4.6. ENERGY

This section includes the following discussion and analysis related to energy: existing environmental and regulatory setting; criteria and methodology for evaluating impacts; and the results of the impact assessment, including identification of potentially significant impacts and corresponding mitigation measures to avoid or substantially lessen such impacts to the extent feasible.

PEIR Scoping Comments

During the PEIR scoping process, the District received one letter containing a comment related to energy. The comment submitted is quoted below (see PEIR Scoping Report in Appendix A of this document).

Leadership Counsel for Justice and Accountability

"The EIR must evaluate the energy use for the construction and long-term operations and maintenance of projects in the VCIP. If analysis of the projects' energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources, the EIR must include mitigation for that energy use. This analysis must include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. Possible mitigation measures include energy bill discounts and community microgrids to protect residents from impact of additional load on the grid and ensuring residents who live near the projects receive some of the benefits."

[Note: The analysis of energy impacts is contained in Section *4.6.3. Environmental Impact Analysis* under Impacts EN-1 and EN-2]

4.6.1. ENVIRONMENTAL SETTING

The primary energy sources utilized during construction, operation, and decommissioning of the potential VCIP energy and infrastructure projects would be gasoline and diesel fuel. The projects would not use natural gas. Small amounts of electricity would be used for auxiliary power during construction, operation, and decommissioning and for O&M power during operation of the facilities.

Electricity

The VCIP Plan Area lies entirely within the service area of Pacific Gas and Electric Company (PG&E), whose territory covers most of northern and central California. In 2023, the total electricity consumed in Fresno County was 8,384 gigawatt-hours (GWh), which was 10.8 percent of the total PG&E usage of 77,887 GWh (CEC 2024f). In 2023, the power mix of electricity delivered to PG&E customers consisted of 33 percent qualifying renewables (e.g., solar, wind, biomass, geothermal, small hydro), 14 percent large hydro, 53 percent nuclear, and 0 percent natural gas or other fossil fuel (PG&E 2024).

Transportation Fuels

In 2023, the total quantity of transportation fuels consumed in Fresno County was approximately 372 million gallons of gasoline and 81 million gallons of diesel, representing 2.7 percent and 3.5 percent, respectively, of the statewide totals (CEC 2024a).

Relatedly, Fresno County has a long history of oil and natural gas production, particularly in the oil and gas fields on the west side of the valley near Coalinga. In October 2024, the County produced a total of 176,550 barrels of oil, or 2.7 percent of the state's total production; and approximately 24,994 million cubic feet of natural gas, equivalent to 0.2 percent of statewide production for the same month (Drilling Edge 2024). In 2024, over 76 percent of petroleum delivered to California refineries came from sources outside the state (CEC 2025a). Approximately 44 percent of crude oil in the U.S. is used to produce gasoline and other transportation fuels (U.S. EIA 2025). (For additional discussion on oil and natural gas resources in Fresno County see Section *4.12. Mineral Resources* in this PEIR.)

Renewable Energy

Since the first utility-scale solar projects in Fresno County were completed in 2008, more than 22 utility-scale solar PV facilities, with a combined generating capacity of 1,623 megawatts (MW) have come online in the County, compared to a statewide total of approximately 13,957 MW generated by solar PV facilities. Currently, there are no existing or proposed solar thermal facilities or utility-scale wind farms in Fresno County. In 2023, Fresno County's solar PV plants generated a total of 2,120,532 megawatt-hours (MWh) of electric power, which was equivalent to 25.3 percent of Fresno County's total electricity consumption in 2022, and represented 5.6 percent of the state's total solar generation of 39,420 GWh in 2023 (CEC 2024c, 2024e, 2024f).

Most of the operating solar facilities in Fresno County have a generating capacity of 50 MW or less, with the largest facility (Scarlet Solar) generating 400 MW. The current pipeline of pending and approved solar projects in Fresno County includes eight solar projects with a combined generating capacity of approximately 2,535 MW, representing an average generating capacity of 316 MW per facility (Fresno County 2025, CEC 2024d). In addition, the County has three approved stand-alone Battery Energy Storage System (BESS) projects, with a total planned storage capacity of 3,045 MW. The larger pending solar projects noted above also include BESS, which will enable the storage of solar power generated during daylight hours to be dispatched to the grid during peak evening hours. For example, on September 6, 2022, a day when many daily temperature records were exceeded, operational BESS throughout the state proved critical to the reliability of the state electrical grid as peak statewide demand reached an all-time high of 52,061 GW at around 5 PM (Cal ISO 2024).

