CAC Item C7
Consent Item 12

TO: Ava Community Energy Authority

FROM: **Brett Wiley, Senior Program Associate**

SUBJECT: **Optiwatt Managed Charging Scope Addition to Lunar Contract**

DATE: June 12, 2024

Recommendation

Approve a Resolution for the CEO to negotiate and execute a DERMS contract with Lunar Energy – previously approved at the May Board of Director's meeting – that now includes a subcontracted scope with Optiwatt for managed electric vehicle ("EV") charging services resulting from Ava's 2023 request for proposals ("RFP") soliciting proposals.

Optiwatt's proposal offers scalable marketing services and managed EV charging program management with data services support to enhance Ava's expertise in identifying and enrolling EV customers to manage their charging load. Managed EV charging is a priority Distributed Energy Resource ("DER") in our forthcoming virtual power plant ("VPP") via a Distributed Energy Management Software ("DERMS") contract, currently under negotiation with Lunar Energy.

Background and Discussion

There are more than 114,000 EVs domiciled in Alameda and San Joaquin Counties[1]. Currently, these customers are commonly charging during expensive and carbon intensive times. Furthermore, nearly half of these customers are not on EV Time of Use ("TOU") rates. Through managed charging, Ava could optimize many of these EV

[1] At the end of Q1 2024. Estimated based on Ava customer data and the California Energy Commission new EV sales dashboard.

drivers to charge during more desired times, which would reduce peak demands and associated greenhouse gases (“GHG”), while lowering our customer’s cost of energy.

Managed EV charging programs allow customers to enroll their vehicle or home charger into a platform that manages their charging to optimize electricity costs while still meeting their specific charging needs. The customer can set their vehicle charging needs, then let the program optimize for the best outcome while they get the state of charge needed by their prescribed time. Customers typically save money on their energy costs and reduce GHG emissions, while load serving entities can shift & shape charging load to reduce procurement costs and portfolio-wide emissions that benefits all customers. Enrollment and performance incentives further increase optimal participation while delivering additional customer benefits.

Ava’s Smart Charge Pilot spanned January 2023 to May 2023 to understand the impact of this service on Ava and our customers. The following pilot results are evidence of the value these programs can provide:

- Managed charging was widely accepted and valued among participants. Only 3% of charging sessions were overridden by participants because they needed their vehicle charged faster than it would have been on the managed charging schedule. Customers valued the ability to save money and charge during lower carbon hours – something that standard EV maker apps don’t provide – with easy ways to “set and forget” their personal charging needs and ability to “boost” charging when they need one right away.

- Our customers’ EV charging is a more flexible load. Pilot participants on average had their EVs plugged in for roughly 12 hours per charging session, with half of all charging sessions starting between 6-9pm, while only needing to charge 2.5 hours on the typical day.

- Peak load was meaningfully shifted, and customers saved money on their home charging. EV2 and E-TOU-C rate customers currently represent 78% of our EV drivers. In the pilot, EV2 rate customers’ total charging consumption was 20% during the peak and 24% during partial peak without managed charging. With managed charging, the total charging consumption was reduced to 2.5% during the peak and 4% during partial peak. For E-TOU-C rate customers, their peak charging was reduced from 17.5% down to 3%.

Managed charging programs by MCE, Peninsula Clean Energy, Silicon Valley Clean Energy, and Sonoma Clean Power validate similar results.

As Ava pursues a greener and more resilient energy future for its customers, improving the penetration of optimized EV charging, amid a suite of other DERs across our service area, will be foundational to our forthcoming VPP. This will be a key strategy to maximize the use of local renewables, reducing Ava's need for grid energy during peak times, and saving our customers money on their bills. This will be especially important as EV adoption accelerates in Alameda County and San Joaquin County. Our service area is seeing some of the highest EV adoption rates in the country with 32% of all new light-duty vehicles sold in 2023 being 100% electric, according to the California Energy Commission. Yet, market growth is still in the early stages since all light duty vehicles sold in California will be 100% zero emissions by 2035 per the California Air Resource Board's Advanced Clean Cars II ruling.

