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August 23, 2022

Ample, Inc. Briefing to City of Brisbane Economic Development Subcommittee

Purpose

This document provides an overview of Ample's existing investments in the City of Brisbane and the proposed deployment of Ample battery swapping stations for electric vehicles at two locations managed by the City of Brisbane.

Overview of Ample

Ample owns and operates a repowering system for electric vehicles (EVs) that provides a superior alternative to fast charging EVs for many use cases. The system is built around a swappable battery pack and automated swapping stations that enable cleaner, faster, more efficient operation of EVs. Ample manufactures key components of the system (swappable battery packs, adaptor kits, and swapping stations) and operates a network of swapping stations that support a subscription-based repowering service for EV fleets. Ample launched operations in March 2021, providing swap-enabled Nissan Leaf and Kia Niro EVs to rideshare drivers in the Bay Area.

Background on Battery Swapping

Battery swapping is a replacement for fast charging that is as fast, economical and convenient as gasoline. Ample's battery swapping system robotically removes depleted batteries from EVs, racks them for external recharging and replaces them with charged batteries in just minutes. While battery swapping is functionally equivalent to a gasoline station in terms of speed and utility, it generates no greenhouse gas emissions or criteria pollutants. Battery swapping also has significant advantages over public charging. It is much faster, so swapping reduces dwell times (for both driver and vehicle); it increases utilization rates for capital intensive electrical generation, transmission and distribution assets; and it provides grid-scale storage for renewables, demand response functions and other grid services.

Ample's Investments in the City of Brisbane



Ample has invested significantly in the City of Brisbane. It is currently working with local stakeholders to carry out two projects within the City: 1) expansion of Ample's existing fabrication facility and 2) deployment of multiple battery swapping stations. These projects will drive economic growth, create jobs for local residents and expand the City's tax base.

Brisbane Plant

Ample opened its Brisbane modular battery pack production facility (based in the Crocker Industrial Park) in 2022. By 2024, Ample estimates that annual production at the Brisbane Plant will be equivalent to approximately 14,400 EVs. Currently, Ample employs 20 people at the Brisbane Plant. Headcount is expected to increase to 31 within two years. This growth will bring well-paid jobs to the city and generate associated tax revenue. Ample has worked with City staff and elected officials to secure a competitive manufacturing grant through the California Energy Commission's GFO-21-605 Zero-Emission Transportation Manufacturing Grant Program. The proposed grant project would result in positive economic impacts on the Brisbane community stemming from construction-related employment (short term) and additional manufacturing employment (long term). As a result of Ample's existing investments and positive experience collaborating with City officials, Brisbane is also a top contender for future investments in facilities to support Ample's manufacturing and operations. In the coming years, Ample will require millions of square feet of industrial space for on-vehicle components, battery Swapping station subsystems, and inventory warehouses, which will employ hundreds of workers. Ample looks forward to continuing to collaborate with the City and growing our local presence.

Battery Swapping Stations

The City of Brisbane is an ideal swapping station deployment site due to proximity to both U.S. Route 101 and San Francisco International Airport. Deploying Battery swapping stations in the City will strengthen Ample's relationship with Brisbane and directly benefit the local economy. Ample swapping stations will support the electrification of local business transport and delivery vehicles, and benefit businesses through increased customer traffic. It will also establish public EV infrastructure that will eventually serve Brisbane residents. Each of the proposed locations can serve up to 80 drivers per day per station. These drivers will patronize businesses located in the Brisbane Village Center. Finally, Ample will pay competitive monthly rental income to the City (see Proposed Agreement Terms below).

Proposed Site Plans- Brisbane Village Center and Brisbane Marina

In conversations about Ample's proposed Brisbane plant expansion, Mayor Mackin recommended Ample work with Community Development Director John Swieki to explore potential locations for Ample swapping stations. From June through July of 2022 Ample's deployment team and Mr. Swieki identified three potential locations: 1.) the former Bank of America Building at Brisbane Village Center, 2.) the parking lot at the Brisbane Marina, and 3.) the Brisbane Park and Ride. Ample's deployment team proposed moving forward with the first two locations and eliminating the Brisbane Park and Ride due to space constraints. More detail on the proposed locations is provided in the section below.

