

<b>DOCKETED</b>	
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<b>Project Title:</b>	Vaca Dixon Power Center Project
<b>TN #:</b>	268144
<b>Document Title:</b>	Chapter 1_Executive Summary_VDPC
<b>Description:</b>	This chapter provides an executive summary of the Project and presents Project objectives, location, components, schedule, and ownership details as well as a list of Application preparers.
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# 1 Executive Summary

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Vaca Dixon BESS LLC and Arges BESS LLC (Applicants) propose to construct, operate, and eventually repower or decommission the Vaca Dixon Power Center Project (Project). The Project consists of battery energy storage system (BESS) facilities on approximately 10 acres in the City of Vacaville, Solano County, California. The major Project components include:

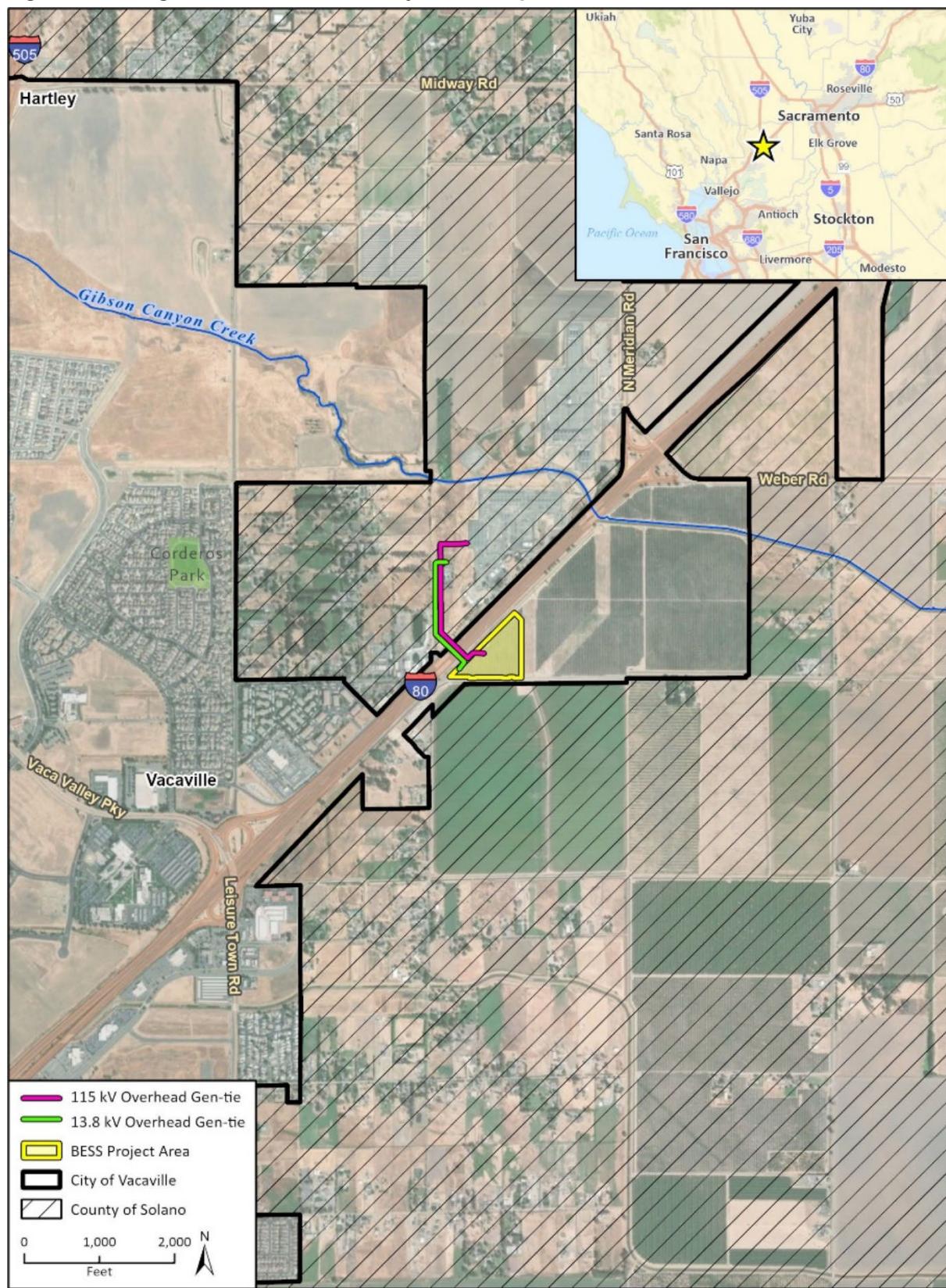
- Vaca Dixon BESS (57 megawatts [MW], 1-hour duration, 57 megawatt-hours [MWh]) with associated electrical switchyard
- Arges BESS (100 MW, 4-hour duration, 400 MWh) with associated electrical switchyard
- Overhead generation intertie (gen-tie) lines crossing Interstate 80 (I-80) to connect the BESS facilities to the existing Pacific Gas and Electric Company (PG&E) Vaca-Dixon Substation
- Ancillary facilities including access roads, stormwater detention basins, and landscaping on the 10-acre BESS Project Area