4.6.2. REGULATORY CONTEXT

Federal

Energy Policy and Conservation Act

In 1975, the federal Energy Policy and Conservation Act established the first Corporate Average Fuel Economy (CAFE) standards to reduce energy consumption by increasing the fuel economy of cars and light trucks (42 U.S.C., section 6201 *et seq*.). The U.S. Congress specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act sets equipment energy efficiency standards and seeks to reduce reliance on nonrenewable energy resources and provides incentives to reduce current demand on these resources (42 U.S.C., section 15801 *et seq*.). Under the act, consumers and businesses can obtain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; and constructing energy-efficient buildings. The act also includes incentives for renewable energy production, including solar power.

Energy Independence and Security Act of 2007

Signed into law in December 2007, this broad energy bill most notably included an increase in auto mileage standards, and addressed biofuels, conservation measures, and building efficiency (42 U.S.C., section 17001 *et seq*.). The bill amended the CAFE standards to mandate significant improvements in fleetwide fuel efficiency. The bill also established a new energy block grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs, among other things.

State of California

California Energy Action Plan

In 2003, the three key energy agencies in California – the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the California Power Authority (CPA) jointly adopted an "Energy Action Plan" (EAP) that established goals for California's energy future and set forth a commitment to achieve these goals through specific actions (CPUC 2003). Revised and updated in 2005 and 2008, the EAP identifies priorities for meeting the state's energy needs, including energy efficiency and greater reliance on renewable sources of power CPUC 2008).

State of California Integrated Energy Policy

Public Resources Code section 25301(a) requires the CEC to develop an integrated energy plan at least every two years for electricity, natural gas, and transportation fuels. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. Every two years, the CEC issues an Integrated Energy Policy Report (IEPR) which provides assessments of progress for greenhouse gas (GHG) reduction and energy efficiency in all sectors and makes recommendations for improvements. The CEC's 2023 IEPR covers a broad range of topics, including: accelerating connection of clean resources to the grid; potential growth of renewable hydrogen; and industrial decarbonization (CEC 2024b).

California Greenhouse Gas Bill (AB 1493)

The "California Greenhouse Gas Bill" (AB 1493 Pavley), signed into law in July 2002, required the California Air Resources Board (CARB) to develop and adopt regulations that achieve maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks (Health and Safety Code, sections 42823, 43018.5). In response, CARB adopted landmark regulations in 2004 limiting GHG emissions from new vehicles sold in California beginning in the 2009 model year. New vehicles complying with this regulation consume nearly 30 percent less fuel than vehicles built before 2009.

California Global Warming Solutions Act (AB 32)

Energy consumption is closely related to GHG emissions, so reductions in overall energy consumption, particularly from non-renewable sources, also reduce GHG emissions. To mitigate the consequences of climate change, the California Legislature (Legislature) enacted the California Global Warming Solutions Act (AB 32) in 2006. AB 32 established a state goal of reducing GHG emissions to 1990 levels by 2020 (a reduction of approximately 25 percent from forecast emissions levels), and required CARB to establish a comprehensive program to implement this goal (Scoping Plan). In 2016, the Legislature passed SB 32 which extended the goals of AB 32 and set a 2030 goal of reducing 2030 emissions by 40 percent from 2020 levels. In 2022, the Legislature passed AB 1279, which establishes the policy of the state to achieve carbon neutrality 2045, and to ensure that GHG emissions by that year are reduced at least 85 percent below 1990 levels. The AB 32 Scoping Plan has gone through four iterations as legislative mandates have evolved, with the latest being the 2022 Scoping Plan which provides the framework for achieving carbon neutrality by 2045, and which identifies policies and strategies that enable carbon dioxide (CO_2) removal solutions and carbon capture, utilization, and storage (CCUS) technologies (CARB 2022b).

