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Project Title:	Potentia-Viridi Battery Energy Storage System
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Document Title:	Socioeconomics
Description:	This section describes the potential social and economic effects within the project vicinity and region arising from the construction and operation of the project.
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3.10 Socioeconomics

This section describes the potential social and economic effects within the Project vicinity and region arising from the construction and operation of the BESS. This discussion considers Project-related effects to population, housing, public services and utilities, and county tax revenue, and evaluates the economic benefits that will arise from the Project. This evaluation of socioeconomics includes the following elements:

- Section 3.10.1 describes the socioeconomic environment that might be affected by the BESS;
- Section 3.10.2 provides an environmental analysis of the construction and operation of the proposed development;
- Section 3.10.3 discusses whether there will be any cumulative effects from the Project;
- Section 3.10.4 describes mitigation measures that will be implemented to avoid impacts;
- Section 3.10.5 discusses the applicable laws, ordinances, regulations, and standards (LORS);
- Section 3.10.6 lists the agencies involved and agency contacts;
- Section 3.10.7 discusses permits and permit schedules; and
- Section 3.10.8 lists reference materials used in preparing this section.

The following environmental setting and impact evaluation is based in part on the following Project-specific technical report and engineering plans, included as appendices to this EIR:

- Appendix 3.10A – Socioeconomic Analysis, prepared by Stanley R. Hoffman Associates, June 2024.

3.10.1 Affected Environment

The Potentia-Viridi Project site will encompass approximately 70 acres area of a parcel identified as Assessor Parcel Number (APN) 99B-7890-002-04 in Alameda County, California. The Project site currently consists of vacant, agricultural farmland used for cattle grazing. The Project's gen-tie line would be sited on APNs 99B-7890-2-4, 99B-7890-2-6, and 99B-7885-12 and would extend from the Project site across Patterson Pass Rd, and over additional agricultural lands surrounding the Tesla Substation, which is located directly to the east. In addition to the PG&E Tesla Substation, the Project site and gen-tie route are surrounded by vacant rural agricultural land, multiple high-voltage transmission lines, rural roads, and a railroad line. The nearest settlement is the City of Tracy approximately 2.5 miles to the east. The area surrounding the Tesla Substation is sparsely developed for residential use, with the nearest residence, which is also owned by the same landowner leasing the area for the Project's gen-tie line, is approximately 1,500 feet southeast of the Project site and 560 feet south of the proposed gen-tie line. The next closest residence is approximately 3,500 feet east of the Project site and 2,300 feet east of the proposed gen-tie line.

The study area for this socioeconomic analysis is defines as the geography over which the Project would have spillover economic impacts. Given its unique location at the tri-junction of Alameda, San Joaquin, and Contra Costa counties, it is estimated that the Project would draw upon workforce and supplier relationships across county boundaries. The study area is defined as a combination of the three counties shown in Figure 1-2 of Appendix 3.10A

3.10.1.1 Population

Land use and growth trends identified for the study area are based on population estimates, projections, and current land use plans. The California Department of Finance (CDOF) estimates that Alameda County's 2023 population is 1,636,194, Contra Costa County's 2023 population is 1,147,653, and San Joaquin County's 2023 population is 786,145 (Appendix 3.10A).

According to the Department of Finance (CDOF), the 2010 population was 1,510,271, 1,049,025, and 685,306 in Alameda, Contra Costa, and San Joaquin counties, respectively. It is estimated that Alameda County's population will grow to 1,670,455, Contra Costa County's population will grow to 1,171,945, and San Joaquin County's population will grow to 831,956 by the year 2030 (Appendix 3.10A). Based on Alameda, Contra Costa, and San Joaquin Counties population data for years 2010 and 2020, population growth within the county was 1.1%, 1.1%, and 1.3%, respectively. This equates to a net increase in residents of 172,082, 116,902, and 93,927, respectively, for the 10-year period from 2010-2020. Table 3.10-1 summarizes the historical population data for Alameda County, Contra Costa County, and San Joaquin County and the state of California.

Table 3.10-1. Historical and Projected Populations

Area	2010	2020	2023	2030 projected	2040 projected	2050 projected	2060 projected
Alameda County	1,510,271	1,682,353	1,636,194	1,670,455	1,795,198	1,898,488	1,977,629
Contra Costa County	1,049,025	1,165,927	1,147,653	1,171,945	1,274,708	1,361,137	1,444,900
San Joaquin County	685,306	779,233	786,145	831,956	896,033	942,102	976,326
California	37,253,956	39,520,071	38,990,487	39,430,871	40,106,449	40,049,519	39,508,492

Source: Appendix 3.10A

Table 3.10-2. Historical and Projected Annual Population Change by Percent

Area	2010-2020	2020-2023	2020-2030 projected	2030-2040 projected	2040-2050 projected	2050-2060 projected
Alameda County	1.1%	-0.9%	0.3%	0.7%	0.6%	0.4%
Contra Costa County	1.1%	-0.5%	0.3%	0.8%	0.7%	0.6%
San Joaquin County	1.3%	0.3%	0.8%	0.7%	0.5%	0.4%
California	0.6%	-0.4%	0.2%	0.2%	0.0%	-0.1%

Source: Appendix 3.10A

The Potentia-Viridi Project is in a remote area of eastern Alameda County, and as a result removed from major population centers. Table 3.10-3 summarizes the populations of neighboring population centers and distance from the Project site. The closest two communities to the site are the Mountain House Census Designated Place (CDP) in San Joaquin County and the Byron CDP in Contra Costa County. Tracy is the closest incorporated city from the site, 10 miles to the east across the county line in San Joaquin County. Livermore, within Alameda County, is 13 miles to the west along the I-580, followed by Pleasanton and Dublin 23 miles going west on the freeway. There are a total of ten incorporated cities within a 30-mile radius from the Project site with a combined population of one million. Stockton in San Joaquin County is the largest of these cities with a population of 319,731 in 2023.