Brisbane Marina (400 Sierra Point Parkway)

The Brisbane Marina, located at 400 Sierra Parkway, was identified as a proposed location for the deployment of up to three (3) Ample battery swapping stations. The Proposed Site Plan (see aerial map below) outlines the location of these proposed stations in green and the existing

transformer in yellow. We have placed the stations in an underutilized area of the parking lot to mitigate any adverse impact to the Marina visitors and to position the swapping facilities in close proximity to the transformer. PG&E's Integrated Capacity Analysis (ICA) Map indicates 1.5-2 MW of available capacity, which is more than sufficient for Ample stations (100 kW/station, total of 300kW needed capacity see Station Specifications for more detail below).

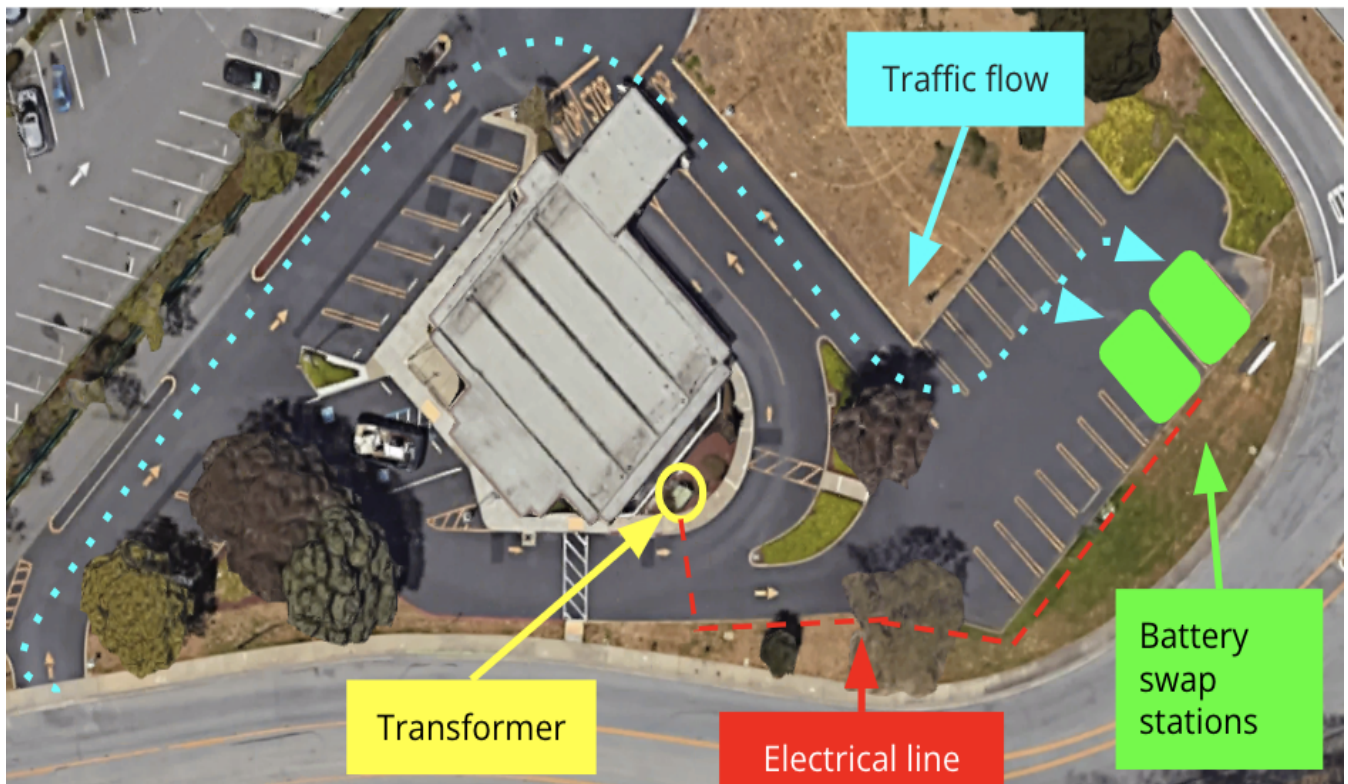
Brisbane Marina Proposed Site Plan



Former Bank of America Building (70 Old County Rd)

