023. The 2022 Energy Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2022 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, encouraging better energy efficiency, strengthening ventilation standards, and more. The 2022 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. Furthermore, the Air Quality and Greenhouse Gas Assessment prepared for the Proposed Project requires the implementation of Mitigation Measure GHG-1, which ensures that measures within the City's Climate Action Plan are integrated into the Project's operation (ECORP Consulting Inc. 2024). Mitigation Measure GHG-1 would require the Project to install solar panels on the commercial parking lots, construct all buildings with a light reflecting roofs to promote energy efficiency, and adhere to Title 24 standards and promotes the usage of Tier 1 and Tier 2 Green Building Ratings, such as LEED, Build It Green, or Energy Star certifications. As such, the Project would adhere to the policies within the General Plan's planning documents that promote energy efficiency measures.

Additionally, in January 2010, the State of California adopted CalGreen which establishes mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. CalGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. With these building standards in place, the Project would not obstruct any state or local plan for renewable energy or energy efficiency.

3.0 REFERENCES

- California Air Resources Board (CARB). 2024. EMFAC2021 Web Database Emissions Inventory. <https://www.arb.ca.gov/emfac/2021/>.
- California Energy Commission (CEC). 2023. 2023. California Energy Consumption Database. <http://www.ecdms.energy.ca.gov/>
- _____. 2022. 2021 Total System Electric Generations in Gigawatt Hours. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation>
- Climate Registry. 2016. General Reporting Protocol for the Voluntary Reporting Program version 2.1. January 2016. <http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf>
- Corona, City of. 2020. General Plan. <https://www.coronaca.gov/home/showpublisheddocument/23728/638157045404770000>
- ECORP Consulting. 2024. Northgate Market Project Air Quality and Greenhouse Gas Emissions Assessment.
- Linscott, Law, and Greenspan Engineers. 2024. Traffic Impact Analysis Report for Northgate Market (2024).
- Southern California Edison. About Us – Sustainability. <https://www.sce.com/about-us/environment>

Energy Consumption Modeling Output

**Proposed Project
Total Construction-Related and Operational
Gasoline Usage**

Table 1. Construction in First Calendar Year			
Action	Carbon Dioxide Equivalents (CO ₂ e) in Metric Tons ¹	Conversion of Metric Tons to Kilograms ²	Construction Equipment Emission Factor ²
Project Construction	384	384,000	10.15
Total Gallons Consumed During First Calendar Year of Construction:			37,833

Table 2. Construction in Second Calendar Year			
Action	Carbon Dioxide Equivalents (CO ₂ e) in Metric Tons ¹	Conversion of Metric Tons to Kilograms ²	Construction Equipment Emission Factor ²
Project Construction	191	191,000	10.15
Total Gallons Consumed During Second Calendar Year of Construction:			18,818

¹ Northgate Markets Project Air Quality and Greenhouse Gas Emissions Assessment. 2024.

²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016.

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Table 3. Total Onroad Vehicle Gallons Consumed in Riverside County								
Area	Sub-Area	Calendar Year	Season	Veh_tech	EMFAC 2021 Category	Total Onroad Vehicle Gallons Consumed in Riverside County in 2026	Total Onroad Vehicle Miles Traveled in Riverside County in 2026	Total Passenger Vehicle Miles per Gallon in Riverside County in 2026
Sub-Areas	Riverside County	2026	Annual	All Vehicles	All Vehicles	655,606,001	15,334,705,092	23.39

Sources:
California Air Resource Board. 2021. EMFAC2021 Mobile Emissions Model.

Table 4. Total Gallons During Project Operations		
Annual VMT	Total Miles Per Gallon	Project Onroad Vehicle Annual Fuel Consumption
11,150,592	23.39	476,722

Sources:
CalEEMod 2022.1.; Linscott, Law, and Greenspan Engineers 2024