Renewables Portfolio Standard (RPS)

One of the key implementation programs under AB 32 is the Renewables Portfolio Standard (RPS) which has undergone several iterations mandating that renewable generation sources comprise an ever-increasing share of electrical utilities' total power generation by certain target dates. Qualifying renewable generation sources include solar, wind, small hydro, geothermal, and biomass. In September 2018, Governor Brown signed SB 100, which increased the required renewables content of electricity generation to 50 percent by 2025 and 60 percent by 2030, which put California on the path to implement a zero-carbon electricity grid by 2045. In September 2022, these targets were revised by SB 1020, which requires the following: 90 percent renewables or zero carbon content of all electricity sales in California by the end of 2035; 95 percent renewables content of electricity by 2040; and 100 percent renewables content of electricity consumed by state agencies by the

end of 2035. SB 1020 also codifies the goal stated in SB 100 of achieving 100 percent renewables content by 2045.

As of 2023, renewable energy sources, including biomass, geothermal, small-scale hydro, solar, and wind, accounted for an estimated 35.5 percent of California's power mix, with utility-scale solar generation accounting for 18.3 percent of the State's power mix. During the same year, fossil fuel energy sources – primarily natural gas with minor quantities of coal and oil – accounted for an estimated 43.8 percent of the state's power mix (CEC 2024a). In light of the discussion regarding AB 2661 (2024) below, it is anticipated that implementation of renewable energy projects under the VCIP would reduce reliance on fossil fuels for electricity generation.

Electricity: Westlands Water District (AB 2661)

In recognition of "the unique need of the Westlands Water District to support the development of solar electrical generation for the electrical grid and to facilitate the development of transmission capacity to help California reach its clean energy and climate goals," the Legislature enacted AB 2661 in 2024. The act, among other things, authorizes the District to: (1) provide, generate, and deliver solar photovoltaic electricity, and construct, operate, and maintain any and all works, facilities, improvements, and property, or portions thereof, necessary or convenient for generating and delivering that electricity; (2) construct, operate, and maintain an energy storage system, as defined in section 2835 of the Public Utilities Code, and all works, facilities, improvements, and property, or portions thereof, necessary or convenient for the operation of an energy storage system, within the boundaries of the District; and (3) construct, operate, and maintain electrical transmission lines and all works, facilities, improvements, and property, or portions thereof, necessary or convenient for the conveyance of electricity within the boundaries of the District (Wat. Code, section 37860(b)-(d)).

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 by Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with a 0.25-percent reduction in 2011 and culminating in a 10-percent reduction by 2020. Petroleum importers, refiners, and wholesalers can either develop their own low carbon fuel products, or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas, and hydrogen.

Executive Order N-79-20

EO N-79-20 (September 23, 2020) sets the following goals for the state: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium and heavy duty vehicles in the state shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the state shall be zero-emission by 2035, where feasible.

California Air Resources Board (CARB)

CARB is the state air pollution control agency charged with protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change.

Advanced Clean Cars Program

Closely associated with the Pavley regulations under AB 1493 (2002), the Advanced Clean Cars emissions-control program was approved by CARB in 2012. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emissions vehicles for model years 2015-2025. The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years (CARB 2025c). A related program is the Advanced Clean Fleets Program which requires fleets that are well suited for electrification to reduce emissions through requirements to both phase-in the use of Zero-Emission Vehicles (ZEVs) for targeted fleets and requirements that manufacturers only manufacture ZEV trucks starting in the 2036 model year (CARB 2025d).

Airborne Toxic Control Measures to Limit Diesel-Fueled Commercial Motor Vehicle Idling

This regulation was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. It applies to diesel-fueled commercial vehicles over 10,000 pounds that are licensed for operation on highways. Reducing idling of diesel fueled commercial vehicles reduces the amount of petroleum-based fuel used by the vehicle (CARB 2025e).

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

This regulation was adopted to reduce emissions of pollutants from in-use diesel-fueled vehicles (Title 13, California Code of Regulations (CCR), section 2025). The regulation, phased in from 2011 through 2023, is intended to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models. The emission-controlled vehicles would use petroleum-based fuel in a more efficient manner.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards Code

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (24 CCR, part 6) provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. The standards apply to the building envelope (building enclosure or exterior), space-conditioning systems, water-heating and lighting systems of buildings and appliances, and provide guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements including appliances, water and space heating and cooling equipment, and insulation for doors, pipes, walls and ceilings.