Table 3.10-3. Population Centers by Project Proximity, 2023 Project Study Area

Area	Population (2023)	Distance from Project Site (Driving Miles)
Alameda County		
Livermore	84,793	13.2
Pleasanton	76,459	25.1
Dublin	71,750	28.0
Contra Costa County		
Byron CDP[2]	1,140	10.1
Brentwood	64,513	20.3
Oakley	44,995	25.8
Antioch	115,442	29.1
San Joaquin County		
Mountain House CDP[2]	24,499	7.5
Tracy	95,615	10.1
Manteca	88,803	23.4
Ripon	15,769	29.2
Stockton	319,731	30.2

Source: Appendix 3.10A

Data from the California Department of Finance shows declining population trends to be reversed by 2030, with all three counties outpacing the overall growth rates for the state. By 2060, the total population of Alameda County is projected to reach 1.98 million, followed by Contra Costa at 1.44 million, and San Joaquin at 0.98 million for a combined population of around 4.4 million.

3.10.1.2 Housing

As shown in Table 3.10-4, data from the California Department of Finance for the closest cities within the commute shed shows the total housing stock for the area at around 332,000 units. Within this, rental units are estimated to constitute a share of 36.5%. For the cities closest to the Project location, rentership rate was at 27.3% in Livermore and a higher 36% in Tracy. In general, rental units constitute a higher share of the housing stock in San Joaquin County (42.4%) compared to Alameda County (31.2%) and Contra Costa County (29.4%).

Total rental housing across cities identified within the 45-minute commute-shed is estimated around 122,000 units. Of these around 72,000 units or 60% share are located within San Joaquin County, 22% share in Alameda County and 18% in Contra Costa County. Stockton, by far, has the largest rental housing stock among the study area cities, making up 40% of the commute-shed in this housing category.

Furthermore, based on data obtained from the Census Bureau, rental vacancy rate is estimated at 4.5% across the commute-shed communities. Applying this rate to the rental stock results in an estimated 5,485 vacant rental units within the 45-minute commute-shed. Of these around 3,230 units are in San Joaquin County, 1,450 units within Alameda County and around 800 units in Contra Costa County potentially available to workers employed over the construction and operations phases of the Project.

Table 3.10-4. Rental Housing Stock within the Commute-Shed, 2023 Potentia-Viridi Study Area

Area	Total Units	Renter % of Total Occupied	Estimated Rental Units	Rental Vacancy Rate	Estimated Vacant Rental Units
Alameda County					
Livermore	33,157	27.3%	9,046	4.0%	365
Pleasanton	29,776	31.8%	9,476	6.5%	613
Dublin	25,304	35.6%	9,017	5.2%	470
Subtotal	*88,237*	*31.2%*	*27,539*	*5.3%*	*1,448*
Contra Costa County					
Brentwood	22,033	18.3%	4,038	6.4%	260
Oakley	14,381	22.1%	3,184	2.7%	85
Antioch	38,095	38.5%	14,658	3.2%	463
Subtotal	*74,509*	*29.4%*	*21,880*	*3.7%*	*808*
San Joaquin County					
Tracy	30,275	36.0%	10,911	2.9%	311
Manteca	30,399	30.9%	9,394	5.9%	552
Ripon	5,763	31.1%	1,791	2.4%	42
Stockton	103,808	48.3%	50,151	4.6%	2,324
Subtotal	*170,245*	*42.4%*	*72,247*	*4.5%*	*3,229*
Total Commute Shed[3]	**332,991**	**36.5%**	**121,666**	**4.5%**	**5,485**

Source: Appendix 3.10A

Table 3.10-5 summarizes a review of available rental/temporary accommodations, including rental units, hotel/lodging, and RV/Mobile Parks, potentially available to the workers employed during construction and operations phases of the Project. The review estimates at least 6,000 units per month available within the 45-minute commute shed for short-term occupancy.

Table 3.10-5. Summary of Housing Availability, Commute Shed Potentia-Viridi Study Area

Accommodation Type	Estimated Units
Rental Units	5,485
Hotel/Lodging	564
RV/Mobile Parks	77
Total	**6,126**

Source: Appendix 3.10A

3.10.1.3 Economy and Employment

The three counties in the study area are distinct in their employment size and industry composition. As shown in Table 3.10-6, employment in Alameda County in 2021 was estimated at around 875,000 jobs, more than twice of either Contra Costa County at 394,000 jobs or San Joaquin County at 311,000 jobs. Alameda County has a higher share of manufacturing jobs and Professional, Scientific, and Technical Services jobs within the study area. In contrast, given its unique location as the gateway to the Bay Area, the economy of San Joaquin County specializes in Transportation and Warehousing activities. The employment distribution in Contra Costa County shows a relatively higher share of activities supported by residential spending, including retail and healthcare, and on tourism related activities.

Table 3.10-6. Employment Distribution by NAICS Industry Sectors, 2021

Industry Sector	Alameda County	Contra Costa County	San Joaquin County	California
Total Employment[1]	**1,100,959**	**595,975**	**384,431**	**19,890,626**
NAICS Industry Distribution[2]				
Agriculture, Forestry, Fishing, and Hunting	0.1%	0.3%	4.9%	2.3%
Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.0%	0.0%	0.1%
Utilities	0.5%	0.2%	0.8%	0.6%
Construction	6.2%	7.7%	5.4%	5.2%
Manufacturing	12.4%	3.9%	8.0%	7.5%
Wholesale Trade	4.1%	0.0%	4.0%	3.7%
Retail Trade	8.1%	11.9%	9.7%	9.1%
Transportation and Warehousing	6.0%	3.3%	16.9%	5.0%
Information	2.4%	1.8%	0.5%	3.5%
Finance and Insurance	2.0%	4.9%	1.6%	3.0%
Real Estate and Rental and Leasing	1.4%	2.1%	1.3%	1.7%
Professional, Scientific, and Technical Services	10.3%	7.3%	2.1%	8.1%
Management of Companies and Enterprises	2.2%	2.1%	0.7%	1.4%