Vendor Selection

On November 3, 2023 Ava released a solicitation for a DERMS provider that included an additional scope for managed EV charging services. The goal of the solicitation was to contract with a single DERMS provider with the ability to control a suite of existing and future DERs types on a single platform, and provide Ava with centralized control to optimize the managed load for carbon emission mitigation, energy cost savings for customers, and procurement cost reductions. Firms could respond as a team or to individual scopes, ensuring we casted a wide net looking for the best solution while understanding existing market integrations and partners.

In addition to platform capabilities and DERMS integration, the managed charging scope evaluation criteria included an assessment of customer acquisition strategy, program experience, coverage of available EVs and chargers, partnerships, pricing structure & budget, and overall ability to scale.

Additional desired qualifications included an ability to enroll light duty fleets, willingness to accept performance-based pricing, management & retained value of Low Carbon Fuel Standard ("LCFS") credits, and performance in event-day demand response markets.

Ava received and evaluated three unique responses from market leaders in managed EV charging. During the evaluation process, two firms were identified as providing offers that fit Ava's needs best while being quite competitive in the standard and additional qualifications. Those firms were interviewed and provided a live demonstration of the consumer-facing managed EV charging application and the back-end dashboards & reporting.

Optiwatt's scope of work provides the best value and alignment to Ava and our RFP requirements. Ava staff recommend engaging Optiwatt to develop our managed EV charging program, implement a robust marketing campaign, enroll & support customers as program participants, and manage customer incentives & ongoing program administration, for the following reasons:

- Optiwatt's customer experience, enrollment options via an app or website, and existing market success to enroll EVs and chargers in other similar programs;
- Optiwatt demonstrated an ability to implement a wide-ranging and adaptable marketing campaign to reach the scale of program enrollments with as many Ava customers as possible, supporting electricity cost savings and distributing incentives broadly to program participants;
- Optiwatt's paired proposal & DERMS integration with Lunar Energy provide a streamlined way for Ava to contract with our two leading vendors via a single contract, while maintaining direct oversight of Optiwatt's work;
- Optiwatt's compatibility with a broad range of EVs and chargers;
- Optiwatt's ability and cost competitiveness to enroll a larger share of the total addressable market; and
- Ava will retain 100% of the value of LCFS credits generated in the program, which Ava can pass those benefits along to our customers.

Optiwatt's proposed scope of work would be executed via a subcontract with Lunar Energy. Optiwatt's managed EV charging scope includes marketing services in concert with Ava's own marketing, an Ava-branded app, technical integrations to EVs & chargers for the VPP, program launch, ongoing program management, data & reporting, and an optional scope related to EV fleet management.

In total, Optiwatt has committed to a minimum of 5,000 EVs and chargers enrolled by the end of the first year and 10,000 total enrollments by the end of the second year. The scope includes risk mitigation penalties for under performance. The minimum enrollments proposed in Year 1 and Year 2 would make this program one of the largest in California.

Fiscal Impact

The proposed contract term is two years with a not-to-exceed limit of $2.3 million, with three one-year options to extend. The Local Development Fund has already allocated $3 million for managed EV charging in the FY 23/24 budget. No additional expenditure is requested to support this contract at this time.

Attachments

A. Resolution
B. Presentation

RESOLUTION NO. R-2024-XX

A RESOLUTION OF THE BOARD OF DIRECTORS

OF AVA COMMUNITY ENERGY AUTHORITY AUTHORIZING THE CEO TO NEGOTIATE AND EXECUTE A MASTER SERVICES AGREEMENT AMENDMENT WITH LUNAR ENERGY TO INCLUDE OPTIWATT MANAGED CHARGING SERVICES

WHEREAS The Ava Community Energy Authority ("Ava") was formed as a community choice aggregation agency ("CCA") on December 1, 2016, Under the Joint Exercise of Power Act, California Government Code sections 6500 *et seq.,* among the County of Alameda, and the Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Piedmont, Oakland, San Leandro, and Union City to study, promote, develop, conduct, operate, and manage energy-related climate change programs in all of the member jurisdictions. The cities of Newark and Pleasanton, located in Alameda County, along with the City of Tracy, located in San Joaquin County, were added as members of Ava and parties to the JPA in March of 2020. The city of Stockton, located in San Joaquin County was added as a member of Ava and party to the JPA in September of 2022. The city of Lathrop, located in San Joaquin County, was added as a member to Ava and party to the JPA in October of 2023. On October 24, 2023, the Authority legally adopted the name Ava Community Energy Authority, where it had previously used the name East Bay Community Energy Authority since its inception.