California Green Building Standards Code

The California Green Building Standards Code, commonly referred to as the CALGreen Code (24 CCR, part 11), was first adopted in 2009 to meet the goals of AB 32, and is updated every three years. The code sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills and use of environmentally sensitive materials in construction and design, including eco-friendly flooring, carpeting, paint, coatings, thermal insulation and acoustical wall and ceiling panels. The code also includes requirements for bicycle parking and designated parking for fuel-efficient and carpool/vanpool vehicles in commercial development. The latest CALGreen standards were updated by the California Energy Commission in the 2022 CALGreen Code, which took effect on January 1, 2023 (CBSC 2023).

A key feature of the CALGreen Code applicable to VCIP projects is the requirement for diversion of 65 percent of non-hazardous construction waste from landfills (see Section *4.17. Utilities and Service Systems* for additional information).

Fresno County

Fresno County General Plan

The Fresno County General Plan (General Plan) does not contain any goals and policies related to energy which are relevant to the VCIP (Fresno Co. 2024b). However, the implementation of General Plan policies related to greenhouse gas emissions (see Section *4.8.2. Greenhouse Gas Emissions*), and air quality (see Section *4.3. Air Quality*) would indirectly result in reductions in energy consumption.

4.6.3. ENVIRONMENTAL IMPACT ANALYSIS

METHODOLOGY

This section analyzes the potential for the implementation of VCIP to result in significant environmental impacts related to energy. Specifically, it evaluates whether implementation of the VCIP would result in a substantial increase in energy demand and/or wasteful use of energy during the construction, operation and maintenance, and decommissioning of the VCIP energy and infrastructure projects, considering the off-setting effects of the VCIP projects' solar production of a clean energy source compared with conventional fossil-fueled electrical generation. The following evaluation is based on the GHG emissions estimates for the VCIP prepared by Illingworth & Rodkin (Appendix B of this document).

SIGNIFICANCE CRITERIA

Based on Appendix G of the state CEQA Guidelines, the project would be considered to result in a significant impact related to energy if it would:

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

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4.6.3.1. DIRECT AND INDIRECT EFFECTS

Impact EN-1. Wasteful, Inefficient, or Unnecessary Consumption of Energy

Implementation of the VCIP Energy Resource and Infrastructure Plans would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation. (*Less-than-Significant Impact*)

Construction

Construction of the VCIP energy and infrastructure projects would involve short-term consumption of fuels for construction equipment, material truck deliveries, and vehicle trips generated by construction workers traveling to and from the project sites. As required by the CALGreen Code, 65 percent of construction and demolition waste would be diverted from the waste stream, allowing for reuse of these materials and thus saving energy that would otherwise be consumed in extraction, transport and processing of virgin materials (CSBC 2023).

The primary form of energy used during construction would be petroleum-based fuels, primarily diesel. Natural gas would not be used during construction-related activities, and the relatively small amounts of electricity used for power tools and lighting construction would not result in wasteful or unnecessary electricity demands. Fuel consumption by equipment during construction-related activities was estimated based on construction carbon dioxide equivalent (CO_2e) emissions measured in metric tons (MT) calculated from California Emissions Estimator Model (CalEEMod) outputs from the air quality analysis and converted to diesel. The results are shown in Table 4.6-1.

TABLE 4.6-1
VCIP – ENERGY CONSUMPTION AND PRODUCTION

Project Phase	Energy Consumption			Energy Production		Fuel Consumption as % of Solar Energy Production
	MT CO_2e	Fuel Equivalent[1] (gallons)	MBtu Equivalent[2]	MWh	MBtu Equivalent[3]	
Construction (total)	968,593	950,480,311	130,595,995			11.4%
Operation (annual)	*4,269*	*4,189,170*	*575,592*			0.05%
Operation (35 years)	149,415	146,620,950	20,145,720	33,484,500/yr[4]	1,142,491,140/yr	0.18%
Decommissioning (total)	968,593	950,480,311	130,595,995			11.4%
Project Lifetime (construction, operation, decommissioning,)	2,086,601	2,047,581,572	281,337,710	1,171,957,500 (35 years)	39,987,189,900 (35 years)	0.70%

Conversion Factors
1. GHG to Fuel: 10.19 $kgCO_2e$/gal diesel = 0.9813 gal/$kgCO_2e$ X 1,000 kg/MT = 981.3 gal/MT CO_2e
2. Fuel to Energy: 137,381 Btu/gal / 1,000 Btu/MBtu = 0.1374 MBtu/gal
3. Energy to Electricity: 3,412 Btu/kWh x 1,000 Btu/MWh / 1,000,000 Btu/MBtu = 34.12 MBtu/MWh
4. Based on the 2023 average generation of 1,594.5 MWh/MW from the five largest solar operating solar facilities in Fresno County (CEC 2024f).