Table 3.10-6. Employment Distribution by NAICS Industry Sectors, 2021

Industry Sector	Alameda County	Contra Costa County	San Joaquin County	California
Admin and Support, Waste Management and Remediation	5.1%	6.9%	5.7%	6.6%
Educational Services	7.9%	8.4%	8.7%	8.0%
Health Care and Social Assistance	15.4%	20.4%	13.2%	15.3%
Arts, Entertainment, and Recreation	1.6%	1.9%	0.9%	2.0%
Accommodation and Food Services	7.4%	9.5%	7.8%	9.2%
Other Services (excluding Public Administration)	3.3%	3.5%	2.5%	3.0%
Public Administration	3.8%	3.9%	5.3%	4.8%

Source: Appendix 3.10A

The combined GDP for the three-county region is estimated by the BEA at $308.45 billion, as shown in Table 4.10-7. Of this labor income is estimated at $183.06 billion. Based on data obtained from the Census Bureau, median household income in Alameda and Contra Costa counties in 2021 was higher at around $120,000 compared to $86,000 in San Joaquin. The median household income in California was estimated at around $92,000. The share of population in living in poverty was estimated higher for San Joaquin County comparable to the state. Contra Costa County had the lowest levels of poverty within the study area at 8.7%, compared to the 10.1% in Alameda County. Unemployment rates were lower in both Alameda and Contra Costa at 5% in January 2024 compared to 6.8% in San Joaquin and 7.5% in the state. Figure 2-2 of Appendix 3.10A shows the concentration of poverty in the study area at the Census Block-group level.

Table 3.10-7. Regional Economic Indicators, 2022 Potentia-Viridi Study Area

	Alameda County	Contra Costa County	San Joaquin County	Three-County Region
Gross Domestic Product	$171,446,384,000	$96,134,042,206	$40,874,508,907	$308,454,935,113
Labor Income[1]	$109,093,529,847	$49,392,787,345	$24,570,620,392	$183,056,937,584
Employment[1]	1,093,484	603,262	375,725	2,072,471

Source: Appendix 3.10A

Table 3.10-8. Regional Household Indicators, 2022 Potentia-Viridi Study Area

	Alameda County	Contra Costa County	San Joaquin County	California
Median Household Income	$122,159	$120,061	$86,056	$91,551
Population in Poverty (%)[1]	10.1%	8.7%	12.1%	12.2%
Unemployment Rate (%)[2]	5.0%	5.0%	6.8%	7.5%

Source: Appendix 3.10A

3.10.1.4 Fiscal Resources

As shown in Table 3.10-9, the County's Adopted 2023-24 shows total anticipated revenue of $3.72 billion for fiscal year ending June 2024. This includes around $601 million from property taxes (16% of total) and $165 million in other taxes, which includes the county share of sales and use tax. Charge for services provided the County is expected to generate $436 million, while fines and forfeitures generate another $9 million. Aid from federal, state, and other local agencies are projected for a total of $2.7 million, including $1.6 million from state alone, which comprises 44% of the total General Fund revenues.

Table 3.10-9. General Fund Revenues County of Alameda, Adopted 2023-24 Budget (In Constant 2024 Dollars)

	Amount	Percent
Property Tax Revenues	$601,546,231	16.2%
Other Taxes	$165,060,649	4.5%
Licenses, Permits, & Franchises	$12,135,272	0.3%
Fines, Forfeits, & Penalties	$9,602,631	0.3%
Use of Money & Property	$12,730,437	0.3%
State Aid	$1,632,368,841	44.1%
Aid from Federal Government	$555,505,748	15.0%
Aid from Local Government Agencies	$82,047,276	2.2%
Charges for Services	$436,881,604	11.8%
Other Revenues	$119,964,931	3.2%
Other Financing Sources	$74,255,063	2.0%
Total Revenues	**$3,702,098,683**	**100.0%**

Source: Appendix 3.10A

As shown in Table 3.10-10, the County's Adopted 2023-24 shows total balanced expenditures of $3.72 billion for fiscal year ending June 2024. Healthcare Services and Public Safety (including the DA's office, sheriff, fire, and public defender) account for around $1.1 million each, together constituting 58% of all General Fund expenditures. The projected budget supports Public Assistance expenditures (including child support, social services, programs for families, children and seniors, and workforce and benefits administration) amounting to $1 billion or 27% of the total. This is followed by General Government (County administration and operations), which receives around $300 million or 8% of the total.

Table 3.10-10. General Fund Expenditures County of Alameda, Adopted 2023-24 Budget (In Constant 2024 Dollars)

	Amount	Percent
Capital Projects	$15,000,000	0.4%
General Government	$298,227,883	8.1%
Public Assistance	$999,923,698	27.0%
Public Protection	$1,020,711,075	27.6%
Health Care Services	$1,095,275,965	29.6%
Non-Program Activities	$139,353,951	3.8%
Contingency & Reserves	$133,606,111	3.6%

Table 3.10-10. General Fund Expenditures County of Alameda, Adopted 2023-24 Budget (In Constant 2024 Dollars)

	Amount	Percent
Total Expenditures	$3,702,098,683	100.0%

Source: Appendix 3.10A

3.10.1.5 Education

The Project site is located within the Lammersville Joint Unified School District (USD), which was established in 2011 as a combination of the Mountain House ESD in Alameda County and Lammersville ESD in San Joaquin County through a special election held in 2010. As shown in Table 3.10-11, the Lammersville USD has eight TK-8 schools and one high school, with a total enrollment of around 7,500 students and 700 teaching staff. The erstwhile Mountain House ESD was previously under the Alameda County Office of Education (ACOE), which is responsible for the provision and administration of public schooling within the County. In 2022-23, the ACOE served 212,000 students over 18 school districts within the County.