WHEREAS in 2020, Ava committed to a zero-emission power supply by 2030, fifteen years ahead of state law requirements;

WHEREAS there are more than 114,000 EVs domiciled in Alameda and San Joaquin Counties at the end of Q1 2024[1];

WHEREAS Ava issued a request for proposals ("RFP") on November 3, 2023 for a Distributed Energy Resources Management System (DERMS) provider to oversee a suite of Distributed Energy Resources ("DERs") including a specific scope for managed charging, prioritizing electric vehicles ("EVs") and home charging as a highly dispatchable DER.

WHEREAS Ava received three bids for managed charging and selected Optiwatt based on their proven experience, technological capabilities, marketing expertise, willingness to contract through Lunar Energy, and align with Ava's objectives;

WHEREAS The Fiscal Year 2023/2024 budget included $3M for the development and administration of managed EV charging;

[1] Estimated based on Ava customer data and the California Energy Commission new EV sales dashboard

WHEREAS Optiwatt is capable of supporting program design and administrative needs for the managed charging program while aggregating and integrating those resources into our DERMS;

WHEREAS Ava's Board on May 15, 2024 approved the CEO to negotiate and execute a contract with Lunar Energy as Ava's DERMS provider.

WHEREAS Ava wishes to amend its contract with Lunar Energy to include Optiwatt's managed charging services scope and expand its capabilities to manage DERs, in a manner that benefits customers and Ava's pursuit of carbon-free electricity by 2030.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF AVA COMMUNITY ENERGY AUTHORITY DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The CEO is hereby authorized to negotiate and execute a Master Services Agreement amendment with Lunar Energy for inclusion of Optiwatt's managed charging software, program design, and administrative services for an amount not to exceed $2.3 million over a 2-year contract period.

ADOPTED AND APPROVED this 12th day of June, 2024.

_____

Jack Balch, Chair

ATTEST:

_____

Adrian Bankhead, Clerk of the Board

Attachment Consent Item 12B

Ava Community Energy

Managed Charging Program and Vendor Selection

Board Presentation
6/12/24

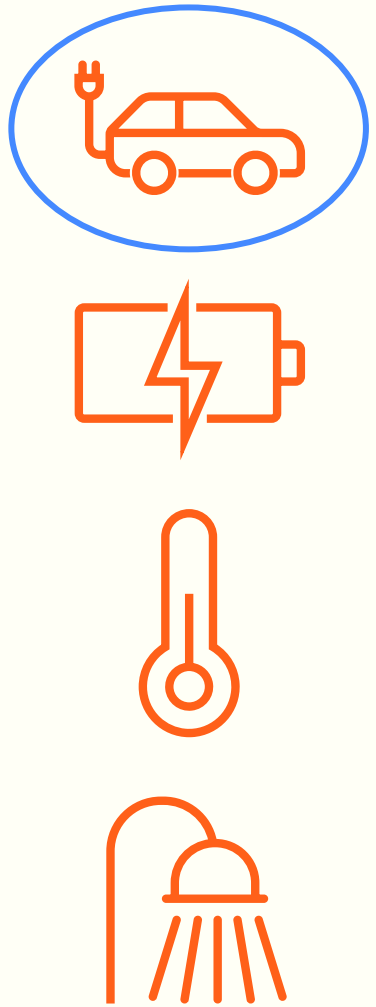
What is a DERMS?

Distributed Energy Resource Management System

A **software platform** designed to communicate with and optimize the operation of various distributed energy resources (DERs) located across Ava's service territory, such as:

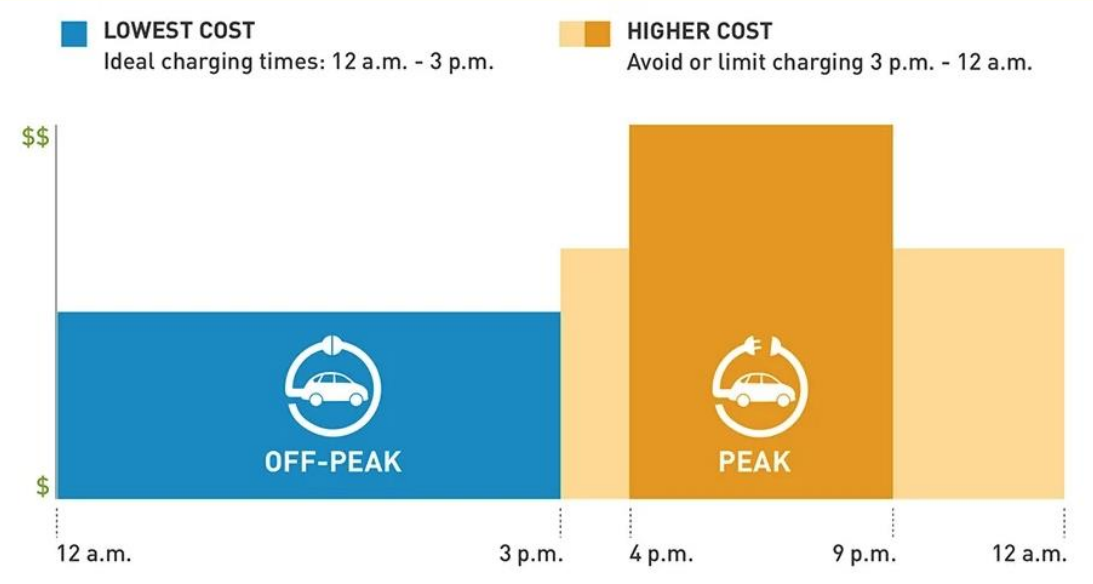
- electric vehicles
- batteries
- thermostats, and
- heat pump water heaters

Ava Board of Directors approved a resolution for the CEO to negotiate and execute a contract with our recommended DERMS provider Lunar Energy at the May 2024 Board meeting.



Why Ava Needs Managed Charging

EV2 Rate



E-TOU-C Rate

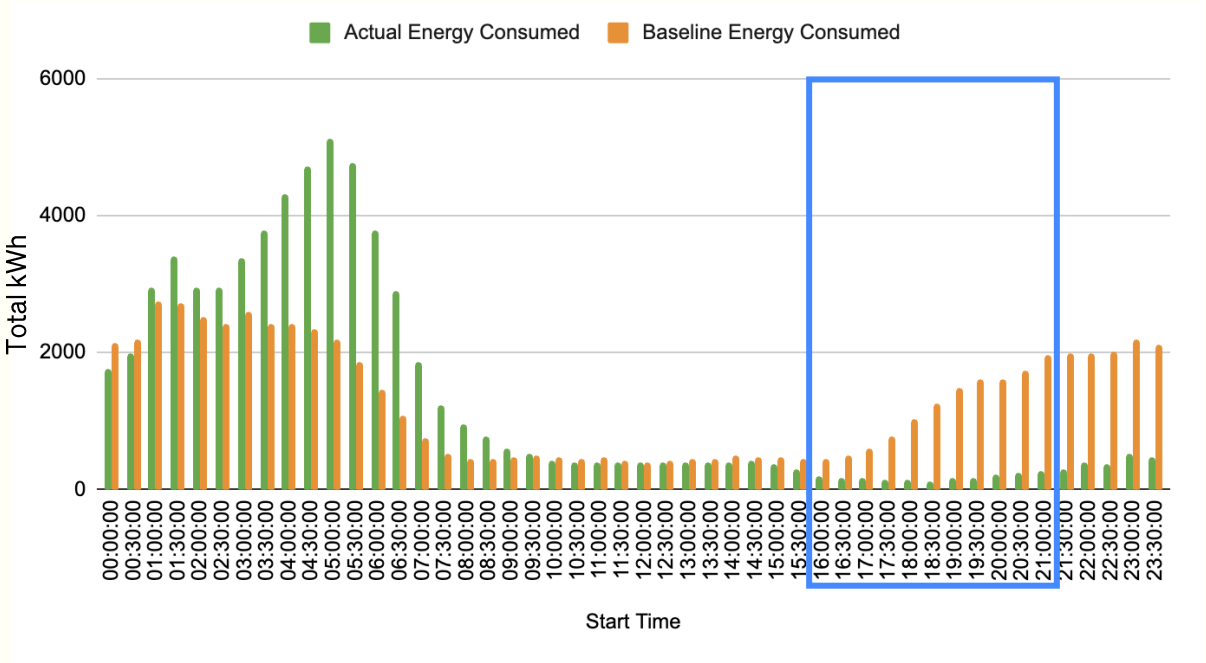
Why Ava Needs Managed Charging

Ava's Smart Charge Pilot (Jan-May 2023) reduced peak & part-peak (3pm-12am) charging from 44% to 6% of daily EV load among pilot participants