Sources: Illingworth & Rodkin 2025; US EIA 2024a; US EIA 2024b.

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As shown in Table 4.6-1, the total fuel consumption during all phases of on-site and off-site vehicle and equipment usage during construction for the VCIP energy and infrastructure projects is estimated to be approximately 950.5 million gallons, consisting primarily of diesel fuel. Gasoline will likely comprise a minor portion of the overall fuel consumption, mainly for use in passenger vehicles by commuting construction workers. Although it is unknown exactly how much gasoline would be consumed relative to diesel fuel, gasoline is about 14 percent less carbon-intensive than diesel fuel (i.e., one gallon of diesel emits as much GHG as 1.14 gallons of gasoline) (US EIA 2024b). Therefore, the above fuel consumption estimate for project construction is likely greater than would occur during full buildout of the VCIP and represents the upper limit of reasonably foreseeable conditions.

The construction fuel consumption total was converted to British Thermal Units (Btu) to allow comparison with VCIP solar energy production, which was converted from MWh/yr to Btus. As shown in Table 4.6-1, the total energy consumed in VCIP project construction over approximately 10 years would be equivalent to about 11.4 percent of one (1) year's electricity production at the VCIP solar facilities under full operation. As also shown, the total lifetime energy use of the VCIP solar and infrastructure facilities (including construction, decommissioning, and 35 years of operation) is equivalent to approximately 0.70 percent of total energy production over the project's useful life. Thus, the overall energy efficiency of the VCIP energy and infrastructure projects would be approximately 99.3 percent over the lifetime of the VCIP projects. In comparison, the energy efficiency of the most efficient combined-cycle natural gas fueled power plant in California is approximately 47 percent, which means that 53 percent of the energy input in the form of natural gas is wasted during electricity generation (CEC 2020, p. 10). However, the 47 percent energy efficiency for natural gas plants does not consider the energy consumed in plant construction or decommissioning. If energy inputs for construction and decommissioning of the solar facility are ignored to allow for a valid comparison, the 0.05 percent annual energy input vs. output for the solar facility would be 940 times more energy efficient than the most efficient natural gas-fueled power plant.

Additionally, the efficiency of fuel use during construction the VCIP projects would be increased through implementation of the San Joaquin Valley Air Pollution Control District's (SJVAPCD) requirement for clean fleet construction equipment to minimize emissions under Rule 9510 regarding indirect source review (ISR) which would also indirectly result in greater fuel efficiency (SJVAPCD 2018). Unnecessary idling of construction equipment and vehicles would be avoided through compliance with California Code of Regulations, title 13, section 2485, which requires that non-essential idling for all diesel-fueled vehicles not exceed 5 minutes at any given location. The energy efficiency of fuel consumed by commuting workers and delivery vehicles would be ensured through federal fuel efficiency standards, and by substantial voluntary carpooling. In addition, construction contractors would be required to provide substantial shuttle bus service for workers to maintain acceptable service levels on area roads and highways (see Section *4.16. Transportation*). For construction haul trucks, the state's regulation to reduce diesel emissions through replacement of older trucks with newer models with diesel emissions controls would also result in greater fuel efficiency for long-haul trucks such as those delivering imported solar components from California ports. In addition, the project would be constructed in accordance with the California Building Standards Code and Energy Efficiency Standards, as enforced through plan review and site inspections by the Fresno County Building Official. Given that potential VCIP projects would comply with the above rules, regulations, and programs to maximize energy efficiency in vehicles and equipment used in construction, in addition to achieving energy savings from required trip reduction for the commuting work force, project construction would not result in the inefficient, wasteful, or unnecessary use of energy resources.