Table 3.10-11. School Facilities in Project Vicinity Alameda County

School	Type	Address	District	Distance from Project Site
Peter Hansen Elementary	Grades K-8	1400 S. Durant Terrace Mountain House	Lammersville Joint USD	5.9
Mountain House High	High	1090 S. Central Parkway, Mountain House	Lammersville Joint USD	6.3
Bethany Elementary	Grades TK-8	570 Escuela Drive, Mountain House	Lammersville Joint USD	6.7
Mountain House Elementary	Grades TK-8	3950 Mountain House Rd, Mountain House	Lammersville Joint USD	7.0
Wicklund Elementary	Grades TK-8	300 Legacy Drive, Mountain House	Lammersville Joint USD	7.5
Altamont Elementary	Grades TK-8	452 W. St. Francis Street, Mountain House	Lammersville Joint USD	7.6
Julius Cordes Elementary	Grades TK-8	296 E. Parco Avenue Mountain House	Lammersville Joint USD	7.6
Sebastian Questa Elementary	Grades TK-8	685 N. Montebello Street Mountain House	Lammersville Joint USD	9.5
Lammersville Elementary	Grades TK-8	16555 W. Von Sosten Road, Tracy	Lammersville Joint USD	9.5

Source: Appendix 3.10A

3.10.1.6 Public Services and Facilities

This section describes public services and facilities in the BESS area (Alameda County). The three primary emergency service functions provided by local governments are police, fire, and emergency services and medical facilities. As their primary goal, these public service agencies share a role in protecting the safety of people and their property.

3.10.1.6.1 Law Enforcement

Police protection services at the Project site is provided by Alameda County Sheriff's Office, which is a full-service law enforcement agency with mandated and discretionary functions. Mandated functions include preserving the peace, arresting all persons who attempt to commit public offenses, exercise the authority to keep the County jail and the incarcerated individuals in, and serve all process and notices in the manner prescribed by law. Discretionary functions include emergency dispatch, contract police services, regional training center, crime laboratory services, and targeted programs including crime prevention, community policing, school resources, and youth and family services. According to the Adopted 2023-24 County budget, the County Sheriff's Office has an appropriate budget of $590 million with about 1,900 full time employees, including more than 1000 sworn personnel.

The Eden Township Division is the police department for the unincorporated areas of Alameda County. The Eden Township Division offers professional and progressive policing to the areas of Castro Valley, San Lorenzo, Ashland, Cherryland, and the unincorporated Tri Valley. Per communication with the Sheriff's Office, the Project site receives patrolling services from newly established Tri-Valley patrol dispatch office located in Dublin, as shown in Table 3.10-12. Emergency services dispatch is coordinated by the Sheriff's office in San Leandro. Additional, law enforcement support is provided by the California Highway Patrol (CHP) Golden Gate Division, with its nearest office to Project site located in Dublin in Alameda County and Tracy (Valley Division) in San Joaquin County.

Table 3.10-12. County Sheriff Facilities in Project Vicinity Alameda County

Sheriff Services	Address
Patrol Dispatch Location Tri Valley Substation	4985 Border Blvd, Dublin, California 94568
Countywide Sheriff Services Eden Township Substation Emergency Services Dispatch	15001 Foothill Blvd, San Leandro, California 94578 2000 150th Ave, San Leandro, California 94578
Proximate Sheriff Contracted City Dublin Police Services	6361 Clark Ave, Dublin, California 94568

Source: Appendix 3.10A

3.10.1.6.2 Fire Protection

The Project site is located within the California State Responsibility Area (SRA), which has designated the area within the state's High Fire Hazard Severity Zone (FHSZ). Response at the site to emergency and medical calls is provided by the Alameda County Fire Department (ACFD). The ACFD is responsible for providing emergency fire and medical response and fire prevention services to all residents of the unincorporated areas of the County. The ACFD's total service area covers 508 square miles and served by 28 stations, including stations to serve the unincorporated areas of the County, contract services with the cities of Dublin, Emeryville, Newark, San Leandro, Union City, and

the Lawrence National Laboratories in Berkely and Livermore. Service call response to the Project site is provided by ACFD Engine 8 out of its Station 20 located in Livermore, as shown Table 3.10-13. Other nearby stations, such as in Dublin (Station 18 and Station 17), could be called into action as required depending on the incident and scale of response. According to the County 2023-24 Adopted Budget, ACFD has an appropriated budget of $186 million with 530 full-time personnel.

Table 3.10-13. County Sheriff Facilities in Project Vicinity Alameda County

ACFD Station	Address	Distance from Project Site
Station #20/#8	7000 East Ave, L-388, Livermore	10.8
Station #18	4800 Fallon Rd., Dublin, California 94568	21.9
Station #17	6200 Madigan, Dublin, California 94568	23.6
Station #15	5325 Broder Rd, Dublin, California 94568	24.7
Station #16	7494 Donohue Dr, Dublin, California 94568	26.5
Station #14	11345 Pleasanton-Sunol Rd, Sunol, California 94586	32.9

Source: Appendix 3.10A

3.10.1.6.3 Emergency Response

Emergency Medical Services (EMS) in the County is administered by the Alameda County Emergency Medical Services Agency (ALCO EMS). The EMS system has several components including communication centers, first responders, basic and advanced transports services, and multiple receiving and specialty care centers. Emergency calls within the County are received by emergency communication centers. There are eighteen Public Safety Answering Points (PSAPs), which perform the initial intake of 911 calls and direct callers to the needed resources. First responders include the Alameda County Fire District (ACFD), which responds to emergency calls in the unincorporated county areas and provides initial emergency medical aid. Transportation to hospital or other facilities in the unincorporated County is contracted to Falck Northern California. A list of ambulance and emergency air transport providers is show in Table 3.10-14.