The Project Site and related facilities were selected taking into consideration the Project environmental impacts, water, engineering constraints, site geology, and electric transmission constraints, among other factors. A detailed discussion of site selection is provided in Chapter 6, *Project Alternatives*. The main elements of the Project are further summarized in Subsection 1.1.2, Project Elements. Chapter 2, *Project Description*, provides Project details and Chapter 4, *Engineering*, provides additional engineering and design detail for this Opt-In Application. Section 5.5, *Visual Resources* provides a visual depiction of the existing conditions and visual simulations of the same areas following completion of construction of all Project components.

## 1.1 Project Overview

The Project location and main elements of the Project are discussed in the following subsections. Figure 1-1 depicts the regional location and Project vicinity and Figure 1-2 provides an overview of the Project Site and components.

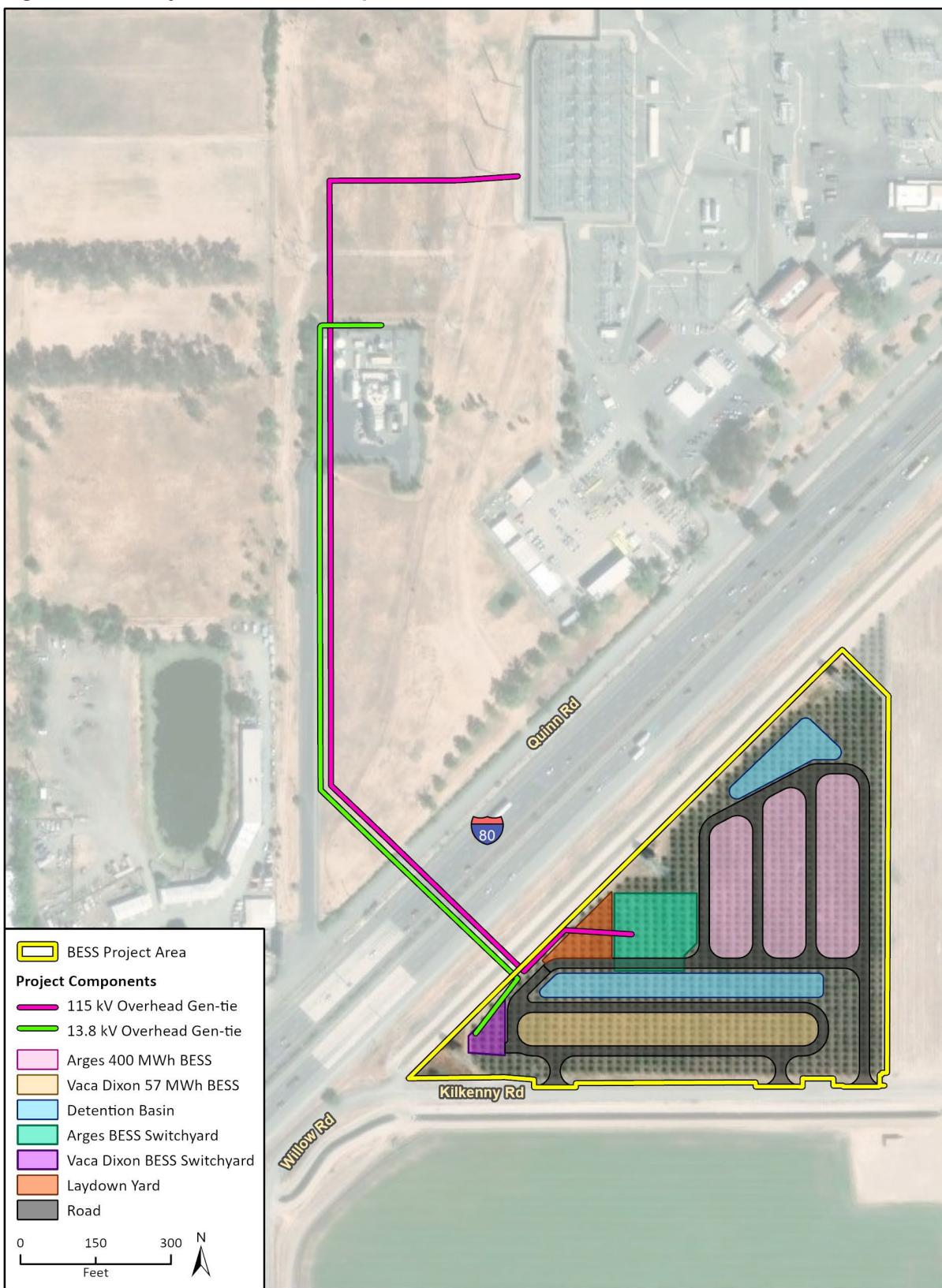
**Figure 1-1 Regional Location and Project Vicinity**