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Operation

Each VCIP solar and energy storage facility would be operated by a small number of permanent staff who would monitor operations, with periodic visits by maintenance staff who would perform inspections, maintenance and repairs, vegetation management, and panel washing. The infrastructure facilities such as substations, gen-tie lines, and VCIP transmission lines would have no permanent staff and would receive occasional visits by maintenance personnel. Thus, the operation of the VCIP energy and infrastructure facilities would involve relatively small amounts of fuel consumption for staff travel to and from the facilities, and for fueling maintenance vehicles and equipment. Electricity consumption for project lighting and operation would also be low.

Permanent structures such as O&M buildings and substation control buildings would be subject to the energy conservation measures and standards contained in CALGreen and the Energy Efficiency Standards. Examples of energy conservation measures include but are not limited to building insulation; use of energy efficient HVAC; solar-reflective roofing materials; energy efficient indoor and outdoor lighting systems; and incorporation of skylights.

A primary purpose of the proposed VCIP is to facilitate renewable solar energy production and provide for the reduced statewide reliance on non-renewable fossil-fueled generation. While outside the scope of this analysis and the District's control, the substantial quantities of renewable energy produced and stored by the VCIP solar and energy storage facilities would likely allow for the decommissioning of equivalent generation from natural gas fired power plants. As shown in Table 4.6-1, the annual energy consumed by facilities operation would be equivalent to approximately 0.05 percent of annual energy production from VCIP energy projects. In other words, the operating energy efficiency of the VCIP facilities would be about 99.95 percent, which is extremely efficient compared to fossil-fueled power plants, of which even the most efficient plants achieve an energy efficiency of 47 percent. Thus, the consumption of energy by VCIP projects would not be wasteful or inefficient. Such projects would likely result in a substantial offset or displacement of highly inefficient non-renewable fossil fuel generation with highly efficient and renewable solar generation. Therefore, the operation of the VCIP facilities would not result in wasteful, inefficient, or unnecessary use of energy, and the impact to energy resources would be *less than significant*.

Decommissioning

At the end of its useful life after 35 years of operation, each VCIP solar and energy storage facility would be de-energized and decommissioned. The deconstruction process would involve removal of all solar arrays, equipment and pads, battery storage units, substations, electrical cables, fencing, and other material in accordance with an approved Reclamation Plan. Equipment and materials would be reused and/or recycled to the extent practicable. Based on decommissioning plans for other solar projects (including those within or near the Plan Area), it is anticipated that much of the decommissioned material would be salvaged and repurposed or recycled. This would avoid expenditure of energy in manufacturing components from raw materials, and represents substantial energy savings from conservation.

For purposes of estimating energy consumption during decommissioning, it was assumed that the total energy requirements would be similar to those of project construction, as shown in Table 4.6-1. However, decommissioning is expected to involve less equipment use and fewer haul truck trips, and the time required for decommissioning would be less than original construction. In addition, advances in fuel efficiency (and

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anticipated transition to non-fossil fuels for transport trucks and construction equipment) over time would also reduce energy consumption during decommissioning. As such, it is anticipated that the actual amount of energy consumed in decommissioning could be half the energy use estimated for construction or less. In addition, the contractors undertaking the decommissioning would comply with the same or more stringent rules, regulations, and programs to maximize energy efficiency in vehicles and equipment as applies to construction. In summary, the decommissioning of the VCIP energy and infrastructure projects would not result in the inefficient, wasteful, or unnecessary use of energy, and the impact to energy resources would be *less than significant*.

Mitigation Measures: No mitigation is required.

Impact EN-2. Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Implementation of the VCIP Energy Resource and Infrastructure Plans would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The VCIP would instead advance these plans by facilitating new sources of renewable energy. (*Less-than-Significant Impact*)

As discussed in Section *4.6.2. Regulatory Context*, there are numerous plans, policies, and regulations which directly and indirectly address renewable energy and energy efficiency during construction, operation, and decommissioning of potential VCIP projects. For energy efficiency in building construction, the applicable energy conservation requirements are contained in the California Building Standards Code and Energy Efficiency Standards, which would apply to the construction of buildings and structures within VCIP projects.