Table 3.10-14. Emergency Services Providers Alameda County

EMS Providers	Address	Contact
Ambulance Service		
County Contracted		
Flack Ambulance Alameda	28333 Industrial Blvd, Hayward, California 94545	(510)846-8336
Other Proximate Agencies		
Livermore-Pleasanton FD	3560 Nevada St, Pleasanton, California 94566	(925)454-2361
East Bay Regional Parks FD	17930 Lake Chabot Rd, Castro Valley, California 94546	(510)881-1833
Hayward Fire Department	777 B St. 4th Floor, Hayward, California 94541	(510)293-7000
Fremont Fire Department	300 Capitol Ave., Building A, Fremont, California 94538	(510)494-4200
Alameda Fire Department	1300 Park St., Alameda, California 94501	(510)337-2100
Emergency Air Transport		
CALSTAR/REACH	4933 Bailey Loop, McClellan, California 95652	(916)921-4000
California Highway Patrol	4999 Gleason Dr., Dublin, California 94568	(925)828-0466

Table 3.10-14. Emergency Services Providers Alameda County

EMS Providers	Address	Contact
East Bay Regional Parks PD	2950 Peralta Oaks Court, Oakland, California 94605	(888)327-2757
Stanford LifeFlight	300 Pasteur Dr., Stanford, California 94305	(650)723-5578

Source: Appendix 3.10A

3.10.1.6.4 Healthcare Facilities

Medical facilities in the County include those that are part of the Alameda County Health Care System (AHS) hospitals and primary care clinics, and other non-AHS facilities, as shown in Table 3.10-15. The closest AHS hospital facilities to the Project site are the Fairmont and San Leandro hospitals in San Leandro, while the nearest AHS primary care facilities are located in Newark, Castro Valley, and Hayward. Other non-AHS hospital facilities are closer to the Project site, including Sutter Community Hospital in Tracy (10 miles), and the Stanford Tri-Valley hospitals in Livermore (13 miles), Dublin (23 miles) and Pleasanton (25 miles).

Table 3.10-15. Healthcare Facilities in Project Vicinity Alameda County

Healthcare Facilities	Address	Distance from Project Site (Miles)
Alameda County Health Care System (AHS)		
Fairmont Rehabilitation & Wellness	15400 Foothill Blvd. San Leandro, California 94578	37.8
San Leandro Hospital, San Leandro	13855 E. 14th St. San Leandro, California 92578	39.3
John George Psychiatric Pavilion, San Leandro	2060 Fairmont Dr. San Leandro, California 94578	39.4
Highland Hospital, Oakland	1411 E. 31st St. Oakland, California 94602	47.4
Alameda Hospital, Alameda	2070 Clinton Ave. Alameda, California 94501	47.5
AHS Primary Care Clinics in Proximity		
Newark Wellness Center, Newark	6066 Civic Terrace Ave. Newark, California 94560	35.0
Eden Medical Center – Castro Valley	20103 Lake Chabot Rd. Castro Valley, California 94546	35.9
Hayward Wellness Center – Hayward	664 Southland Mall, Hayward, California 94545	41.4
Eastmont Wellness Center - Oakland	6955 Foothill Blvd. #200, Oakland, California 94605	43.0
Non-AHS Facilities in Proximity		
Sutter Community Hospital, Tracy	1420 North Tracy Blvd. Tracy, California 95376	10.5
Stanford Health Care Tri-Valley Livermore	1111 E. Stanley Blvd. Livermore, California 94550	13.3
Livermore VA Hospital – Livermore	4951 Arroyo Road, Livermore, California 94550	16.1

Table 3.10-15. Healthcare Facilities in Project Vicinity Alameda County

Healthcare Facilities	Address	Distance from Project Site (Miles)
Stanford Health Care Tri-Valley, Dublin	4120 Dublin Blvd., Dublin, California 94568	23.4
Stanford Health Care Tri-Valley, Pleasanton	5725 W. Las Posita Blvd. Pleasanton, California 94588	24.7
Doctors Hospital, Manteca	1205 E. North St. Manteca, California 95336	25.9

Source: Appendix 3.10A

3.10.1.7 Utilities

The Project is not expected to draw upon external utilities, including natural gas service, municipal water, or wastewater systems. Solid waste generated from the construction activity will be disposed locally.

3.10.1.7.1 Electricity and Gas

Electricity in the area is provided by PG&E. The Project is a BESS system, which would draw electricity from the power grid to charge and store electrical energy and discharge back to the power grid when the stored energy is needed. The Project would provide several benefits to the power grid, including reducing the need to operate natural gas power plants to balance intermittent renewable generation and serving as an additional capacity resource that would enhance grid reliability.

3.10.1.7.2 Municipal Water

The Project would not require a connects to a municipal water system. The Project would truck in water for sanitary facilities and fire-water supply. Water required during for common construction-related purposes, including but not limited to dust suppression, soil compaction, and grading would be untreated and also be trucked to the site. Dust-control water may be used during ingress and egress of on-site construction vehicle equipment traffic and during the construction of the Project. A sanitary water supply line would not be required during construction because restroom facilities would be portable units, serviced by licensed providers. Drinking water would be provided via portable water coolers. Water used at the facility for construction and operation activities would be purchased and supplied by the local water purveyor for Alameda County.

3.10.1.7.3 Wastewater Discharge

Wastewater and sewage from the restroom facilities would be stored in onsite tanks and serviced by trucks.

3.10.2 Regulatory Setting

Federal, state, and local laws, ordinances, regulations, and standards (LORS) related to socioeconomics were reviewed for applicability to the Project. These are detailed in Section 3.10.6, Laws, Ordinances, Regulations, and Standards.

3.10.3 Impact Analysis

The following sections describe the potential environmental effects on utilities and socioeconomic impacts near the Project site during the construction and operation of the proposed Project.

3.10.3.1 Methodology

The impact analysis in this section is based on Project assumptions provided by the proponent for the construction and operations phases of the Project.

For the construction phase, assumptions include the monthly phasing of construction activities, the resulting total labor utilization (local and non-local) and Project expenditures over the overall construction period. For the operations phase, assumptions include the estimated annual labor utilization (local and non-local) and expenditures for operations and maintenance.

The resulting regional impacts for each phase, based on the above sets of labor and expenditure inputs, are presented in terms of direct impacts (Project-level outcomes) and their associated indirect and induced regional outcomes within the study area, as explained further in the sections below. The direct, indirect, and induced impact outcomes are presented in terms of output (value of products and services), jobs and labor income.

3.10.2.2 Impact Evaluation Criteria

This evaluation of socioeconomic impacts for the proposed Potentia-Viridi Project is based on the criteria provided in California Environmental Quality Act (CEQA) Checklist (California Code of Regulations, Title 14, Section 15000 etc.). Project impacts from construction and operations of the facility are determined to be significant if they meet the following significance criteria:

- Induce substantial growth or concentration of population,
- Displace a large number of people or impact existing housing,
- Result in substantial adverse impacts on the local economy and employment,
- Create adverse fiscal impacts on the community,
- Result in substantial adverse impacts on educational facilities,
- Result in substantial adverse impacts on the provision of utility services, and
- Result in substantial adverse impacts associated with the provision of public services.