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Fig 2-1 Regional Location\_Portrait

## Figure 1-2 Project Site and Components



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### 1.1.1 Project Location

The BESS components of the Project are located in the City of Vacaville, California. The combined BESS components footprint encompasses approximately 10 acres on APN 0133-060-060. The proposed Vaca Dixon 57 MWh BESS component is located on approximately 4.25 acres in the southern portion of the BESS Project area. The proposed Arges 400 MWh BESS component is located on approximately 5.75 acres in the northern portion of the BESS Project area (Figure 1-2).

The Project's overhead gen-tie lines would extend north from the BESS facilities, crossing the I-80 to connect to the existing PG&E Vaca-Dixon Substation located on a PG&E-owned parcel in unincorporated Solano County.

Table 1-1 provides the section, township, range, and assessor's parcel number (APN) for the two parcels located within the Project Site. A list of the owners of property within 1,000 feet of the Project facilities and 500 feet of the gen-tie lines, as well as a map of the APNs within these areas and within the Project Site are provided in Appendix A.

**Table 1-1 Project Site Assessor's Parcel Numbers**

Assessor's Parcel Numbers	Section(s)-Township-Range	County
<b>BESS Facilities</b>		
0133-060-060	S01 – 06N – 01W	Solano County
<b>Gen-tie Line Routes</b>		
0133-060-070	S01 – 06N – 01W	Solano County

### 1.1.2 Project Elements

Project elements including the BESS facilities and gen-tie lines are shown in Figure 1-2. The main Project elements are discussed in the following subsections.

#### **BESS**

The Project BESS facilities would consist of modular lithium-iron-phosphate battery technology housed in non-habitable enclosures with integrated heating, ventilation, air conditioning, fire detection, and suppression systems. Each enclosure would contain battery modules managed by a battery management system for monitoring and safety. Power conversion system (PCS) inverter skids, equipped with inverters, transformers, and protection equipment, would connect to the enclosures via underground conduits.

The Vaca Dixon 57 MWh BESS facilities would include 21 battery enclosures and 21 PCS skids, while the Arges 400 MWh BESS facilities would include 50 battery enclosures and 25 PCS skids, with additional units added over time to maintain capacity. The system is designed for safe operation under a wide temperature range and compliance with Underwriters Laboratories (UL) Certification requirements and fire safety standards.