Rates alone don't shift charging behavior, while charging load is fairly flexible

Customers can reduce their costs without a change in their desired state of charge for their "ready by" time

Managed EV Charging Consumption v. Non-Managed EV Charging Consumption in Ava's Smart Charge Pilot



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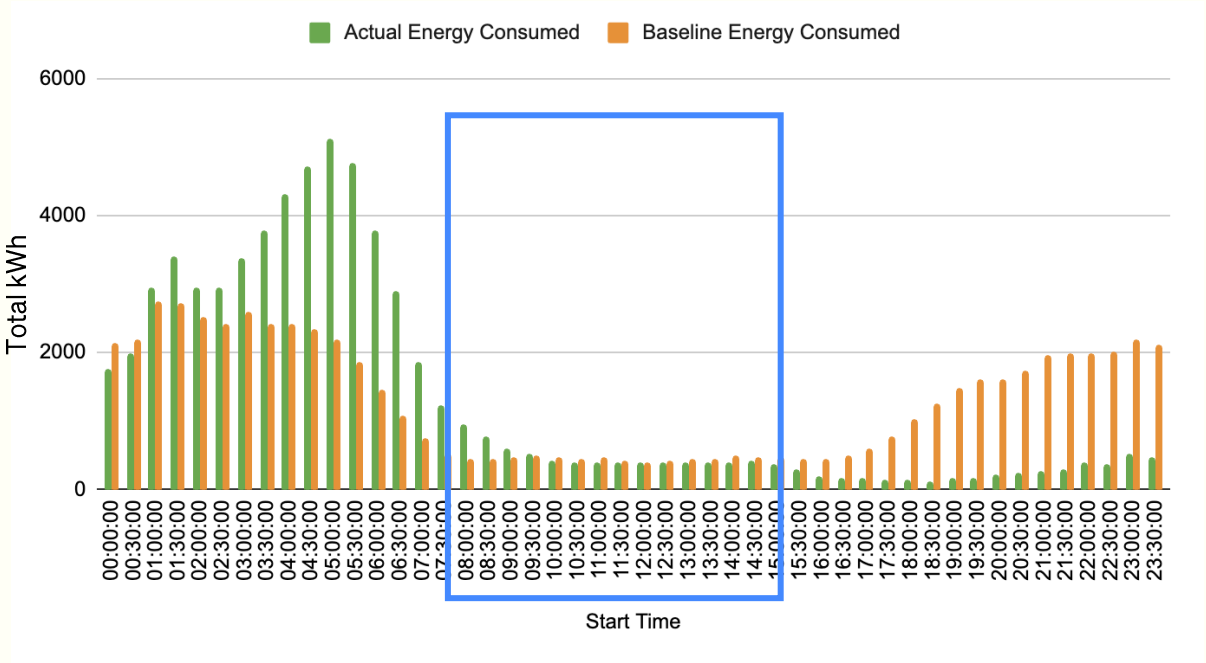