Other impacts may be significant if they cause substantial change in community interaction patterns, social organization, social structures, or social institutions; substantial conflict with community attitudes, values, or perceptions; or substantial inequities in the distribution of the Project cost and benefit.

3.10.2.3 Impact Evaluation

Schedule

Regional impacts resulting from construction activities on the Project site. These are one-time events from which regional impacts (direct, indirect, and induced) last only over the construction period. The Project construction is phased over a period of 18 months from a proposed start date of October 2026 and an end-date of May 2028.

Operational impacts would result from the commencement of operations of the Project, which is anticipated in October 2028. Ongoing operations and maintenance expenditures at the Project would result in annual regional impacts (direct, indirect, and induced), which are analyzed further.

Construction Workforce

Aggregate labor demand varies by month ranging from 24 workers in the initial mobilization phase to a peak of 127 workers between months 8 to 10 (August to October 2027), remaining at an elevated level through Month 15 (March 2028) at 121 workers, and then finally coming down to a range of between 20 and 41 workers towards the last 2 months of the construction period.

Operations and Maintenance Workforce

Site operations and maintenance will employ 3 full-time staff, including one plant manager and two technicians. These jobs are assumed to be local in this analysis since these are stable positions related to ongoing long-term operations requiring local (study area) residence.

Impact 3.10-1: Would the project induce substantial unplanned population growth in the area, either directly or indirectly?

Construction

Less-than-Significant Impact. The proposed Project would employ 127 workers at its peak in Months 8 through 10 of the construction phase. This represents an insignificant share of the three-county study area population of over 3 million people. A large portion (88% share) of these workers is expected to come from within the 45-minute commute shed, and therefore, are already part of the study area residential population. As such, the Project would not induce substantial growth or concentration of population in the study area and impacts would be less than significant.

Operations

Less-than-Significant Impact. The ongoing operations of the Project would employ three full-time staff, which would not displace substantial numbers of existing people or housing necessitating the construction of replacement housing elsewhere. As such, impacts would be less than significant.

Impact 3.10-2 Would the project displace substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction

Less-than-Significant Impact. Construction of the Project would not displace substantial numbers of existing people or housing necessitating the construction of replacement housing elsewhere. As shown previously in Table 3.10-5, there are an estimated 6,100 vacant units available across communities within the Project's 45-minute commute-shed. Even at the monthly peak of 127 jobs for the Project, if all workers were to seek accommodations, this can be easily satisfied by availability in the existing housing inventory. Additionally, the Project is expected to draw most workers already residing within the study area. The Project would not, therefore, require any new addition to currently available housing inventory and impacts would be less than significant.

Operations

Less-than-Significant Impact. The ongoing operations and maintenance of the Project would employ 3 full-time staff. This represents an insignificant share of the three-county study area population of over 3 million people and impacts would be less than significant.

Impact 3.10-3 Would the project have substantial adverse impacts on the local economy and employment?

Construction

Less-than-Significant Impact. As noted previously, during the Project's construction period, the aggregate labor demand varies by month ranging from 24 workers in the initial mobilization phase to a peak of 127 workers in Months 8 to 10 (August to October 2027), remaining at an elevated level through Month 15 (March 2028) at 121 workers, and then finally coming down to a range of between 41 and 20 workers towards the last 2 months of the construction period. These jobs are monthly estimates, representing certain fractions of Full-time Equivalent (FTE) employment (2,080 hours per year). When aggregated over the entire construction period, these labor fractions result in a total of 137 FTEs (job-years). It is estimated that around 121 FTEs (job-years) of labor demand or 88% of the total labor demand will be met locally. Overall, these are beneficial impacts to the regional economy.

Secondary employment (indirect and induced) from Project construction would be positive and account for less than 1% of the study area workforce. The construction of the Project would support 105 indirect jobs in the local supply chain and 98 induced jobs from household spending in the local economy.

Construction of the Project would have beneficial direct income impacts on the local economy. The local component of the total construction spending (output) is estimated at $134 million over the entire construction period or 0.04% of the three-county GDP of $308 billion. Direct labor income associated with construction is estimated $29 million.

The construction phase of the Project would also generate secondary income benefits to the local economy. Construction spending would support an additional estimated $31 million in indirect output in the local value chain and estimated $20 million in induced output from household spending. Taken together the final output change (direct, indirect, and induced) is estimated $184.42 million over the entire construction period. Construction spending would support an additional estimated $9.6 million in indirect labor income in the local value chain and estimated $6.75 million in induced labor income from household spending. Taken together the final labor income change (direct, indirect, and induced) is estimated $45.39 million during construction.

Operations

Less-than-Significant Impact. Site operations would employ three full-time staff (FTEs) for the ongoing annual operations and maintenance of the facility. These labor needs will be met locally, either through current labor market supply or through the permanent relocation of individuals to the study area.

Secondary employment (indirect and induced) from Project operations would be positive and account for less than 1% of the study area workforce. The Project operations would support 14 indirect jobs in the local supply chain and 10 induced jobs from household spending in the local economy.

Similarly, the operations phase of the Project would have beneficial direct income impacts on the local economy. The local component of the total operations spending (output) is estimated at $28.20 million annually over the lifetime of the Project. Direct labor income associated with operations is estimated $1.54 million.

In addition, the operations phase of the Project would generate annual secondary income benefits to the local economy. Annual O&M spending would support an estimated $10.7 million in indirect output in the local value chain and $2 million in induced output from household spending. Taken together the final output change (direct, indirect, and induced) is estimated $41 million annually. Operations spending will support an additional $2 million in indirect labor income in the local value chain and $0.7 million in induced labor income from household spending. Taken together the final labor income change (direct, indirect, and induced) is estimated $4.6 million annually.