#### **Overhead Gen-Tie**

The Project includes overhead gen-tie lines to connect the BESS facilities to the existing PG&E Vaca-Dixon Substation. The gen-tie alignment would span approximately 1,815 feet for the Vaca Dixon 57 MWh BESS and 2,350 feet for the Arges 400 MWh BESS. Gen-tie components would be co-located on shared transmission structures carrying both 13.8 kV and 115 kV conductors for approximately

1,500 feet of the gen-tie lengths, from the vicinity of the BESS switchyards across I-80 and up to the northwest corner of the CalPeak Power Vaca Dixon Peaker Plant (VDPP) facility site where the lines would bifurcate. From this point, the Vaca Dixon 57 MWh BESS 13.8 kV line would extend a short distance to the east and tie in to the low side of the existing generation step-up (GSU) transformer in the VDPP switchyard, which is connected to the PG&E substation by an existing 115 kV line. The Arges 400 MWh BESS 115 kV gen-tie route would continue approximately 725 feet north and east to the connection point at the PG&E Vaca-Dixon Substation.

## **Utility Switchyards**

The Project includes two switchyards to manage electrical flow and interconnection. The Vaca Dixon 57 MWh BESS electrical switchyard would be located west of the Vaca Dixon 57 MWh BESS component. This switchyard would collect circuits at 13.8 kV, manage energy flow, and provide isolation for safety. It would enable the Vaca Dixon 57 MWh BESS to connect to or disconnect from the grid and transfer stored energy through an overhead gen-tie to the existing VDPP switchyard.

The Arges 400 MWh BESS switchyard, located west of the 400 MWh Arges facility, would feature a 34.5 kV collection bus, a main transformer to step up voltage to 115 kV, and a circuit breaker with a gen-tie takeoff structure. It would connect to the PG&E Vaca-Dixon Substation via a 115 kV overhead gen-tie line supported by steel monopoles as described above and would house control equipment, supervisory control and data acquisition systems, and backup power.

## **Water Supply Routes and Facilities**

The water supply needs for the Project would be met by tapping nearby City of Vacaville water supply facilities. Construction water would be supplied by connecting to a fire hydrant adjacent to the southwest corner of the BESS Project area. The Project would obtain water during the operation phase from the City of Vacaville through an existing 12-inch water main located along the northern site boundary. Water would be used for construction activities such as dust suppression and grading, and for operational needs including fire protection and limited landscape irrigation. No new water supply sources or treatment facilities are required; connections would be made to existing nearby municipal infrastructure.

## **Fire Protection Systems**

The Project incorporates multiple fire protection measures focused on fire safety and environmental protection. Each battery enclosure would include internal fire detection and suppression systems, heating, ventilation, and air conditioning (HVAC) for thermal management, and a battery management system for monitoring voltage, temperature, and fault conditions. Fire suppression would use gaseous agents compliant with National Fire Protection Association (NFPA) standards and California Fire Code requirements. Additional safety features include combustible gas detection, alarms, and emergency ventilation systems.

## **1.2 Project Schedule**

Construction of the Project is anticipated to take approximately 24 months to complete.

Construction of the Vaca Dixon 57 MWh BESS component and associated gen-tie facilities is planned to begin in July of 2027 and would be operational by July 2028. Construction of the Arges 400 MWh BESS component and associated BESS facilities is planned to begin in June of 2028 and would be operational by June 2029.

## 1.3 Project Ownership

### 1.3.1 Project Applicant, Owner, and Operator

The Project, including the BESS facilities and gen-tie lines, would be owned and operated by the Applicants (Vaca Dixon BESS LLC and Arges BESS LLC). Lease agreements are currently in place between the Applicant and Thiara Brothers, LLC for construction and operation of the BESS facilities on APN 0133-060-060 as well as with PG&E for construction and operation on APN 0133-060-070.

## 1.4 Persons Who Prepared the Opt-In Application

Appendix B contains a list of persons involved in the preparation of the Opt-In Application including their roles and responsibilities.