The former Bank of America Building, located at 70 Old County Rd, was identified as a proposed location for the deployment of two (2) Ample battery swapping stations. The Proposed Site Plan (see aerial map below) outlines the location of the stations in green and the existing transformer in yellow as well as the proposed electrical line in red. Similar to the Marina, the stations are located in an underutilized area of the parking lot. In addition, PG&E's Integrated Capacity Analysis (ICA) Map indicates 1 MW of available capacity, which is more than sufficient for Ample stations (100 kW/station, total of 200kW needed capacity see Station Specifications for more detail below).

Bank of America Proposed Site Plan



Proposed Agreement Terms

This section describes the key business terms between Ample, Inc (Ample) and the City of Brisbane (Brisbane) related to the deployment of Ample Battery Swapping stations (Stations). Ample and Brisbane will establish an agreement whereby Ample will install, own and operate swapping stations on two locations owned by Brisbane. Ample swapping stations will be used by vehicles that will temporarily park inside the station, exchange depleted batteries for charged batteries, and then exit the Station. Ample and Brisbane will develop and sign an agreement after both parties agree to these terms.

An initial summary of Key Terms are provided below.

Timeline:

- Start: October 01, 2022

- End: October 01, 2024

Location/Number of Stations Deployed:

- Site 1:
 - Address: 400 Sierra Point Parkway, Brisbane CA 94005
 - Number of Stations: Three (3) Stations
- Site 2:
 - Address: 70 Old County Rd, Brisbane CA 94005
 - Number of Stations: Two (2) Stations

Ample's Responsibilities

- Installation of Ample Station:
 - Install Ample station at Brisbane designated locations at no cost to Brisbane. Ample will be responsible for installation costs including all required permits and necessary site preparation to support the installation (eg., connection to electric distribution panel, internet, security, etc.).
- Operations of Ample Stations:
 - Ample will be responsible for operation of stations to support battery swapping for EV fleet customers.
 - Ample will provide a phone number to Brisbane for 24 hour customer support to address any issues associated with the Ample station as well as a path of escalation for any problems encountered during operation.

Brisbane's Responsibilities

- Installation of Ample Station:
 - Brisbane will provide space for the installation and operation of Ample stations at mutually agreed locations.
 - Brisbane will provide support for any permitting, connecting to the distribution utility and other required approvals required for the installation of Ample Stations.

Rent

- Ample agrees to pay rent at the rate of \$800 per station for 5, or a total of \$4,000 per month, for the duration of the agreement.

Energy Cost

- Ample will install a separate utility meter to track energy consumption of Ample Battery Stations and establish a new customer account to pay for all associated energy costs with the local utility company (PG&E/distribution utility & Peninsula Clean Energy/CCA)

Station Specifications

Energy Storage:

- Energy Chemistry: Lithium-ion (NMC)
- Energy Storage Capacity: up to 440 kWh

Electrical Specifications:

- Power (AC): 100 kW
- Voltage (AC) 3-phase 208/240V - 480V
- Current: 3-phase: 200 A service, 125 A typical
- Frequency: 50 / 60 Hz +/- 1%

Mechanical Specifications:

- Dimensions: 19' 0" (5782mm) x 16' 8" (5074mm) x 9' 6" (2901mm)
- Weight: 1,912 kg (4,215 lbs)
- Grading: < 2 degrees inclination

Environmental Specifications:

- Installation Location: Outdoor

Network and Compliance:

- Network Connection: Ethernet (preferred)/4G LTE
- Internet Speed: 10 mbps minimum

Adjacent space

- (Desired) 18' in front of station for easy turning radius
- 3" away from building structures or walls