Impact 3.10-4 Would the project create adverse fiscal impacts on the community?

Construction

No Impact. The construction phase would have positive fiscal impacts in the study area. Spending over the entire construction period is estimated to result in a total of $8.2 million in taxes to local and state governments over the direct, indirect, and induced impacts taken together. The County and local area government share of these taxes is estimated at $2.75 million, including approximately $349,000 in sales tax. The site property falls under the Williamson Act, and any property tax collected by the County at the 1% tax rate will be at the County's discretion or by agreement with the project proponent and would create a positive fiscal impact to the community. As such, the Project would create positive fiscal impacts to the community during construction activities and no impact would occur.

Operations

No Impact. Facility operations would have positive fiscal impacts in the study area. Annual spending is estimated to result in a total of $4.33 million in taxes to local and state governments over the direct, indirect, and induced impacts taken together. The County and local area government share of these taxes is estimated at $2.31 million, including $334,000 in sales tax. The site property falls under the Williamson Act, and any property tax collected by the County at the 1% tax rate will be at the County's discretion or by agreement with the project proponent and would create a positive fiscal impact to the community. As such, the Project would create positive fiscal impacts to the community during operations and maintenance activities and no impact would occur.

Impact 3.10-4 Would the project result in substantial adverse impacts on educational facilities?

Construction

No Impact. Construction of the proposed Project would introduce a temporary increase in workers, but they would not be anticipated to relocate to the area or bring their families as the workers would likely be sourced from Alameda County or surrounding counties and/or be active on-site temporarily and would not permanently relocate. As such, the Project would not result in an increase in population in the area that would necessitate additional school services. No impact would result from the proposed Project.

Operations

Less that Significant Impact. The operations of the Project would require only a small workforce. As such, operations would not cause a significant increase in demand for school services or significant adverse impact to school services and impacts would be less than significant.

Impact 3.10-5 Would the project result in substantial adverse impacts associated with the provision of utility services?

Construction

Less-than-Significant Impact. Over the construction phase, the Project would not draw upon external utilities, including natural gas service, municipal water, or wastewater systems. Solid waste generated from the construction activity will be disposed locally. The Project would not require a connection to a municipal water system and would truck in water for sanitary facilities and firewater supply. Water required during for common construction-related purposes, including but not limited to dust suppression, soil compaction, and grading would be untreated and also be trucked to the site. Dust-control water may be used during ingress and egress of on-site construction vehicle equipment traffic and during the construction of the Project. A sanitary water supply line would not be required during construction because restroom facilities would be portable units, serviced by licensed providers. Drinking water would be provided via portable water coolers. Water used at the facility for construction activities would be purchased and supplied by the Zone 7 Water Agency, which sells untreated water directly to agricultural users in the area. As such, impacts would be less than significant.

Operations

Less-than-Significant Impact. The Project is a BESS system, which would draw electricity from the power grid to charge and store electrical energy and discharge back to the power grid when the stored energy is needed. The Project would provide several benefits to the power grid, including reducing the need to operate natural gas power plants to balance intermittent renewable generation and serving as an additional capacity resource that would enhance grid reliability. No connection to a municipal water system or other utilities would be required for operations. As such, BESS operations will not result in adverse impacts to local utilities and impacts would be less than significant.

Impact 3.10-5 Would the project result in substantial adverse impacts associated with the provision of public services?

Construction

Less-than-Significant Impact. Construction of the Project may have minor impacts on police, fire, or hazardous materials handling resources. Some public services may be required, such as fire protection, but these would be

short-term requirements and would not require increases in the level of public service offered or affect these agencies' response times. The increased presence of workers in the area and workers commuting to the Project location could result in a need for EMS services resulting from any unforeseen accidents or events. However, the construction would not place an undue burden on public service providers because public services are located near the Project area as well as, distributed throughout the County. Law enforcement and protection services in this area would be provided by the Alameda County Sheriff Department, including ongoing patrolling services from its Tri Valley dispatch center in Dublin. The Project is within CalFire's State Responsibility Area (SRA), which is responsible for the protection of forest areas in California and leads/coordinates response to wildfire incidents. Emergency response would be provided by the Alameda County Fire Department with its nearest station located in Livermore. In addition, due to the safety plans and policies required for the Project, construction activities would not create significant adverse impacts on public services in the area. See Section 3.16, Worker Health and Safety, for additional information on health and safety program. Impacts would be less than significant.

Operations

Less-than-Significant Impact. Operation of the Project may have minor impacts on police, fire, or hazardous materials handling resources. For example, some public services may be required, such as fire protection, but these would be short-term requirements and would not require increases in the level of public service offered or affect these agencies' response times. The facility would be staffed full time and surrounded by a security fence and cameras. As such, operations would not place an undue burden on public service providers because public services are located near the Project area as well as, distributed throughout the County. In addition, due to the safety plans and policies required for the Project, operational activities would not create significant adverse impacts on public services in the area. See Section 3.16, Worker Health and Safety, for additional information on health and safety program. Impacts would be less than significant.

3.10.2.4 Environmental Justice

As indicated in this Application and as summarized in this analysis, the Project does not create any significant or "high and adverse" impacts related to Project implementation, include construction, operation, and decommissioning activities. Given the Project's remote location in Eastern Alameda County, the Project is unlikely to result in the disruption to the surrounding communities. Both construction workers and operational staff would benefit local businesses through purchasing food and other goods and services in the Project vicinity. As such, there are no high and adverse environmental impacts that are likely to fall disproportionately on minority and/or low-income members of the community.

3.10.4 Cumulative Effects

Cumulative impact refers to a proposed project's incremental effect together with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed Project (Public Resources Code Section 21083; Title 14, California Code of Regulations, Sections 15064[h], 15065[c], 15130, and 15355).

The analysis presented in the foregoing sections demonstrated that the Project by itself would have beneficial to insignificant impacts on Alameda County and the study area over the construction and operations phases. Over the construction period, while employing a small worker population, the Project contributes to the overall output of the

regional economy and generates revenues for local and state governments. This is combined with insignificant impacts on utilities and other public infrastructure and services.