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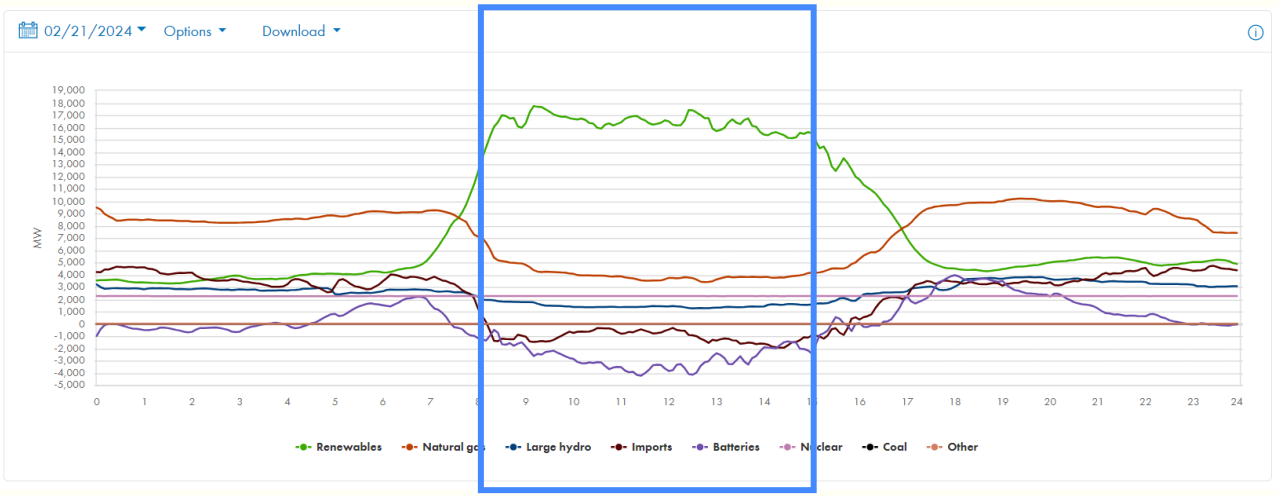
CAISO Supply Trend for 2/21/24, and showing a typical trend between renewables and natural gas between Sept '23 and Feb '24



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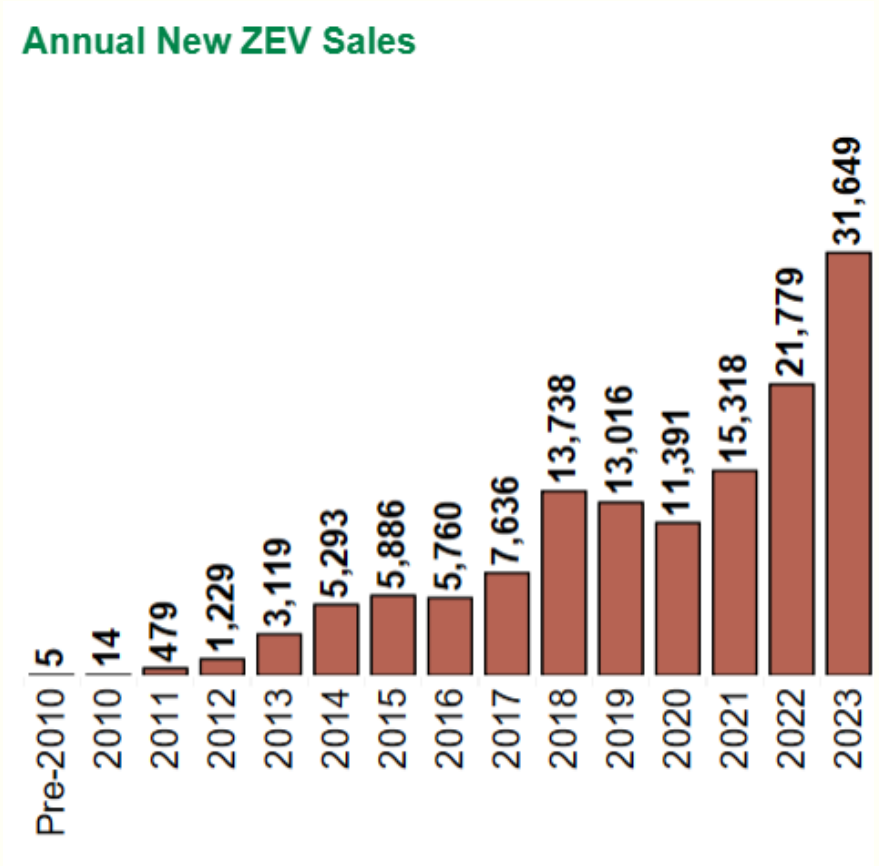