The state's primary mandate regarding renewable energy is embodied in AB 32, the Global Warming Solutions Act of 2006, which is implemented through CARB's Scoping Plan. The 2022 Climate Change Scoping Plan adopted by CARB outlines the strategies for achieving the emissions reduction target mandated in AB 32 (CARB 2022). One of the key strategies is the RPS, which now requires all electric utilities in California to include a minimum of 60 percent renewable generation sources in their overall energy mix by 2030, and mandates 100 percent renewables by 2045. The solar generation and energy storage elements of the VCIP would help increase the proportion of renewables in the statewide energy portfolio, thereby furthering implementation of the RPS by the target years instead of obstructing its implementation. As declared by the Legislature in AB 2661 (2024), the activities contemplated by the VCIP underscore "the unique need of the Westlands Water District to support the development of solar electrical generation for the electrical grid and to facilitate the development of transmission capacity to help California reach its clean energy and climate goals." The addition of the VCIP's solar generation and energy storage to the state's electrical supply will help facilitate the retirement of existing older fossil-fueled generation plants, thereby offsetting or displacing those inefficient sources of electricity with highly efficient and renewable sources of electricity. Therefore, the implementation of the VCIP Energy Resource and Infrastructure Plans would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and thus would have *no impact* in this regard.

Mitigation Measures: No mitigation is required.

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4.6.3.2. TRANSMISSION CORRIDORS OUTSIDE THE VCIP

The outside transmission lines would result in the consumption of energy in the form of fuel needed for vehicles and equipment used during construction. Additional energy would be required for the manufacture of new materials for the transmission lines. Overall energy consumption during construction would be reduced by compliance with air quality rules and regulations. The efficiency of fuel use during construction of the transmission projects would be increased through the use of clean fleet construction equipment to minimize emissions as required by the SJVAPCD and neighboring air quality management districts. Unnecessary idling of construction equipment and vehicles would be avoided through compliance with the state requirement that non-essential idling for all diesel-fueled vehicles not exceed 5 minutes at any given location (13 CCR, section 2485(c)(1)(B)). For construction haul trucks, the state's regulation to reduce diesel emissions through replacement of older trucks with newer models with diesel emissions controls would also result in greater fuel efficiency for long-haul trucks. The state's Advanced Clean Fleets Program would also facilitate the electrification of the trucking fleet. The energy efficiency of fuel consumed by commuting workers and delivery vehicles would be ensured through federal fuel efficiency standards, and by substantial voluntary carpooling. Given that the transmission projects would comply with applicable rules, regulations, and programs to maximize energy efficiency in vehicles and equipment used in construction, the outside transmission lines would not result in the inefficient, wasteful, or unnecessary use of energy.

The purpose of the outside transmission corridors is to provide the state's major energy markets with access to the VCIP's renewable energy sources, thus reducing the state's dependence on non-renewable generation sources. As such, the outside transmission lines would be instrumental in facilitating displacement of inefficient fossil fuel generation and thus would indirectly result in a substantial net reduction in fossil-based energy consumption as provided by VCIP solar facilities, quantified under Impact EN-1. Therefore, the outside transmission lines would help advance the state's goals of increasing available sources of renewable energy and increasing energy efficiency.

4.6.3.3. CUMULATIVE IMPACTS

Construction and operation of VCIP projects would be subject to an array of regulatory requirements related to the efficient use of fuel, use of renewable energy sources, solid waste reduction and diversion, and energy efficient building standards, among other requirements. These requirements would also apply to the other past, present, and reasonably foreseeable future projects and would ensure that their construction and operation would not result in cumulatively wasteful, inefficient, or unnecessary use of energy. Therefore, the *cumulative energy impact would be less than significant*, and the impact of VCIP implementation would *not be cumulatively considerable*.

As is the case with the potential VCIP projects, an objective of most of the other cumulative projects (i.e., solar projects) is to help implement state and local plans and policies to generate and deliver renewable solar energy to help reduce statewide reliance on non-renewable fossil-fueled generation. The operation of the solar/BESS facilities would likely allow for the decommissioning of equivalent generation from natural gas fired power plants. The cumulative projects would consume a relatively small amount of electricity to operate lights

and equipment, and this energy consumption would be negligible compared to the clean energy produced by the solar projects and their displacement of inefficient fossil-fueled generation. Therefore, the cumulative projects would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and thus the *cumulative energy impact would be less than significant*, and the impact of VCIP implementation would *not be cumulatively considerable*.

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