In comparison to the Project-only outcomes, cumulative impacts refer to the combined effects of all projects in the study area, with overlapping construction schedules as the proposed Project. Taken together, these projects could intensify demands on local agencies and community resources. While population and housing impacts from just the Project are estimated to be insignificant for the overall study area, the presence of other construction projects in the proposed Project's vicinity might add pressure on communities closest to the Project site. Other local construction projects requiring nonlocal labor might have a cumulative impact on temporary housing supply in the area. While the extent of this impact is not known, this study estimates the availability of about 6,000 rental units within the study area (45-min commute shed). Since most workers are anticipated to already live in the study area, sufficient housing would be available to house workers from multiple projects. Other kinds of cumulative socioeconomic impacts are also unlikely because the Project's effects on housing, schools, and public services would be negligible.

3.10.5 Mitigation Measures

Because there are no significant adverse impacts caused by the Project, no socioeconomic-specific mitigation measures are proposed.

3.10.6 Laws, Ordinances, Regulations, and Standards

Table 3.10-16 presents a summary of the LORS, including the Project's conformance to them.

Table 3.10-16. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Application Section Explaining Conformance
Federal			
Executive Order 12898	Avoid disproportionately high and adverse impacts on minority and low-income members of the community. Applies only to federal agencies. However, was used to inform an analysis of impacts to environmental justice communities for the Project	USEPA	Not applicable
State			
California Code of Regulations Title 14, Section 15131 (CEQ)	CEQA identifies several environmental factors that are addressed or referenced in this analysis, including Population/Housing, Utilities/Service Systems, Public Services, and Agricultural Resources	Office of Administrative Law (OAL)	Section 4.10.2

Table 3.10-16. Laws, Ordinances, Regulations, and Standards

LORS	Requirements/ Applicability	Administering Agency	Application Section Explaining Conformance
	Economic/social effects of a project are not treated as significant effects on the environment, while they may be used to determine the significance of physical changes caused by the Project.		
Government Code Sections 65996-65997	Establishes that the levy of a fee for construction of an industrial facility be considered mitigating impacts on school facilities. School Districts may charge a one-time assessment fee to mitigate potential school impacts.	Local School Districts	Section 4.10.2.4
Education Code Section 17620	Allows a school district to levy a fee against any construction within the boundaries of the district for the purpose of funding construction of school facilities. Local school districts may charge a one-time assessment fee to mitigate potential school impacts	California Department of Education	Section 4.10.2.4
Local			
County of Alameda General Plan	Comprehensive long-range plan to serve as the guide for the physical development of the County	Alameda County Community Development Agency Planning Department	Section 4.10.5.3
County of Alameda Municipal Code, Title 17, Zoning	Establishes zoning districts governing land use and the placement of buildings and district improvements	Alameda County Clerk of the Board of Supervisors	Section 4.10.5.3

3.10.6.1 Federal LORS

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," requires federal agencies to consider whether the project may result in disproportionately high and adverse human health or environmental effects on any minority or low-income population by performing an environmental justice analysis. Since the signing of the Executive Order 12898, CEC has included this topic in its power plant siting decisions to ensure that the Applicant identifies and addresses any potential adverse impacts to socioeconomic resources.

3.10.6.2 State LORS

California Code of Regulations Title 14, Section 15131 states that the potential social or economic effects of a project shall not be treated as significant effects on the environment; however they may be used to determine the significance of physical changes caused by the project. Additionally, the code states that social, economic, and housing factors shall be considered by public agencies along with environmental and technology factors to determine whether changes to a project are necessary to avoid or reduce potentially significant effects on the environment.

California Government Code Sections 65996 and 65997 provide the exclusive methods of considering and mitigating impacts on school facilities that might occur because of the development of real property. Education Code Section 17620, listed in California Government Code Section 65997 as an approved mitigation method, allows school districts to levy a fee or other requirement against construction within the boundaries of the school district for the purpose of funding construction of school facilities.

3.10.6.3 Local LORS

Alameda County General Plan

The General Plan identifies eight elements of Alameda County, including Community Climate Action Plan, Conservation Element, Housing Element, Noise Element, Open Space Element, Recreation Plan, Safety Element, and Scenic Route Element. Each element includes goals and policies for their respective topics to promote increased sustainability, adequate housing, safety, conservation, scenic quality, and a high quality of life for Alameda County residents. The purpose of the elements is to allow for the utilization of innovative land planning and building design.

East County Area Plan

The East County Area Plan, Policy 218, states that the County shall allow development and expansion of public facilities (e.g., parks and recreational facilities; schools; childcare facilities; police, fire, and emergency medical facilities; solid waste, water, storm drainage, flood control, subregional facilities; utilities etc.) in appropriate locations inside and outside the Urban Growth Boundary consistent with the policies and Land Use Diagram of the East County Area Plan.

Alameda County Municipal Code, Title 17, Zoning

Title 17, Chapter 17.02.050 Districts, of Alameda County's Municipal Code further refines the Alameda County General Plan and provides additional detail pertaining to allowed and conditional uses and specific development standards for the various zoning districts.

3.10.7 Agencies and Agency Contacts

Table 3.10-17 provides a list of agencies and contacts of potentially responsible agencies.

Table 3.10-17. Agency Contacts for Socioeconomics

Issue/Approval	Agency	Contact
Law Enforcement	Alameda County Sheriff	Sheriff/Coroner Yesenia Sanchez
Fire Protection	Alameda County Fire Department	Deputy Chief Eric Moore, Communications and Support Services
Emergency Management	Alameda County EMS Agency	Lauri McFadden, EMS Director
Economic Development	Alameda County Economic and Civic Development	Eileen Dalton, Director

3.10.8 Permits and Permit Schedule

This evaluation has identified no permits related to socioeconomics will be required.

3.10.9 References

California Energy Commission. July 2021. California Code of Regulations, Title 20. Public Utilities and Energy, Division 2. State Energy Resources Conservation and Development Commission. Available: https://www.energy.ca.gov/sites/default/files/2021-07/Title%2020%20Updated%20July%2023%2C%202021.pdf.

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