Source: CEC ZEV Dashboard; Alameda & San Joaquin Counties

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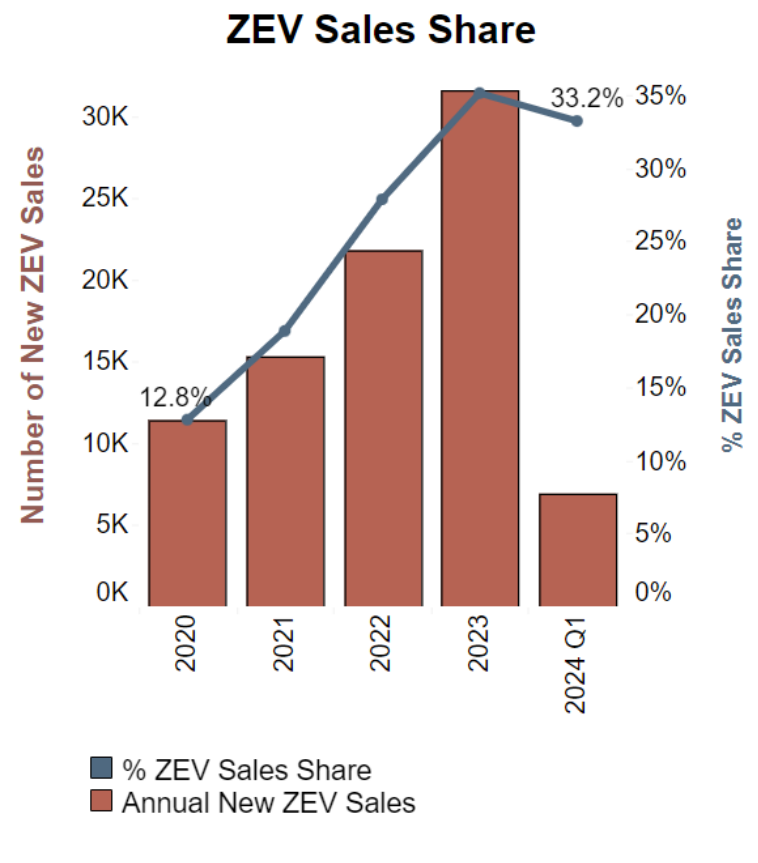


Source: CEC ZEV Dashboard; Alameda & San Joaquin Counties

Program Overview

Program Overview

The managed charging program will allow Ava, through our DERMS provider, to actively manage, shift, and shape the daily load of our EV customers home charging through an app- and web-based platform where customers would enroll their EV and/or charger, set their preferences, save money, and receive performance-based incentives.

Target Segment: Ava customers with EVs

Enrollment Goal: at least 5K in Yr 1 and total of at least 10K by end of Yr 2

Target Launch Date: October 2024

Budget: $2.3M from already approved funds from FY23/24 budget

Current State: Approve the addition of Optiwatt's managed charging services under the May BOD meeting authorization for the CEO to negotiate and execute Lunar DERMS contract

Program Priorities in First 2 Years

- Increase Ava awareness among our EV customers with a fully Ava branded enrollment and managed charging experience, including nudges to our DCFC network
- Enroll at least 10,000 Ava customers to optimize charging during lower cost TOU periods & lower carbon hours without disrupting the customer's desired state of charge
- Shift load from 4-9pm peak period – or other periods as identified by Ava's procurement priorities – to reduce our procurement costs
- Reduce customer energy cost, reduce GHGs, and provide grid resiliency while understanding how a scaled managed charging program could impact Ava's procurement costs
- Earn revenue to reinvest back into electric transportation programs from Low Carbon Fuel Standards credits generated from customer's home charging

Solicitation Details and Why Optiwatt

Managed Charging Solicitation Background & Overview

Background:

- RFP for a managed charging provider released on November 3, 2023 as part of the DERMS solicitation
- Received three bids
- Responses were largely evaluated based on:
  - Detailed customer acquisition strategy & plan to achieve scaled program enrollments
  - Demonstrated experienced in managed EV charging services and programs
  - Coverage of available U.S. EV and charger models
  - Integrations with DERMS providers
  - Competitive and performance-based pricing aligned with a reasonable & clear program budget
  - Ability for pricing structure to accommodate future growth

Recommendation:

- Select **Optiwatt** as Ava's managed EV charging provider
- Contract Term: 2 years, with 3 one-year options to extend
- Budget: $2.3 million (previously allocated in FY 23/24 budget)

Scaled Program Enrollments & Impact
potential to be the largest program in North America

Key Scaling Ingredients

- **The Size & Growth of Ava's EV Market**
- **Optiwatt's Knowledge + Experience in Ava's Territory** and with Ava Customers
- **A Compelling End-Customer Value Proposition** beyond incentives
- **Omnichannel Marketing Engine** deployed w/ 50+ channels
- **Deep Marketing Coordination**
- **Local Marketing Approach** collaborating w/ local partners
- **Point of Sale Marketing** w/ OEMs & installers
- **Leverage Optiwatt's CEC Grants** and broader CA programs
- **Simple, Integrated Enrollment Experience**

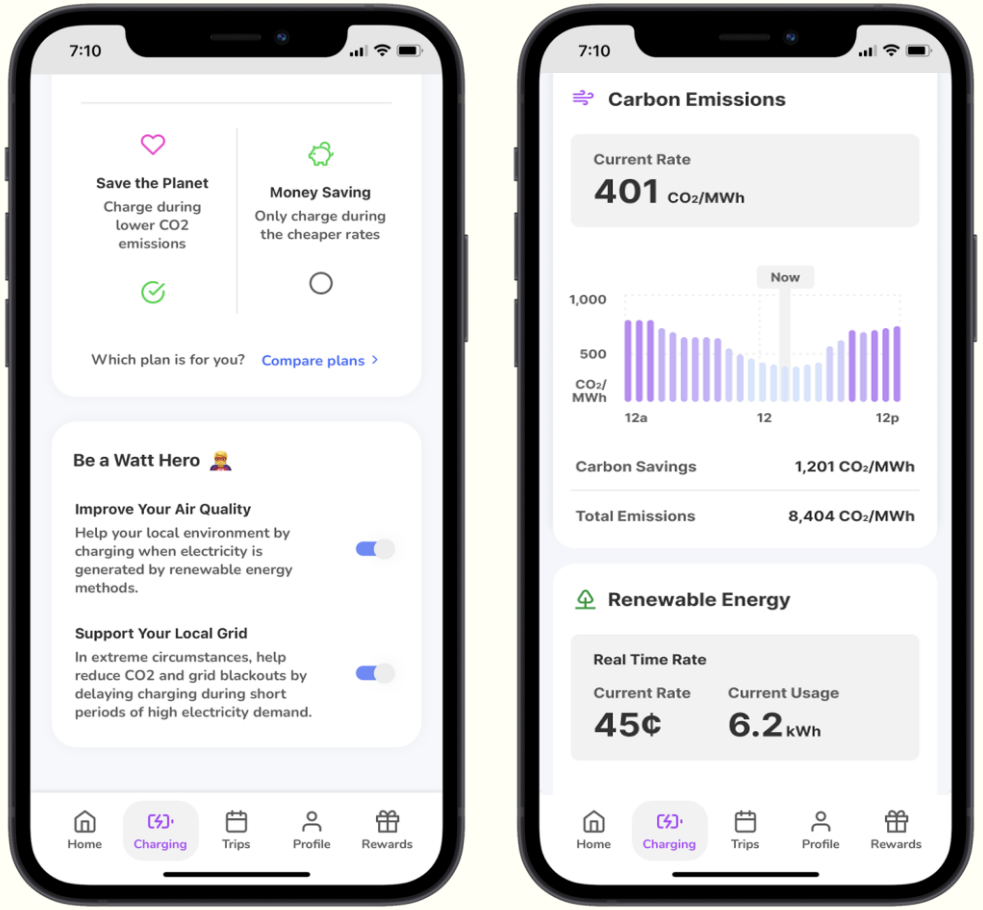
Decarbonize EV Charging
with carbon/renewable energy optimized charging

Optiwatt's 'Save the Planet' Mode

Charge during lower CO2 emissions

- Integrated with real time localized grid emissions & renewable energy signals from WattTime
- Works separately and/or in conjunction with time of use optimization
- Carbon saving & total emissions feedback

Estimated 40-60% MTCO2 Annual EV Charging Emissions Savings



Optiwatt's Data Security & Privacy

1. *Optiwatt is SOC 2 Type 2 Compliant*
2. *Secure File Transfer Processes*
3. *Data Encrypted in Transit and At Rest*
4. *Minimal Data Exchanged*
5. *Only hashed data exchanged where possible*

Thank you!

Ava Community Energy

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